



APRIL 

2025

RESTORASI EKOSISTEM RIAU

PROGRESS
REPORT





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FOREWORD

61,500

Effective nature stewardship demands a long-term perspective. Conservation gains that take years to achieve can be undone rapidly if support falters and forests are once again degraded. As biodiversity across Southeast Asia faces unprecedented pressures, sustained commitment to protecting and restoring critical ecosystems is not only an environmental imperative but also an investment in the region's long-term resilience and prosperity.

This principle is embodied in Restorasi Ekosistem Riau (RER), a landscape-scale conservation initiative spanning more than 150,000 hectares of tropical peat swamp forest. Since its establishment in 2013, APRIL Group has remained committed to safeguarding and restoring the RER landscape through our unique Production-Protection approach. This commitment helps protect RER's extraordinary biodiversity as well as the globally significant carbon store it represents, preventing an estimated 6.5 million tonnes of climate-warming CO₂ equivalent from entering our atmosphere each year.

The importance of this work is reflected in the richness of life found within the landscape. Biodiversity surveys have identified 907 species of plants and animals in RER, including 81 species classified as globally threatened.



“With long-term commitment and strong partnerships, biodiversity can flourish and forests can continue to provide lasting benefits for nature, climate and communities.”

MR. BEY SOO KHIANG

Chairman, APRIL Group
Chairman, RER Advisory Board



According to the International Union for Conservation of Nature's (IUCN) Red List, 14 are categorised as Critically Endangered, with 27 deemed as Endangered and 40 as Vulnerable.

These findings reinforce the need for sustained long-term commitment to RER's preservation. As part of APRIL's Production-Protection approach, the company funds conservation work through a mechanism that directly links production to nature protection. We apply an internal conservation levy of US\$1 for every tonne of plantation wood delivered to the mill. As production grows, so does the capacity to invest in conservation, embedding nature protection within APRIL's core business strategy. To date, this mechanism has generated more than US\$75 million, directly supporting RER and wider conservation initiatives.

This long-term commitment was further strengthened in October 2025, with RER's involvement in a five-year scientific collaboration between APRIL Group and IUCN, announced at the IUCN World Conservation Congress in Abu Dhabi. The collaboration aims to advance conservation science and support the application of evidence-based solutions across APRIL Group's managed landscape. The collaboration will serve as a pilot for IUCN's Rapid High-Integrity Nature Positive Outcomes (RHINO) approach which aims to help organisations guide their interventions to deliver Nature Positive outcomes.

Also launched at World Conservation Congress was APRIL's Thriving Nature strategy: an ambitious plan for how the company intends to conserve, restore and monitor natural forests and to share the benefits of conservation in partnership with local communities. RER is at the heart of the science-led strategy, which recognises that wild landscapes are a common natural asset that benefits the business, local communities and Indonesia.

Progress on the ground in RER continued throughout 2025 with some notable highlights:

- The work of blocking 25 artificial drainage canals within RER is now completed, restoring natural hydrology to more than 8,000 hectares of forest and helping natural vegetation to recover.
- Active reforestation has continued in the most severely degraded areas, with over 4,000 seedlings planted during the year.

- Forest assessments conducted by RER teams show that forest regeneration continues while animal species that are typically found in the forest are using these partially restored areas. These include the Critically Endangered Sunda pangolin and the East Sumatran banded langur.
- The partnership with the Segamai Village Forest Management Institution (LPHD) continued to go from strength to strength. It aims to enhance local capacity and protect the 2,270-hectare Village Forest licence area from illegal logging and other environmental threats. Together with other community and conservation partnerships, these efforts contributed to RER achieving verification by the international carbon offsetting body Verra, under its Climate, Community and Biodiversity (CCB) standards.
- RER remains an important hub for research and learning. Last year, more than 200 visitors, including students and scientists from all over the world, visited the Eco-Research Camp.
- Plant and fish surveys conducted by our long-standing scientific partner Fauna & Flora expanded RER's species list and documented an orchid that had not been recorded by scientists for 166 years.
- Corina, a female Sumatran tiger released into RER in 2020 following her rescue from a poacher's snare, was photographed in October 2025 with two cubs. Her successful return to the wild and subsequent breeding reflects the value of long-term conservation efforts in creating conditions where threatened species can recover.

These results, and the many others you will find in the pages that follow, demonstrate the value of RER as a protected landscape where nature can recover through sustained, science-based conservation. They show that, with long-term commitment and strong partnerships, biodiversity can flourish, and healthy forest landscapes can continue to provide lasting benefits for nature, climate and local communities.

None of these achievements would have been possible without the dedication of the RER team and our valued partners from Indonesia and around the world. I pay tribute to their dedication, and I look forward to working with them in the years to come as we advance RER's conservation mission.



ABOUT RER

A landscape-scale conservation project restoring the peat forest ecosystems across the Kampar Peninsula and Padang Island, Indonesia.



THIRTEEN YEARS OF DEDICATION: SECURING A VITAL CONSERVATION LEGACY (2013–2025)

The Kampar Peninsula and Padang Island, situated on the east coast of Sumatra, Riau Province, Indonesia, hosts a unique tropical peat swamp ecosystem. The landscape is characterised by deep peat deposits that are immense natural carbon stores while sustaining abundant biodiversity. Despite its ecological significance, the region had faced years of forest degradation. Past logging, uncontrolled drainage and illegal encroachment have historically degraded forest cover. Draining peatlands releases carbon accumulated over thousands of years into the atmosphere while significantly increasing fire risk.

Launched in May 2013, Restorasi Ekosistem Riau (RER) is an innovative private-sector initiative dedicated to the protection, conservation, restoration and management of this unique landscape. RER manages five 60-year government-issued Ecosystem Restoration Concession (ERC) licences issued by Indonesia's Ministry of Environment and Forestry. These licences encompass 150,693 hectares across the Kampar Peninsula and Padang Island. This long-term mandate enables RER to rehabilitate degraded forest landscape while safeguarding biodiversity within peat dome ecosystems.



The project's ecological goals are to restore and enhance ecosystem health through protection and the restoration of peat hydrology. RER simultaneously creates meaningful employment opportunities for local communities, who have become key partners in conservation efforts. This approach delivers essential ecosystem services to the wider region, including clean water, significant carbon sequestration and sustainable non-timber forest products, like fisheries. Environmental resilience and local socioeconomic wellbeing improve together.

In 2020, the company introduced an innovative funding mechanism: pledging US\$1 for every tonne of plantation wood supplied to its mill. By tying funding directly to production volume, the mechanism has delivered over US\$75 million since 2020 for the company's wider conservation activities, including RER.

RER provides a long-term model for private-sector peatland restoration at scale.

Concessions	Size (ha)	Location
PT Gemilang Cipta Nusantara (GCN-KP)	20,123.33	Kampar Peninsula
PT Gemilang Cipta Nusantara (GCN-PPD)	20,598.53	Padang Island
PT Sinar Mutiara Nusantara (SMN)	32,781.06	Kampar Peninsula
PT The Best One Timber (TBOT)	40,665.67	Kampar Peninsula
PT Global Alam Nusantara (GAN)	36,524.78	Kampar Peninsula
TOTAL	150,693.37	

RER concessions on Kampar Peninsula and Padang Island in Riau Province, Indonesia

THE PRODUCTION-PROTECTION LANDSCAPE

In addition to the direct link between production and conservation funding, the RER restoration area is part of an integrated Production-Protection landscape spanning the Kampar Peninsula and Padang Island. Surrounded by APRIL's responsibly managed plantations, the restoration core is shielded by a plantation buffer. APRIL's responsibly managed plantations encircle the restoration core, acting as a protective buffer against external threats such as illegal logging, encroachment and wildfires.

Also central to RER's approach is community engagement, which is built on the principle of conservation through empowerment. By equipping community members with the tools and knowledge to pursue diversified, forest-friendly livelihoods, RER reduces local dependence on extractive activities that pose risks to the peatland ecosystem.

This integrated approach ensures that socioeconomic resilience and ecological restoration are complementary components of a stable, sustainable landscape.





STRATEGIC PARTNERSHIPS AND MULTI-STAKEHOLDER COLLABORATION

Collaboration is foundational to RER's operational success. By integrating the specialised expertise of international NGOs and local community organisations, RER ensures that its restoration, social empowerment and protection strategies are based on global best practices.

FAUNA & FLORA

As RER's longest-standing technical partner, Fauna & Flora provides strong scientific oversight through baseline assessments of biodiversity, carbon stocks, and socioeconomic conditions.

BIDARA

Focusing on rural empowerment and sustainable land governance, BIDARA's programmes help local farmers transition to resilient alternative livelihoods based on "no-burn" agriculture and enhanced land-use efficiency.

