

RESTORASI EKOSISTEM RIAU

NEWSLETTER



Restorasi Ekosistem Riau (RER)

January 2017

RESTORING TODAY'S FOREST FOR TOMORROW NEEDS

Restorasi Ekosistem Riau (RER) is a long-term ecosystem restoration project that began in 2013, with the granting of a 60-year ecosystem restoration license for 20,265 ha of degraded ecosystem forest from the Indonesian Government. Four years later, RER now consists of 149,807 ha on the Kampar Peninsula and Padang Island in Riau province, Sumatra. RER applies a four-point restoration approach of **Protect, Assess, Restore, Manage**. RER has a team of 151, comprising 53 employees and 98 contractors, with 87% coming from Riau province. It employs strategies, partnerships, and actions to restore an ecosystem that has been degraded or damaged and find long-term solutions to the many inter-related and complex challenges that exist in the peat lands of Riau province.

RER aims to ensure that essential natural capital (forest, water, air, soil, wildlife, fisheries, and carbon) is maintained and enhanced. RER believes that promoting the use of global best practices and local decision-making processes will ensure the healthy provision of ecosystem services for environmental, economic and social needs. At present, APRIL Group is financing RER through revenues generated by responsible management of fiber production areas that supply local, national and global demand for traditional and specialty pulp and paper products. This synergy between conservation and economic activity, production and protection is the foundation of a landscape approach.



PARTNERS:



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A WORKING PARTNERSHIP

RER has four partners that are crucial to the success of the landscape restoration program. Each partner has a specific role and responsibility that directly guides and addresses the complex challenges of landscape restoration.

As the project sponsor, ecosystem restoration concession license-holder and land manager, APRIL provides financial commitment, leadership, and technical resource expertise.

BIDARA is working to improve the local human well-being by strengthening social capital and self-reliance of two rural communities (Pulau Muda and Segamai) which are immediately adjacent to the RER concessions. Through the Eco-village concept, a BIDARA community officer works to build capacity of individual farmers and community groups to utilize 'no-burn' agriculture practices, organic farming techniques, and animal husbandry.

Fauna & Flora International (FFI) is completing key studies related to biodiversity, climate and communities. To date, FFI has completed inventory work on 3 of 4 RER concessions on the Kampar peninsula (92,507 ha) and will continue this effort in 2017 on the remaining two concessions (57,300 ha) in the Kampar peninsula and Padang island. Significant outputs include:

1. Identification of over 550 plant, animal and fish species
2. Quantification of carbon stock
3. High Conservation Value Assessments
4. Well-being and Ethnography studies in nine villages totaling over 17,000 people
5. Conflict Resolution protocol and land tenure mapping

FFI's key findings are:

Biodiversity

1. The peat swamp forests of Kampar peninsula support typical and representative terrestrial flora and fauna of the ecosystem.
2. The Sumatran tiger is present on the Kampar peninsula.
3. 44 species present are listed on the IUCN Red List as Critically Endangered, Endangered or Vulnerable.
4. The majority of threatened species are closely associated, or completely confined to, mixed swamp forest.
5. The Kampar peninsula is used by migratory birds.
6. New distributional records were obtained for two birds and one amphibian.
7. All the forest areas within RER have High Conservation Values present.

Climate

1. Forest cover density is: High 20%, Moderate 58%, Sparse 21%, Open 1%.
2. There is over 690 million tons of carbon (above-ground, below-ground, and soil) within 92,507 ha of RER.
3. There is over 990 million tons of CO₂e reduction potential within RER.

Community

1. There are over 17,000 people residing in nine communities outside of RER concession, predominantly located on the south side of the Kampar River.
2. There are 139-1,345 households within each village.

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3. Teluk Meranti, Petodaan and Serapung are the oldest villages that were established in the mid-1800's. New villages have developed as a result of peat drainage (canal) development for increased access. The Bono road has also facilitated migrant population expansion and land development.
 4. The majority of people are Malay ethnic, with the addition of migrants with ethnicity from Bugis, Java, Sunda, Batak.
 5. A mixed economy predominates and includes: agriculture (rice, maize), plantation (sago, oil palm, rubber, coconut), fishing, logging, swiftlet bird nest houses.
 6. Roads are unpaved. All communities have elementary schools, but only 1 high school is located in Teluk Meranti. Government provided electricity and health care facilities exist, but are very limited.
3. Identify all public, private and civil society stakeholders, their significant issues and their level of interest in Kampar peninsula in order to assess the potential programs for co-investment that will formulate policies and institutional structures needed to collaborate on landscape management in the Kampar peninsula.
 4. Develop a) Causal Loop Diagram (CLD) that identifies the main causes and impacts of land use change, b) System Dynamics model to run various simulations that will quantify the CLD to assess both the economic and environmental trends that result.
 5. Conduct Practice Policy Forums at provincial and national levels to identify and prioritize main challenges and issues that key stakeholders face in landscape management.

Nature Conservancy (TNC) is establishing a model for integrated landscape management to produce a sustainable outcome for conservation, social and economic imperatives. Since February 2016, TNC is in a scoping phase (through June 2017) to assist RER to integrate the landscape management approach among all stakeholders on the Kampar peninsula. Activities thus far have included:

1. Identify landscape sustainability measures for conservation, production, human well-being and governance to reflect the fundamental values of other stakeholders on the Kampar peninsula as well as the management being conducted by APRIL and RER.
 2. Conduct a preliminary landscape assessment to evaluate APRIL's production, conservation and restoration investments on Kampar peninsula relative to the larger forested and non-forested landscape in Riau, with special focus on biodiversity and fire management issues.
- RER welcomes inquiries from interested parties that wish to participate in the collective effort to sustainably and responsibly manage the natural forests on the Kampar Peninsula and Padang Island.
- Taken as a whole, RER's efforts can contribute to the Indonesian governments' strategy of achieving its Intended Nationally Determined Contribution (INDC) to reduce greenhouse gas emissions by addressing the following:
- Integrated, multi-sectoral landscape approach with focus on terrestrial ecosystems and capacity building at the Regency and Provincial levels
 - Scaling-up the use of private sector best practices and traditional wisdom to innovate climate adaptation mitigation efforts
 - Promote climate resilience by improving the management of natural resources and implementing protection and restoration activities in key terrestrial ecosystems.

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WHY IS KAMPAR PENINSULA IMPORTANT TO PROTECT AND RESTORE?

- It is one of the last lowland tropical peat forests in Sumatra, containing a single block of forest that exceeds 300,000 ha (3,000 sq km) in size.
- It represents over 2% of Indonesia's 28.5 million ha commitment to the 2011 Bonn Challenge to restore 150 million ha of forest globally by 2020.
- Based on FFI's biodiversity assessment¹ there are over 550 species of animals and plants. 44 species are listed by IUCN as globally threatened, 64 species are listed on CITES Appendix I and II that restrict international trade, and 83 species are protected by the Indonesian government.
- BirdLife International identifies the Kampar Peninsula as an *Important Bird Area*
- The IUCN (2007) identifies the Kampar Peninsula as a *Key Biodiversity Area*
- WWF, WCS, et. al. (2006) identifies Kampar Peninsula as a *Class II Tiger Conservation Landscape (habitat for 50 tigers) and Priority 2 for restoration at the regional level.*
- FFI's Interim Carbon Assessment estimates there is over 693 million tons of carbon within a 92,507 ha area of RER. Inventories will continue in 2017.
- Over 17,000 people from nine communities depend upon the availability of fresh water, fisheries and forest resources available on the Kampar Peninsula. .
- The Kampar Peninsula produces forest products for local, national, and international markets.

Many stakeholders are unclear of the location and license-holdings on Kampar Peninsula landscape. We hope the below map will clarify this point:



It is imperative that Kampar Peninsula and Padang Island are effectively managed as an integrated landscape approach to responsible peat land conservation and production, and to contribute to

Indonesia's and the world's efforts toward climate change mitigation.

¹RER Publication Series No. 1, Biodiversity of the Kampar Peninsula, Summary Report, November 2016. 24p. Available at: www.rekoforest.org

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EVALUATING PROGRESS

In evaluating our progress, we have turned to Conservation International² for a concise and understandable definition of Sustainable Landscape Approach as well as a series of criterias against which to measure RER’s progress. The value of these criterias are that they provide a repeatable and internationally recognized set of standards.