SEGAMAI VILLAGE FOREST

The 2,270-hectare Segamai Village Forest acts as a critical buffer zone adjacent to the PT GCN concession. This partnership focuses on institutional strengthening, including the formulation of annual work plans, statutory compliance and capacity building for forest resource monitoring.

TROPENBOS INDONESIA

By establishing demonstration plots for high-value crops (including cocoa, chilli, and watermelon), this initiative within Serapung Village provides a scalable model for climate-smart agriculture that enhances local income while reducing pressure on natural forest resources.

Wildlife Conservation Society (WCS)

This partnership is governed by the APRIL-WCS Strategy to Prevent Illegal Wildlife Trade, a proactive multi-year initiative designed to transform how field teams detect, prevent, and report wildlife crime. By equipping RER and APRIL personnel with advanced surveillance technology and specialised law enforcement training, the strategy addresses the complexities of illegal trade routes and poaching networks within the landscape.

EKSAI FOUNDATION

Ekologi Satwa Alam Liar Indonesia (Indonesian Wildlife Ecology Foundation) is an NGO working on biodiversity research and wildlife conservation. Our partnership has focused on bird banding.

PJHS

The partnership with Perkumpulan Jejaring Hutan Satwa (Forest Wildlife Society) centres on facilitating the development of conservation management. In 2025, RER and PJHS worked together on a major survey of the local tiger population.

IUCN

APRIL's five-year strategic collaboration with IUCN is designed to deliver actionable, on-the-ground outcomes for biodiversity, ecosystems, and communities. It will advance conservation science and pilot IUCN's RHINO (Rapid High-Integrity Nature-positive Outcomes) approach.

INTEGRATED LANDSCAPE MANAGEMENT AND OPERATIONAL EXCELLENCE

RER is committed to safeguarding forest ecosystems and rehabilitating landscapes impacted by legacy drainage, logging and fire. To address these complexities, RER employs a proactive and comprehensive strategy that integrates biodiversity surveys, guard posts at primary access points, and systematic forest patrols. There is also close collaboration with adjacent land managers, and a science-based restoration programme focused on canal blocking and indigenous tree replanting.

At the core of our operational strategy is the four-phase PARM model:

- **Protect:** Systematic landscape protection and security protocols.
- **Assess:** Detailed evaluations of carbon stocks, biodiversity and community requirements.
- **Restore:** Wildlife recovery through re-establishing natural forest cover.
- **Manage:** Long-term, sustainable management of the ecosystem.

A definitive metric of this model's success is the absence of forest fires within RER boundaries since 2014. During this period, 69,000 hectares were lost to fire across Riau Province, according to Global Forest Watch. This extended fire-free period has been instrumental in facilitating ecosystem recovery and preventing further environmental degradation. The achievement stems from the operational team's extensive work on fire prevention.

RER remains committed to upholding rigorous, internationally recognised standards for sustainable forest management. In 2025, all five RER concessions successfully underwent comprehensive survey audits



Four main rivers flow through RER

to maintain their Indonesian Forestry Certification Cooperation (IFCC) and Programme for the Endorsement of Forest Certification (PEFC) status. Being the first Ecosystem Restoration Concession in Indonesia to secure this certification underscores our commitment to contributing practical, proven models to the wider conservation community.

STRATEGIC GOVERNANCE: THE RER ADVISORY BOARD

RER is guided by an Advisory Board, an independent body comprising a diverse assembly of Indonesian and international experts in the fields of ecology, social forestry and sustainable development. The Board provides strategic governance and oversight for RER, offering independent recommendations that contribute to the project's restoration strategies and science-based approach.

Beyond strategic guidance, the Board plays a role in fostering institutional growth and innovation. By bridging the gap between field operations and global research, Board members facilitate knowledge-sharing and capacity-building, connecting the RER team with the latest advancements in peatland management and biodiversity conservation.

The multidisciplinary expertise of the Board further amplifies RER's ability to engage effectively with a broad spectrum of stakeholders. By acting as a credible link to government agencies, international research institutions, and local community representatives, the Board enhances RER's collaborative reach and support across the global sustainability landscape.

BIODIVERSITY

Central to RER's mission to protect and restore peat swamp forest ecosystems is our biodiversity monitoring. To date, these assessments have documented 907 plant and animal species.

Red giant flying squirrel (*Petaurista petaurista*)



RER serves as a refuge for regional biodiversity, harbouring 907 species identified as of 2025 within its protected peatland landscapes. Notably, 81 of these—nearly 10 percent of our documented biodiversity—are Classified as threatened on the IUCN Red List of Threatened Species. This high concentration of vulnerable populations confirms the landscape’s international conservation value and drives our operational priorities.

Providing managed refuge for these species requires more than basic forest maintenance; it necessitates continued investment in ecological monitoring, habitat restoration and protection to secure their long-term survival.

In its first decade, RER's priority was building the infrastructure and personnel capacity necessary to protect the landscape from threats, while conducting comprehensive baseline surveys to map species distribution and assess forest conditions. The team is now actioning a more sophisticated monitoring phase which moves beyond creating an inventory and asks deeper questions about ecosystem health. How is species abundance changing over time and how are they responding to efforts to restore degraded habitat within RER? As part of this progression, camera trap surveys are now deployed to monitor wildlife presence in actively restored areas, alongside targeted monitoring of focal species such as the Sumatran tiger, Malayan sun bear and Sunda pangolin.

To enhance the wildlife protection work that APRIL does over its whole conservation landscape (470,000 hectares in total of which RER is a part), the Company has signed a five-year conservation partnership with the IUCN. Launched at the IUCN World Conservation Congress in



Abu Dhabi in October, the partnership aims to advance conservation science and help us to apply evidence-based solutions across the landscape, including RER. In 2026, APRIL and RER will act as a test location for the IUCN's RHINO (Rapid High-Integrity Nature Positive Outcomes) approach. This aims to guide organisations toward interventions that deliver Nature Positive outcomes.

PLANT AND ANIMAL MONITORING

Since 2015, biodiversity monitoring has been a cornerstone of RER's restoration strategy. Following Fauna & Flora's comprehensive baseline assessments a decade ago, RER's field teams have built upon this foundation through an annual surveillance programme, using remote camera trapping, seasonal avifauna monitoring and systematic transects. This longitudinal data collection allows RER to track the recovery of the peat swamp forest, ensuring that restoration efforts are informed by consistent, high-quality ecological evidence.

Of the 81 species that are listed as globally threatened, the IUCN Red List categorises 14 as Critically Endangered, with 27 Endangered and 40 Vulnerable. Furthermore, RER hosts 119 species protected under CITES and 101 species protected by the Indonesian government.

Taxa	Total	IUCN			CITES	GOI
		CR	EN	VU		
Mammals	80	3	9	9	26	18
Amphibians & Reptiles	108	3	4	2	19	5
Birds	319	3	5	18	46	78
Plants	209	3	4	5	28	0
Fish	89	2	4	3	1	1
Odonata	102	0	1	3	0	0
Total	907	14	27	40	120	102

Plant and animal species recorded in RER in 2025.

The final 2025 number will be updated once the fish survey data are completed.

In January 2025, RER conducted its annual surveys for the Asian Waterbird Census (AWC), a regional initiative coordinated by Wetlands International. The data collected feeds directly into IUCN and Ramsar Convention databases, supplying quantitative population information used to monitor wetland health across the Asia-Pacific.

This standardised annual census provides the consistent data necessary to track long-term migratory trends and use waterbird populations as potential indicators of habitat health on the Kampar Peninsula. During the two-day census, the RER team documented 564 individual waterbirds from eight species. The survey was characterised by a high concentration of migratory and wetland-dependent birds, most notably the Tibetan sand plover (*Anarhynchus atrifrons*) with 440 individuals, and the whiskered tern (*Chlidonias hybrida*) with 105 individuals. This census data confirms that migratory flocks use the Kampar Peninsula while navigating the East Asian–Australasian Flyway.

Survey	Period	Camera Trap Nights	Results
Asian Waterbird Census	14–15 Jan	--	The two-day survey recorded a total of 564 individual birds representing eight distinct species.
Camera Trap at Kampar Peninsula	Feb–July	2206	36 species were documented (21 mammals, 13 birds and 2 reptiles).
Spring Migration Raptor Watch – Kampar Peninsula	13 March	--	91 birds of prey from six species.
Camera Trap at Padang Island	June–Dec	1885	15 species were documented (11 mammals, 3 birds, and 1 reptile).
Bird Banding with the EKSAI Foundation	Sept–Dec	--	139 birds captured and studied.

RER biodiversity surveys in 2025



Between February and July 2025, the team conducted a targeted camera trap survey to assess species utilisation within areas of the Kampar Peninsula that experienced significant historical degradation and have been under active recovery for over a decade (e.g. the Makmur block).

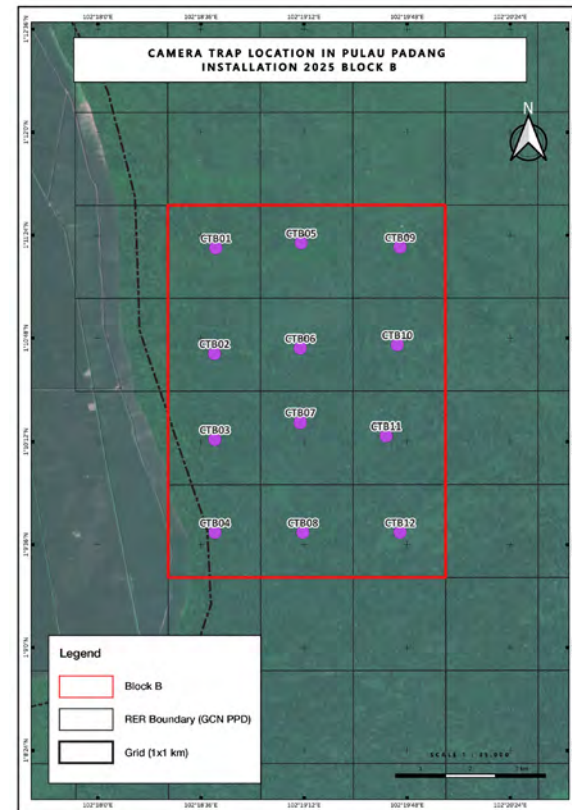
The objective was to evaluate the initial response of medium to large terrestrial mammals to peatland restoration by assessing the presence of different species within restored areas. Using 35 camera trap deployments over 2,206 trap nights, the survey documented 36 species (13 birds, two reptiles, and 21 mammals), including the Critically Endangered sunda pangolin (*Manis javanica*) and the east sumatran banded langur (*Presbytis percura*).

Typically, heavily disturbed sites are dominated by generalist species with a distinct absence of forest specialists. However, the data revealed several forest specialists are already using these restoration areas. Combined with the documented presence of multiple trophic levels (from small prey such as chevrotains to mesopredators like civets and large omnivores such as Malayan sun bears), these findings indicate the recovering sites have matured sufficiently to support complex ecological interactions.

Separately, on Padang Island, a camera trap study conducted from June to December 2025 assessed the distribution and population density of the Sunda pangolin. We deployed 46 camera traps across four management blocks (A–D), totalling 1,885 trap nights. The survey recorded 11 mammal, three bird, and one reptile species. Notably, the data consistently documented the sunda pangolin, with spatial analysis showing the highest encounter rate (2.54) in Block B. This localised occupancy data directly informs RER's resource allocation, allowing us to concentrate on protection and patrolling strategies where pangolin populations are densest.



Sunda scops owl (*Otus lempiji*)



In collaboration with the Ekologi Satwa Alam Liar Indonesia (EKSAI), or Indonesian Wildlife Ecology Foundation, RER conducted a bird-banding program across four locations, including three restoration sites and Townsite 1, a residential area that is part of APRIL's main production site in Pangkalan Kerinci. The initiative resulted in the capture and study of 139 birds, providing data on avian health and site fidelity. One highlight was the documentation of the hook-billed bulbul (*Setornis criniger*), a peat swamp specialist currently listed as Vulnerable on the IUCN Red List. Furthermore, RER deployed two GPS tracking devices on pin-tailed snipes (*Gallinago stenura*). Given the elusive nature of this species, the data gathered will provide valuable insights into their movement patterns and habitat usage.

Bird banding is a delicate and highly regulated activity that can only be carried out by trained and licence personnel. Through the partnership with EKSAI, four RER staff members have achieved a C-level license, allowing them to undertake bird banding with supervision from more experienced licence-holders.

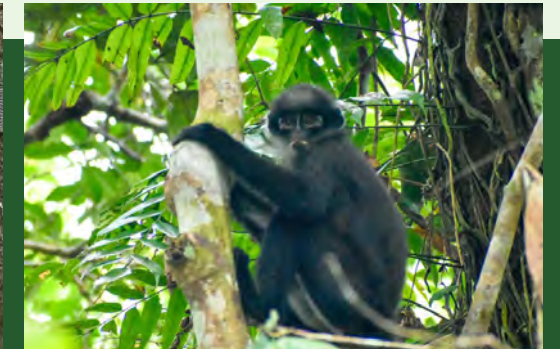
Also as part of our seasonal avian monitoring on the Kampar Peninsula, we conducted a spring migration raptor watch, documenting a total of 91 birds of prey. The survey recorded six distinct species, comprising four migratory and two resident species, including the first recorded sighting of a peregrine falcon (*Falco peregrinus*).



VALIDATING THE PRODUCTION-PROTECTION APPROACH



Camera trap on Padang Island



East Sumatran banded langur (*Presbytis percura*)

With Nature-based Solutions (NbS) being used increasingly as climate mitigation tools, it is important to evaluate the extent of their biodiversity co-benefits. That was the focus of a research project conducted with the UK's University of Kent and IUCN.

The research focused on the diversity of medium to large mammal species. Researchers deployed 202 camera traps between 2021 and 2023 across three sampling grids that took in core peat swamp forest, linear forest remnants and *Acacia crassicaarpa* plantations of different ages. The team documented 23 medium-large mammals over 17,132 camera trap days and used the results to model the likely biodiversity impact for the whole of the Kampar Peninsula of different landscape management configurations.

The results, which were outlined in greater detail in the [2024 RER Progress Report](#) and [published in the peer-reviewed Journal of Applied Ecology](#) in April 2026, validate the Production-Protection approach. They demonstrate that well-designed NbS schemes like RER can deliver significant carbon and biodiversity benefits provided that core forest areas are safeguarded through effective governance. Maintaining landscape configurations that promote connectivity and ecological function is key.

MALAYAN SUN BEAR

Named for the distinctive, crescent-shaped cream or golden patch of fur on their chests that is said to resemble the rising sun, the Malayan sun bear (*Helarctos malayanus*) remains the least scientifically understood of the eight bear species in the world. The first field studies by scientists only began in 1997, and although the species can be found in 10 countries in South and Southeast Asia, their numbers are thought to be in steep decline in many parts of their range. They are listed as Vulnerable on the IUCN Red List.

In 2025, Meisye Wulandari, a master's student at the IPB University, completed an important landscape-scale study based on data from the Kampar Peninsula aimed at understanding sun bear habitat more holistically to inform conservation

priorities. The research was based on data collected by Wulandari in 2024 using camera traps and surveys of signs left by the bears such as claw marks. She complemented this with additional camera trap data collected by RER between 2015 and 2024, resulting in 310 records.

The study combined these observations with ten environmental variables, including precipitation, canopy height, land cover and distances to water bodies, roads or human settlements. The team constructed a model that combined these variables to predict areas of habitat most and least suitable for the bears and their key attributes.

The model indicates that the best sun bear habitats are concentrated in the central Kampar Peninsula, largely overlapping with RER, with around 12 percent



of the study area classified as “highly suitable”. These forests are characterised by dense vegetation, high structural complexity and low human disturbance.

The research also indicates that the bears are using secondary forests which have ecological attributes such as canopy cover, vertical structural complexity of vegetation and available food sources. The bears are omnivores with fruit a significant component of their diet. They are found within plantation forest, but this appears to be a temporary response to peat forest inundation during extreme wet periods.

Aside from vegetation structure, the bears appear most comfortable away from human disturbance. Their preferred habitat also tends to be away from water bodies. Important food resources such as fruiting and hollow trees, ant and termite colonies, and bee nests are not strongly associated with riparian zones. The model will be a vital tool for assessing habitat conservation priorities for this threatened species.

SUMATRAN TIGER

RER partnered with local NGO, the Forest Wildlife Society (PJHS), on more systematic tiger monitoring using camera traps. The team collected data from 202 camera trap installation points across both natural forest and neighbouring plantation over an eight-month period. From analysing the stripe patterns and other body characteristics of the animals captured in images, the team identified 11 adult tigers and three cubs, as well as 16 prey species including wild pig, sambar deer, tapir and primates.

The team used two different techniques to infer more information about tiger abundance from the data. Spatially Explicit Capture-Recapture (SECR) is a method for estimating animal population density by combining individual identification with spatial information about where each animal is detected. Camera Trap Distance Sampling (CTDS) takes account of the fact that animals passing closer to the camera are more likely to trigger an image



Sumatran tiger (*Panthera tigris* ssp. *sumatrae*)

capture, so allowing a statistical correction for the animals not recorded. They estimated overall tiger density at 0.57 individuals per 100 km². Ranger patrols also documented 33 tiger presence indicators (tracks and scat) and found no active threats such as snares or poaching.