Crested Serpent-eagle
(*Spilornis cheela*)



Serkap River

CRITERIA	RER ACTIVITIES AND ACHIEVEMENTS
<p>Protection of natural capital</p>	<ul style="list-style-type: none"> • The essential natural capital is the tropical lowland peat forest, that is habitat to over 550 species of fauna and flora, 10-15% of which is globally threatened (IUCN) and nationally protected. • The hydrological integrity (water) of the Kampar Peninsula and Pulau Padang peat domes are critical to maintain the fisheries that are depended on by thousands of local residents. In 2016, RER constructed 21 dams to close 6 of 30 known drainage canals which were previously constructed mostly by illegal operators. Canal closures will continue annually. • Restoring the peat water table to natural seasonal fluctuations is essential to maintain moist peat to prevent or minimize oxidation and peat moisture release. In 2016, 49 water table monitoring points were established. • Since 2015, there were no incidents of illegal logging, deforestation or fire within RER even during the worst El Nino on record in Indonesia.
<p>Sustainable production along key commodity chains</p>	<ul style="list-style-type: none"> • RER’s partner for community engagement, BIDARA, conducted 17 “no-burn” trainings in Sangar and Segamai villages to intensively utilize degraded peat lands for agriculture to develop chili farms. • To enhance livelihood security and minimize waste, 40 families received ownership of goats by passing on offspring to neighbors. Use of organic goat manure is replacing ash as a source of soil nutrients. • “No-burn” agro-forestry demonstration plots were established with farmer groups in Lukit, Kudap, Bandul, and Selat Akar villages on Padang Island.

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White-throated Kingfisher
(*Halcyon smyrmensis*)



Sangar River canal blocking

<p>Governance and policy alignment at all levels</p>	<ul style="list-style-type: none"> • TNC is supporting the KPHP-TBS to develop the landscape approach through multi-stakeholder collaboration and landscape policy development. • Alongside KPHP-TBS leadership, all landscape stakeholders will be engaged to adopt these policies and monitor progress in transparent and accountable policy and practice forums. • RER and TNC have met four times with KPHP-TBS and/or KPH in 2016 on the development of a collaborative landscape approach.
<p>Sustainable finance</p>	<ul style="list-style-type: none"> • APRIL has committed USD100 million for 10 years (2016-25) to support a landscape level ecosystem restoration approach. • TNC is exploring and developing models for sustainable long-term finance options that will be presented in early 2017.
<p>Science-based decision making</p>	<ul style="list-style-type: none"> • FFI's fauna and flora biodiversity report, establishing baseline for future conservation initiative at RER site. • Installed greenhouse gas flux tower for emission monitoring. • TNC in the process of mapping landscape-level stakeholder values. • RER utilizes water management best practices, SOPs, and receives guidance from APRIL's Independent Peat Expert Working Group (IPEWG) composed of six (6) national and international peat scientists.

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RER Forest Rangers



Changeable Hawk-eagle
(*Nisaetus cirrhatus*)



Dragonfly (Order: *Odonata*)

<p>Multi-stakeholder participation</p>	<ul style="list-style-type: none"> • The RER Advisory Board is composed of five (5) national and international conservation experts and provides oversight and guidance to restoration managers. • Collaboration with PT RAPP’s Fire Free Village Program on community-based fire prevention initiative • RER, FFI, and MoEF authorities have met with villages (7 on Kampar Peninsula, 7 on Pulau Padang) to inform on the rights and obligations of Ecosystem Restoration license holders and discuss community needs and collaboration opportunities. • In 2016, RER provided trainings in “no-burn” agriculture (21), fire suppression (6), and constructed clean water well in Lukit village, Padang Island. RER also suppressed land-clearing fires in six (6) villages.
<p>Continuing improvement through monitoring and evaluation</p>	<ul style="list-style-type: none"> • RER’s logical framework identifies 3 goals, 11 objectives and 39 operational activities to be implemented and monitored. • RER is developing a Quality Management System (e.g. ISO14000) to establish SOP’s, documentation, and auditing of the logical framework to ensure continuous improvement.

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Implementation through partnerships

- RER's four partners include FFI, BIDARA, TNC and APRIL.
- FFI is focused on baseline studies of biodiversity, carbon and communities.
- BIDARA is focused on implementing improved farming techniques in two villages to improve human wellbeing.
- TNC is focused on developing strategic landscape planning, expanding stakeholder awareness and involvement in landscape management, and sustainable financing models.
- APRIL has committed USD100 million through 2025 to initiate RER and landscape approach in Kampar Peninsula and Pulau Padang.
- New opportunities and mechanisms for donors and local stakeholders are being explored to participate in protection, assessment, restoration and responsible management of the Kampar peninsula landscape.

²www.conservation.org/publications/Documents/CI-Science-to-Policy-Sustainable-Landscape-Approach.pdf



Chili harvested from “no-burn” demonstration plots at Pulau Muda



Calanthe triplicata Orchid