In addition, PJHS surveyed local villages about negative interactions with tigers. These were frequently associated with free-ranging livestock husbandry practices. The insights from these surveys regarding community knowledge and perceptions provide a foundation for targeted human-tiger conflict mitigation and awareness strategies.

Separately to the PJHS survey, RER is in the process of establishing 70 camera trap stations in areas of high tiger movement to extend the tiger monitoring effort.

FISH SURVEY

A comprehensive fish survey conducted in collaboration with Fauna & Flora documented a provisional total of 124 fish taxa. That represents a marked increase on a previous survey nearly a decade ago that recorded 89 species. That reflects improved sampling coverage across rivers, peat lakes and canal systems that were previously underrepresented.

The 2025 survey was designed to cover a wider range of habitats, including peat lakes, small tributaries and canals. It employed a combination of active and passive fishing techniques including the use of fishnets, rod fishing, hand nets, fish traps (bubu) and fishing lines (tajur). Various gear sizes and bait types were used to match the characteristics of each habitat and to maximise species capture across functional groups.

Of the 124 taxa recorded, 99 species have been confidently identified to species level, while 25 taxa remain under taxonomic verification. These unresolved records mainly comprise morphologically similar species complexes. To ensure accurate species-level identification, these specimens have been formally deposited at Biodiversity research center BRIN and are undergoing detailed morphological examination. In addition, DNA analyses are being conducted at the PSSP IPB Biotech Laboratory to support and refine taxonomic verification.



Research team conducting a fish survey

HERBACEOUS PLANT SURVEY

In partnership with Fauna & Flora the team conducted a survey of herbaceous plants — non-woody species that die back at the end of their growing season. The survey recorded 163 herbaceous taxa, including one species of orchid (*Hetaeria obliqua*) that has not been formally recorded for 166 years. This rediscovery provides significant botanical evidence supporting the conservation value of the RER peat swamp forest landscape.



Nepenthes mirabilis

Vegetation surveys conducted within RER in 2016 and 2020 had identified 196 tree species, of which approximately 13 percent are endemic, legally protected, or globally threatened. These represent around 77 percent of the tree diversity typically found in tropical peat swamp forests. In contrast, only 40 herbaceous plant species were recorded during these earlier assessments. This underrepresentation was largely attributable to survey designs that prioritised woody vegetation for carbon stock estimation, resulting in limited attention to non-woody flora.

The team selected survey sites to capture plant species across a range of habitat types with different levels of disturbance and at different times throughout the year. That maximises the chance of encountering herbaceous plant species in reproductive stages, making them easier to identify. Of the 163 herbaceous taxa recorded during the survey, a subset of these collections could only be identified to the genus level. These specimens require further taxonomic resolution and are therefore undergoing verification through detailed examination of herbarium material at Herbarium UIDEP, Depok, as well as continued observation of living collections maintained at the APTI Garden nursery. This follow-up process is expected to result in additional species-level identifications as reproductive material becomes available.

Several findings from the survey are of notable scientific and conservation significance. Nine species, including five orchids, were found for the first time on Sumatra. These results will be summarised in a practical guidebook to peat swamp herbaceous flora that is currently being produced.

DRAGONFLY AND DAMSELFLY SURVEY

A new species of damselfly was officially recognised last year in a scientific paper published in July. Named *Amphicnemis reri*, the species epithet ‘*rer*’ honours the insect’s RER home. With a wingspan of just 4 cm and closely resembling another local species (*Amphicnemis bebar*) which also has a dark metallic greenish black thorax, *A. reri* is easily overlooked. But thanks to a comprehensive survey of Odonata (dragonfly and damselfly) species across the Kampar Peninsula, it is one of several interesting discoveries within RER and surrounding areas.

Odonata expert Dr Rory Dow began the survey in 2020 but was forced to delay due to the COVID-19 pandemic. He ultimately visited 97 sites including peat swamp forest as well as open, disturbed areas and identified 100 distinct species (including *A. reri*). Of these, 58 are dragonflies and 42 are damselflies.



Brachygonia puella

Five of the species had never been observed in Indonesia before and a handful are listed by IUCN (one endangered, three vulnerable and seven near threatened). The conservation status of A. eri has yet to be formally assessed but the available data suggest it will fall into one of these categories. Scientific papers detailing the new species and the results of the full Odonata survey were published in the journal Zootaxa.

WHITE-WINGED DUCK SURVEY

Since 2024, the white-winged duck (*Asarcornis scutulata*) has been categorised as Critically Endangered. Its conservation status was raised by IUCN due to rapid population decline in Sumatra. The species was first recorded on the Kampar Peninsula in April 2007 and since 2018, RER has been conducting a continuous survey of the species based on anecdotal encounters. Whenever a sighting by RER or APRIL employees occurs, the number of individuals and the location are recorded on the APRIL Biodiversity Portal, a centralised database.

Between January 2018 and June 2025, there were 292 recorded sightings on Kampar Peninsula, the vast majority on canals within Acacia plantations (288) with most occurring in the north and west of the peninsula. Shaded linear canals appear to be a favoured habitat for the birds. There were no sightings recorded from the natural lakes within RER and only one record of a duck swimming on a natural water body—an adult seen with an unconfirmed number of ducklings in the Serkap River within the natural forest.

Though the sampling method was informal, it suggests a decline in numbers in recent years. While there were 65 and 70 sightings in 2020 and 2021 respectively, the equivalent figures for 2024 and 2025 were 9 and 12. RER's survey data were presented in an academic poster at the 7th National Conference of Bird Researchers and Enthusiasts in Indonesia in Bogor in August.

SMART PATROLS

In 2025, RER moved to full-scale implementation of the SMART (Spatial Monitoring and Reporting Tool) Patrol system. As a globally recognised platform developed by a consortium of leading conservation organizations, SMART provides standardised digital data collection, enabling patrol efforts to transition toward predictive, risk-based spatial targeting. The tool brings together multiple standardised data types recorded digitally in the field by rangers during field patrols. This includes data on threats such as illegal logging or encroachment, wildlife sightings, and human activities observed within the landscape. Patrol routes and observation points are recorded using GPS-enabled devices.

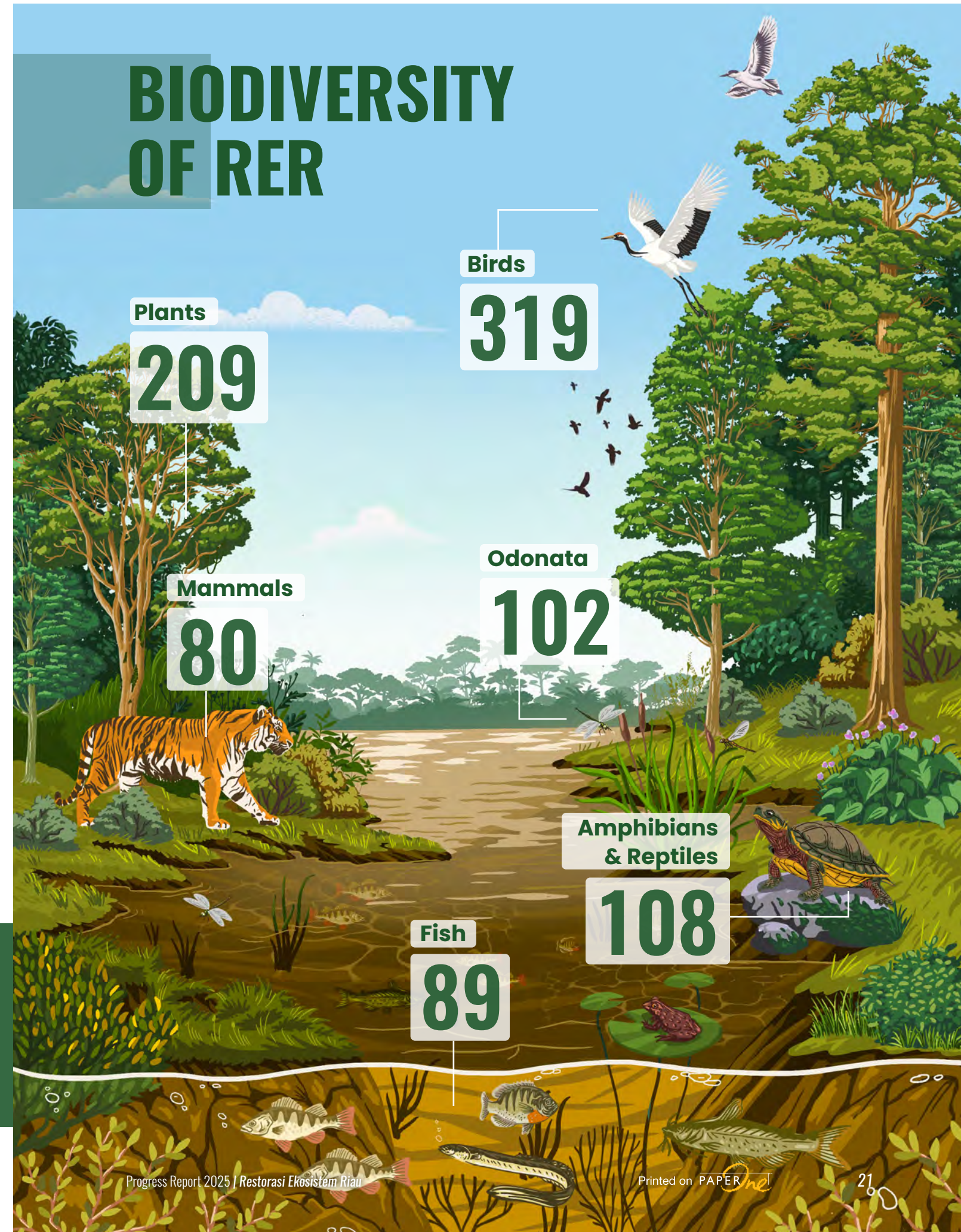
By centralising this information, the tool allows managers to track conservation data in near real time and make more informed decisions. Patrols go beyond being a physical presence in the field, to become a comprehensive data collection mechanism that supports deeper understanding. This enables a transition from reactive monitoring to a predictive protection model, where patrol efforts are deployed strategically to high-risk areas based on analysis of data trends. The collaboration with the Wildlife Conservation Society has been instrumental in embedding the SMART Patrol system with RER staff.



Team members watching raptor behaviour



BIODIVERSITY OF RER



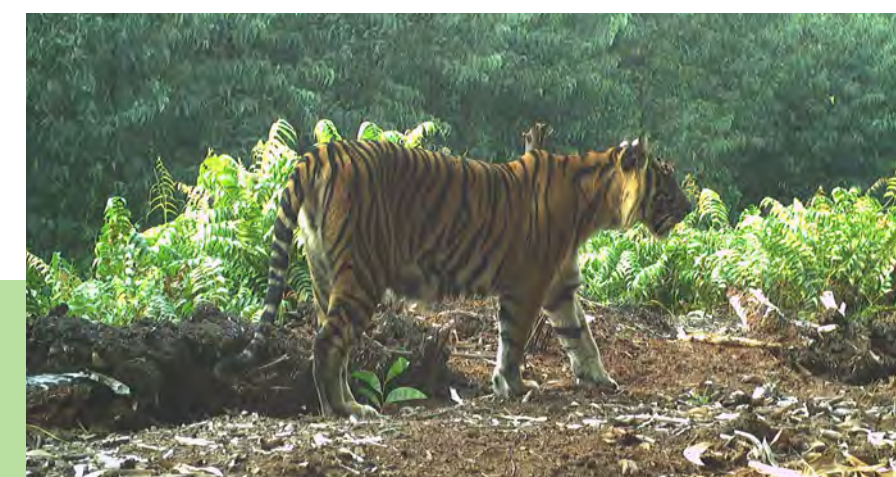


CASE STUDY

FROM RESCUE TO NEW LIFE

A female sumatran tiger who was rescued in 2020 and released into RER has since bred successfully. The tiger, known as Corina, was photographed by a camera trap in October 2025 accompanied by two cubs. The finding is a validation of the RER landscape and the Production-Protection approach as playing a vital conservation role for this Critically Endangered species.

Corina's journey began on 28 March 2020, when she was found caught in a poacher's snare in a community rubber plantation (adjacent to an APRIL plantation) on Kampar Peninsula. The snare caused severe trauma with deep lacerations that had become infected, requiring rehabilitation. This prompted a multi-agency emergency response. She was airlifted to the Dharmasraya Sumatran Tiger Rehabilitation Centre (PR-HSD) in West Sumatra, where she underwent nine months of intensive rehabilitation. Following surgery to treat necrosis in her limb, Corina underwent



"wild-readiness" protocols in a naturalistic enclosure to ensure she maintained her hunting instincts and a healthy fear of humans—both essential for her survival.

On 20 December 2020, Corina was released into the core of the RER forest. To monitor her adaptation, she was fitted with a GPS collar that provided near real-time data on her movements through the peat swamp terrain. This monitoring confirmed that she was navigating effectively and exploring the boundaries of her new home. In the period up to 22 May, when her collar underwent its controlled release, Corina traveled 320 km within a range of some 27,000 hectares. Subsequent camera trap data confirmed that Corina had successfully established and defended a permanent home range.

In 2025, Corina was recorded by camera trap images between April and July. However, images captured in October confirmed breeding success. Initial footage showed Corina alone, followed by a sequence revealing first one, and then two cubs following behind her. This breeding success indicates that the mixed habitat making up her territory provides the necessary safety and prey density for reproduction, moving her status from survival to reproductive viability. This outcome highlights the importance of maintaining a large, contiguous landscape.



Canal blocking is vital
to restoring natural hydrology

CLIMATE

The work to restore RER's natural ecosystem involves both canal blocking to recreate natural hydrology and active tree planting in heavily degraded areas.



WEATHER MONITORING AND FIRE MANAGEMENT

The Kampar Peninsula and Padang Island are defined by a hot tropical climate and low elevation, providing the essential hydrological conditions required to sustain a water-dependent peat swamp forest ecosystem. In 2025, rainfall levels were high, significantly exceeding long-term averages and creating a period of high hydrological recharge for the RER concessions.

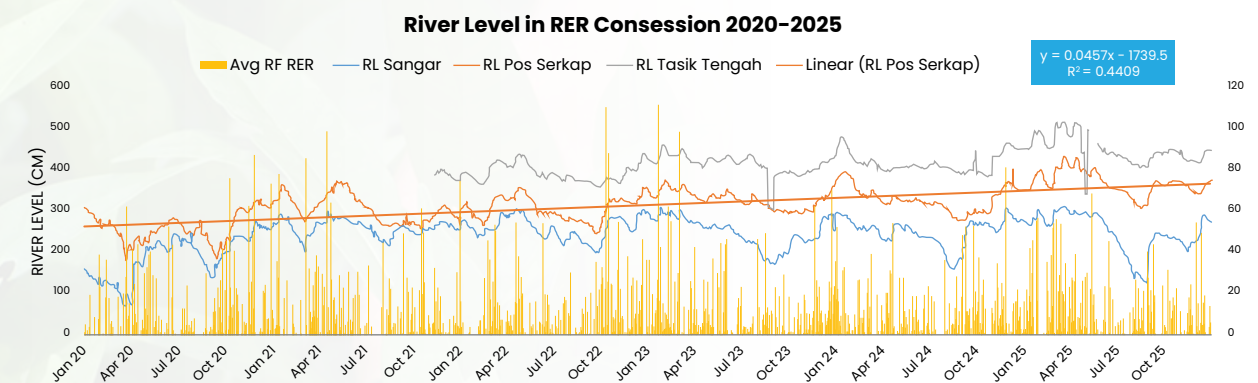


By consistently monitoring these trends against historical benchmarks and moving averages, RER can better calibrate water management strategies and infrastructure. Blocking previously dug drainage canals effectively rewets the peat, thereby reducing fire risk, minimizing greenhouse gas emissions, and maintaining the continued resilience of the peatland landscape.

To improve the geographical spread of climate monitoring within RER installed a new weather station at the Makmur restoration area. This is in addition to the four other monitoring stations that are spread across the Kampar Peninsula portion of RER. Like the others, the station is operated manually, with recordings of precipitation levels, humidity, temperature and the fuel condition of vegetation taken daily by RER rangers at the site.

The Impact of Precipitation on River Hydrology

River level measurements are captured through a strategic network of monitoring stations operated by the RER Water Management Department. By recording water levels at standardised intervals using calibrated gauge boards, the team generates daily dry warnings and alerts, as well as providing baseline data required for adaptive water-level management.



River levels fluctuate with rainfall through the year, but linear regression and trend line analysis confirm an overall increase in river water levels throughout the reporting period, driven by a period between 2023 and 2025 with record rainfall. This data-driven approach allows RER to maintain a comprehensive understanding of the connectivity between rainfall and riverine discharge.

The graph above indicates an improvement in the peat soil's capacity to retain water for longer periods. Given the porous nature of peat, which can contain 80–95 percent water by weight, rainfall is not immediately discharged through river systems but is instead retained. This improvement is likely influenced by our canal blocking activities.

Fire Risk Management and RER Operational Response

RER employs a sophisticated fire management framework that integrates advanced satellite monitoring with real-time meteorological data. By conducting daily hazard assessments—tracking rainfall, humidity, and fuel conditions—the team maintains a proactive stance against potential



Drones give the team an aerial view of the landscape

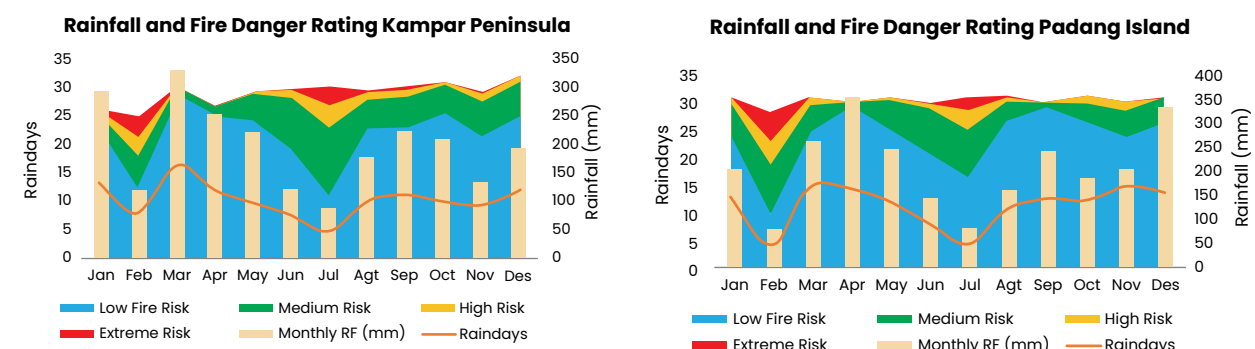


threats. RER’s readiness is built upon a two-pronged approach that prioritises community-led prevention while maintaining a high-capacity rapid response infrastructure.

Since natural fire triggers are virtually non-existent in tropical peat swamp forests, the prevention of human-caused ignition remains the primary objective. RER’s prevention strategy involves monitoring of human activity within the concessions and outreach in surrounding areas. Forest users are kept informed of daily fire danger ratings, while field teams work to prevent illegal encroachment and unauthorised clearing.

Detection and preparedness are further enhanced through the use of satellite imagery to identify “hotspots” or active thermal anomalies. Based on the daily Fire Danger Rating (FDR), patrols are strategically deployed to high-risk zones where human presence is detected. To ensure an immediate impact, RER maintains specialised, lightweight firefighting equipment designed for peat-swamp terrain.

The absence of fire events within RER since 2014 reflects the efficacy of these combined prevention and response measures.



Higher fire risk in the RER area generally occurs in January–February and June–September dry seasons. The Fire Danger Index (FDI) is itself closely correlated with precipitation.

FOREST RESTORATION

The RER landscape on the Kampar Peninsula is characterised by a high degree of ecological integrity, with over 60 percent of the area maintaining intact forest cover. An additional 39 percent has been impacted by historical selective logging and canal drainage, where natural regeneration—supported by strategic canal blocking—serves as the most efficient and cost-effective recovery model. However, a critical 1 percent of the total landscape consists of severely degraded sites that require intensive, multi-year human intervention. Restoring these isolated areas relies on active techniques like direct planting and Assisted Natural Regeneration (ANR) to overcome severe hydrological stress and invasive competition.

In 2025, our efforts to understand and accelerate this recovery led to a major study of natural regeneration at the Makmur and Sangar sites, two open areas heavily impacted by historical logging and wildfires. An RER team survey identified 427 regenerating trees across 35 species.



Planting tree seedlings in the restoration area



Notably, 138 of these individuals were strangler figs (representing 10 distinct species) growing directly on the ground rather than as typical epiphytes. This surprising discovery, recently published in the [Journal of Ecology and Evolution](#), demonstrates that strangler figs are pioneer species capable of populating open ground. Because they fruit year-round, these ground-dwelling figs serve as crucial ecological anchors, attracting seed-dispersing wildlife that further accelerates the recovery of the peninsula’s most vulnerable ecosystems.

TREE NURSERIES

The restoration of isolated sites within the vast and remote peat swamp forest presents significant logistical challenges. The absence of road infrastructure, where access is strictly limited to river systems and narrow forest trails, makes the transport of materials difficult and slow. To mitigate

these hurdles, RER utilises a decentralized network of small-scale, in-situ nurseries located directly within restoration sites. This strategy ensures the immediate availability of high-quality planting material while avoiding the need for long-distance seedling transport.

These nurseries maintain a diverse genetic stock of native seedlings, comprising at least 50 indigenous species ethically collected from the surrounding forest. In 2025, RER’s nine active nurseries across the Kampar Peninsula and Padang Island nurtured a combined inventory of over 31,000 seedlings. A consistent supply of healthy seedlings remains critical for maximising the success rates of reforestation efforts. In 2025, 4,094 seedlings were deployed for enrichment planting to replace underperforming or lost trees from previous cycles, ensuring long-term canopy closure. Furthermore, an inventory of 15,535 seedlings has been prepared and is currently staged for upcoming restoration phases.

Estate	Number of Nurseries	Number of Species	Number of Seedlings	Seedlings Planted in RER	Seedlings Ready to be Planted
Kampar Peninsula Restoration	7	53	27,150	3,557	11,668
Padang Island Restoration	2	38	4,025	537	3,867
Total	9	78	31,175	4,094	15,535

Nursery stock in 2025

The top five species used in restoration in 2025 were 604 seedlings of swamp sapodilla (*Palaquium* sp.), 337 seedlings of water berry (*Syzygium* spp.), 166 seedlings of swamp tropical chestnut (*Sterculia gilva*), 143 fig seedlings (*Ficus* sp.), and 78 false mamey seedlings (*Calophyllum calaba*). The nurseries also serve as a refuge for species of significant conservation concern. Featured species currently under cultivation include those listed as Critically Endangered, such as meranti bunga (*Shorea teysmanniana*), meranti rawa (*Shorea macrantha*), meranti paya (*Shorea platycarpa*) and ramin (*Gonystylus bancanus*).

In addition to these, the nurseries protect several Endangered species, including nasi-nasi (*Syzygium zeylanicum*), resak paya (*Vatica teysmanniana*), and meranti bakau (*Shorea uliginosa*). Vulnerable species like mersawa (*Anisoptera marginata*) are



RER maintains nine native tree nurseries



The nurseries hold 78 different species

also prioritised within the inventory. By focussing on a high concentration of threatened flora, RER’s nursery programme facilitates landscape recovery and makes a meaningful contribution to the broader conservation of peatland-specific plant species.

HYDROLOGICAL RESTORATION

Hydrological restoration is crucial to maintaining the ecological integrity of tropical peat swamp forests. These ecosystems are typically composed of approximately 80 percent water and 20 percent organic matter, with the water table depth defining the critical boundary between water-saturated subsoil and unsaturated soil. Under natural conditions, this level remains near the peat surface for most of the year, though it fluctuates significantly.

RER’s primary hydrological objective is to rewet the peat and stabilise moisture levels by closing legacy drainage canals across the landscape. This intervention minimises peat subsidence and oxidation while reducing the threat of forest fires.

Early dam construction was carried out with sandbags, but these are difficult to transport on foot into remote locations in the forest. In 2024, the RER team began trialling dams constructed from Fibre Reinforced Polymer (FRP) material. This design consists of relatively light hollow modular boxes. In 2025, the team improved the design by changing the dimensions and style of construction.

The team also tested a third construction method called Multi-Sheet Pile (MSP) dams. This involves constructing retaining walls along both sides of the canal from small-diameter timber. The space between these structures is then filled with compacted peat and planted with seedlings. To enhance water retention, a tarpaulin layer is installed at the base to reduce direct water penetration through the structure. This canal blocking design is intended to facilitate a more natural closure process incorporating vegetation on top of the structure.

The status of these new designs is being monitored to ensure they are stable and providing adequate canal blockage.



A Fibre Reinforced Polymer (FRP) dam



Using these dam methods, RER has addressed a network of 25 canals on the Kampar Peninsula totalling 137 km in length. Since 2016, the construction of 81 dams has effectively rewetted 8,678 hectares, representing 100 percent of the targeted area. Two canals had remained intentionally open to serve as a multi-year comparison study, providing data on the seasonal water table differences between drained and blocked systems. In 2025, these too were blocked with two dams each, so completing efforts to return the region to its natural, pre-drainage hydrology.

On Padang Island, the restoration program focuses on 14 canals totalling 65 km, which impact 3,966 hectares of forest. To date, eight dams have been constructed across five canals, rewetting 1,200 hectares, or approximately 30 percent of the target area. RER maintains a rigorous annual inspection and repair schedule for all dams to account for settling, shifting and natural vegetation growth. To assess the efficacy of these closures, water table monitoring is conducted across 100 strategic points, positioned from river edges to deep forest interiors.



Water level monitoring in the Serkap River

Progress	UoM	RKP			RPP		
		Target	Actual	%	Target	Actual	%
Total Canal Closure	Canal	25	25	100%	14	5	36%
Total Dam Installed	Dam	75	81	108%	42	8	19%
Sandbag	Dam	25	20	80%	14	5	36%
Felt	Dam	50	57	114%	28	3	11%
FRP	Dam	1	3	300%	-	-	-
MSP	Dam	1	1	100%	-	-	-
Dam Replacement	Dam	17	8	47%	4	4	100%
Dam Maintenance in 2025	Dam	73	73	100%	7	7	100%
Length	metres	136,769	139,769	100%	64,960	11,169	17%
Impacted Area	hectares	8,678	8,678	100%	3,966	1,200	30%

Annual canal closures in RER. Corrected for miscalculations in the achievements of previous years

Monitoring capabilities have been significantly enhanced through the integration of technology. While manual dip-wells are measured every one-to-three months to track seasonal trends against rainfall data, RER has also deployed 29 recorders (automatic level-loggers). These devices provide continuous data on water level fluctuations and peat subsidence, improving the precision of our hydrological modelling.



COMMUNITY

Community engagement is a key part of mitigating forest threats and advancing sustainable livelihoods across the Kampar Peninsula and Padang Island.

A fisherman on the Serkap River



With over 55,000 residents (BPS, 2024) living along the riverbanks and coastlines adjacent to the RER concessions, the active participation and informed support of these communities are vital to RER's mission. On the Kampar Peninsula, the RER programme maintains direct engagement with approximately 17,300 residents (BPS, 2024) across seven villages. This demographic is primarily composed of Malay and Javanese peoples, alongside other ethnic groups that have settled in the region over several decades.

These communities possess a highly adaptable economic structure, relying on a diverse portfolio of agricultural and natural resource-based activities. Livelihoods are closely tied to land productivity and fluctuating commodity prices, with primary harvests including rice, maize, betel nut and various vegetables. While palm oil and rubber plantations remain significant income drivers, the harvesting of white-nest swiftlet (*Aerodramus fuciphagus*) bird nests has emerged as a specialised economic sector since the early 2000s. Furthermore, the surrounding peat swamp forests provide essential non-timber forest products, such as honey, fish and medicinal plants, which reinforce local economic resilience.

The social landscape of Padang Island is equally complex, where 34,000 people (BPS, 2024) reside across 20 villages. RER directly interfaces with approximately 12,500 residents in seven of these villages, comprising a culturally rich population that includes the indigenous Akit, as well as Malay, Banjar, Javanese, Batak and Bugis communities. Historically, the island's economy has been anchored in sago, coconut and rubber plantations, along with timber harvesting dating back to the 1960s. Today, agriculture and fishing remain the primary drivers of household income.



RER's strategic collaboration with these communities is designed to align economic wellbeing with the conservation of the last remaining blocks of peat swamp forest. By promoting sustainable land-use practices and enhancing local livelihoods, the programme seeks to reduce community dependence on unsustainable resource extraction.

CLIMATE, COMMUNITY AND BIODIVERSITY STANDARDS

In 2025, RER achieved verification by the international carbon offsetting body Verra, under its Climate, Community and Biodiversity (CCB) standards. CCB verification is independent of carbon crediting and can be applied to a variety of land management initiatives, whether they are carbon projects or not. It represents external assurance that a verified project is delivering tangible climate, community and biodiversity benefits.

Community involvement has been integral to RER from the start, but the CCB standards entailed deeper and more systematic engagement. Most

importantly, this approach is bottom-up rather than top-down, meaning the communities determine the form of development that best meets their needs.

To achieve verification, project leaders must demonstrate they have incorporated CCB standards. These include identifying all community stakeholders and ensuring their full and effective participation; respecting customary and statutory rights; obtaining free, prior and informed consent; and maintaining high conservation values. AENOR, an independent auditor appointed by Verra, carried out desk and field research and ultimately verified that RER had met the CCB standards for the period 2020 to 2022. Auditing is ongoing for the 2023 to 2025 period.

NEW LIVELIHOODS THROUGH SUSTAINABLE AGRICULTURE

Serapung Village is located on the eastern side of the Kampar Peninsula, close to RER's border. In 2023, local NGO Tropenbos Indonesia developed a programme in partnership with RER to help



RER's work with communities includes supporting sustainable agriculture



Serapung villagers revive farming knowledge and equip them with the skills needed for more stable and environmentally sustainable ways to earn a living. Villagers were invited to attend a Field School (Sekolah Lapang)—a participatory training programme where community members meet regularly at a learning plot to receive guidance and training.

The programme not only teaches sustainable agriculture techniques but also strengthens participants' ability to monitor the agro-ecosystem, analyse conditions, and make informed decisions about managing their resources. The course includes training in the cultivation of cocoa, chilli and rice, including seedling preparation, planting, use of organic fertilisers, integrated pest management, as well as harvest and post-harvest practices.

The training led to a shift among the participants who began to see farming not as a distant tradition but a viable economic opportunity. Community members took this forward themselves with the creation of Women Farmer Groups (Kelompok Wanita Tani) focusing on home gardening and farming production, including the production and use of botanical pesticides.

In 2025, the Simpang Makmur and Sejahtera Women Farmer Groups were producing long beans, ridge gourd, cucumber, eggplant, spinach, water spinach



Serapung Village is a community of around 2,700 people in 800 households

and chili. Their income from this produce in the final quarter of the year exceeded IDR 9 million and IDR 8 million respectively.

The Field School ran training for 39 people last year in techniques for cocoa grafting. The participants received theoretical instruction and practical demonstrations of budding, top grafting and side grafting before being given the opportunity to practice the techniques themselves.

Aside from agricultural techniques, the project is teaching business skills. In December, 16 participants underwent five days of Business Model Canvas training. That involved skills such as customer identification and targeting, funding sources and managing costs. One outcome of the course was a recognition by participants that community organisations would benefit from shared agricultural product marketing.

The Tropenbos programme, which will conclude in 2026, has benefited 218 farmers who diversified their output considerably. They established 87.1 hectares of semi-organic rice paddies as well as a combined area of 2.9 hectares of horticulture crops. These produced 116.2 tonnes of rice and 13.4 tonnes of chilli respectively in 2025, plus 1,550 kg of maize, 350 kg of long beans, 450 kg of eggplant, 200 kg of cucumber and 2,500 kg of watermelon.



A plant nursery at Segamai village



Passing on botanical knowledge

SOCIAL FORESTRY BENEFITS CONSERVATION AND COMMUNITY

The partnership between RER and the Segamai Village Forest Management Institution (LPHD) is a model for how private sector collaboration can strengthen Indonesia's Social Forestry programme, successfully balancing landscape-scale conservation with community empowerment. The five-year collaboration is designed to secure the 2,270-hectare Village Forest licence area from illegal logging and other environmental threats.

The mission is characterised by significant logistical complexity due to the forest's geographic isolation on the south bank of the Kampar River, situated over 25 km from the village centre. To manage this remote territory, the LPHD maintains a dedicated professional team consisting of six forest rangers tasked with guarding and monitoring

the concession, an administrative accountant to manage procurement and financial oversight and a specialised boat operator. This team manages a challenging two-hour river transit to reach the Village Forest, ensuring a consistent presence in the interior of the Kampar Peninsula despite the distance from Segamai village.

The ecological status of the Segamai Village Forest remains generally positive, with 2,000 hectares, or 89 percent of the total area, classified as high-to-medium density forest. While historical selective logging between 2017 and 2022 impacted approximately 1,100 hectares, much of this land shows high potential for natural regeneration. However, approximately 178 hectares require active restoration through targeted planting and weed control due to more intensive past damage from logging and fire. This planting combines forest plants with plantation crops using an agroforestry system



so that in addition to the benefits of restoring the ecosystem, it also produces economic benefits for the community.

A standout feature of this landscape is Tasik Segamai, a pristine 75-hectare peat water lake. Due to its extreme isolation, the lake remains virtually undisturbed, and the LPHD has adopted a strict precautionary management approach to protect its water quality and indigenous fish populations.

Organisational growth and development were a central priority throughout 2025. RER facilitated eight technical training sessions and six focused mentoring periods to enhance the LPHD's management capacity and procured essential field equipment, including a ketinting outboard motor to facilitate river transport.

These capacity-strengthening efforts translated into significant on-the-ground stewardship, with technically skilled personnel and institutional capability to manage the forest. The LPHD successfully implemented a comprehensive suite of safeguarding initiatives, including four community outreach sessions, the procurement of 500 naturally regenerated seedlings, and the enrichment planting of 50 native timber species. Protection infrastructure was further bolstered by the construction of a new watchtower, the installation of boundary signboards, and continuous year-round patrols led by six rangers. To enhance biodiversity monitoring, the team also deployed five camera traps across the concession.

EMPOWERING FISHING COMMUNITIES

RER partners with two fishing groups, Serkap Jaya Lestari and Tasik Guntung, to facilitate access to four minor rivers that flow through the landscape. By providing equipment and technical assistance, RER ensures that these communities remain resilient while adopting sustainable catch methods that protect aquatic biodiversity.

As well as providing equipment such as gillnets and 15 boats made of recycled plastic drums, the partnership also included collaboration with experts from Riau University. Eleven fishermen participated in technical guidance sessions focused on environmentally friendly fishing techniques. In addition, 16 members received specialised training from the BBKSDA, Indonesia's conservation agency, on mitigating negative human-wildlife interactions. RER also facilitated joint socialisation campaigns in coordination with the sub-district head (Camat) and local police (Kapolsek). These sessions, attended by nine community leaders, emphasised the strict prohibition of wildlife capture and the critical importance of forest and land fire prevention.

SOCIAL AND ECONOMIC SUPPORT FOR COMMUNITIES

The RER Community Relations programme is designed to establish functional community structures that support the protection and restoration of degraded forest areas. In 2025, the programme included a wide range of activities spanning public health, education and infrastructure, as well as support for sports and cultural events.

RER set up two fishery demonstration plots along with one agricultural demonstration plot to promote sustainable harvesting techniques. The programme implemented 11 eco-education sessions at elementary schools and facilitated 23 employee volunteering activities to inspire environmental stewardship. It also delivered 12 counseling sessions on Clean and Healthy Living Behavior and Family Planning. RER teams conducted a fire training refresh event on wildfire prevention and rapid response for Masyarakat Peduli Api (MPA), a community-based volunteer group.



Local fishers have access to the Serkap River within RER



CASE STUDY

HUMAN-WILDLIFE COEXISTENCE TRAINING

In the RER concession area, humans and wildlife live in close proximity, a dynamic that necessitates proactive management to prevent competition for resources from escalating into conflict. Guided by the Indonesian Ministry of Forestry Regulation (Permenhut 48/2008), RER defines human-wildlife conflict as interactions that negatively impact human socioeconomic life or the conservation of wildlife and their environment. In 2025, RER collaborated with the Riau Natural Resources Conservation Agency (BBKSDA Riau) to conduct specialised training for staff and local communities, reinforcing the principle that true conservation success is measured by the ability of both people and wildlife to thrive together.

The drivers of conflict are multifaceted, ranging from habitat pressure and resource competition to forest fires and seasonal harvest patterns. Species frequently involved in these interactions include the Sumatran tiger, sun bear and saltwater crocodile, the latter of which poses a specific risk to local fishers. To address



these challenges, RER's strategy is anchored in three core management principles: recognising the equal value of humans and wildlife, implementing site-specific solutions, and maintaining multi-party responsibility across the landscape.

Integrated Principles for Prevention and Response

The 2025 training distilled RER's approach into three actionable pillars:

- 1. Structural mitigation: Early detection and safety protocols**
RER utilises field technology and standardised protocols to minimise direct encounters. Field teams are equipped with high-intensity spotlights and radio communication systems for rapid coordination. Active deterrence involves the use of non-lethal, gas cannon tools to safely ward off animals from a distance by emitting a series of loud noises. In high-risk zones, such as known tiger crossings or crocodile habitats, RER has installed clear warning signs and mandated strict operational protocols that prohibit solo activity and non-essential work during nocturnal hours.
- 2. Non-structural mitigation: Education and tolerance**
Beyond physical tools, the focus shifts to behavioral change and community empowerment. This approach aims to move local responses from instinctual retaliation toward informed, planned coexistence. Education efforts

encourage preventive behaviours, such as securing harvests to eliminate attractants and adjusting daily routines to avoid wildlife corridors.

3. Conservation as an asset, not a threat

RER actively works to reshape local perspectives, encouraging communities to view wildlife as a protected asset rather than a threat. By involving community members in early reporting and monitoring, they transition from being recipients of conflict to becoming proactive conservation partners.

Reporting and Monitoring Protocols

Effective conflict management extends beyond the initial encounter through a rigorous three-step post-conflict protocol executed by the Conflict Handling Task Force, a partnership that includes local government, BBKSDA Riau, APRIL and civil society organisations. This includes an immediate post-incident response to verify chronologies and perform necessary rescue or relocation actions; a comprehensive reporting phase that documents every action taken for both humans and wildlife; and a monitoring phase to track the success of interventions and prevent recurrence. As a result of these integrated efforts, RER recorded no negative human-wildlife conflicts within the concession area in 2025, underscoring that coexistence remains the only viable path toward a sustainable future.



RER's Muhammad Iqbal at the 7th National Conference of Bird Researchers and Enthusiasts in Indonesia



OUTREACH AND ENGAGEMENT

Learning from others, while sharing successes and challenges, is core to RER's mission of responsible stewardship.



FIELD VISITS

Field visits play an essential role in enhancing stakeholders' understanding of the scope of RER and the operational challenges it encounters. In 2025, 213 visitors from around the globe toured the RER area, including a Serkap River journey, overnight stay at the Eco-Research Camp and the greenhouse gas flux monitoring tower sited in the forest. These facilities provide visitors with direct observation and detailed information regarding RER's restoration operations.

In 2025, visits to RER encompassed a range of interests, spanning restoration and conservation initiatives, research activities, operational safety evaluations and business-related visits. In December 2025, for example, RER hosted a three-week undergraduate internship programme for three students at Bogor Agricultural University's (IPB) Department of Forest Resources, Conservation and Ecotourism. The students gained hands-on experience in peatland restoration, sustainable forest management, and conservation practices, as well as an insight into community engagement.

Interns from the University of Riau visit the Eco-Research Camp



In another undergraduate programme, RER hosted five students from Universitas Riau (UNRI) between September and November. The students had the opportunity to integrate theory with the realities of working in the field of conservation and restoration. They gained hands-on experience of wildlife monitoring techniques, peatland fire prevention and hydrological management, as well as ecological data analysis.

EXTERNAL ENGAGEMENT

Throughout 2025, the RER team participated in various national and international forums, sharing technical insights and operational findings. Key engagements included:

Date and location	Event	Description
2 May Medan, Indonesia	Frontier Sumatra Screening	The documentary explores RER's conservation and protection work.
22 May Jakarta, Indonesia	Indonesia Biodiversity Week	Held in parallel with the IUCN Species Congress. An RER ecologist presented work on forest protection and restoration.
8-9 August Bogor, Indonesia	7th National Conference of Bird Researchers and Enthusiasts in Indonesia	An RER ecologist presented survey data on the Critically Endangered white-winged duck.
9-15 October Abu Dhabi	IUCN World Conservation Congress	RER's Head of Operations gave a presentation on the project's restoration journey and the benefits of APRIL's Production-Protection approach.
20-25 October Pangkalan Kerinci, Indonesia	26th AsiaFlux Conference	APRIL facilitated this global scientific event which featured a presentation by the Head of Ecosystem Restoration on the biodiversity value of APRIL's Production-Protection landscape. Two RER staff members also presented biodiversity research.
2 December Bogor, Indonesia	Asian Restoration Education Curriculum Development Workshop	The Head of Ecosystem Restoration served on an expert panel providing feedback on modules for landscape restoration curriculums developed by university staff within the ASEAN Region.





The Arunika cruiser's near-silent electric motor allows guests to hear the wildlife as they move along the Serkap River.



FINANCIAL SUMMARY

In US\$ ('000)

No.	Description	2013–2020	2021	2022	2023	2024	2025
1.	Employees	5,519	1,176	1,254	1,479	1,804	1,501
2.	Total Operational & Overhead Costs	5,373	1,468	1,390	1,564	1,618	1,642
3.	Legal and License Costs	8,387	179	183	208	199	336
4.	Partnerships*	5,156	430	336	230	1,138	1,014
5.	Advisory Board	190	–	64	63	60	58
6.	Capex	4,644	110	483	225	438	378
Total		29,269	3,364	3,710	3,769	5,257	4,929

* Dependent on the phasing of the implementation of agreed activities

