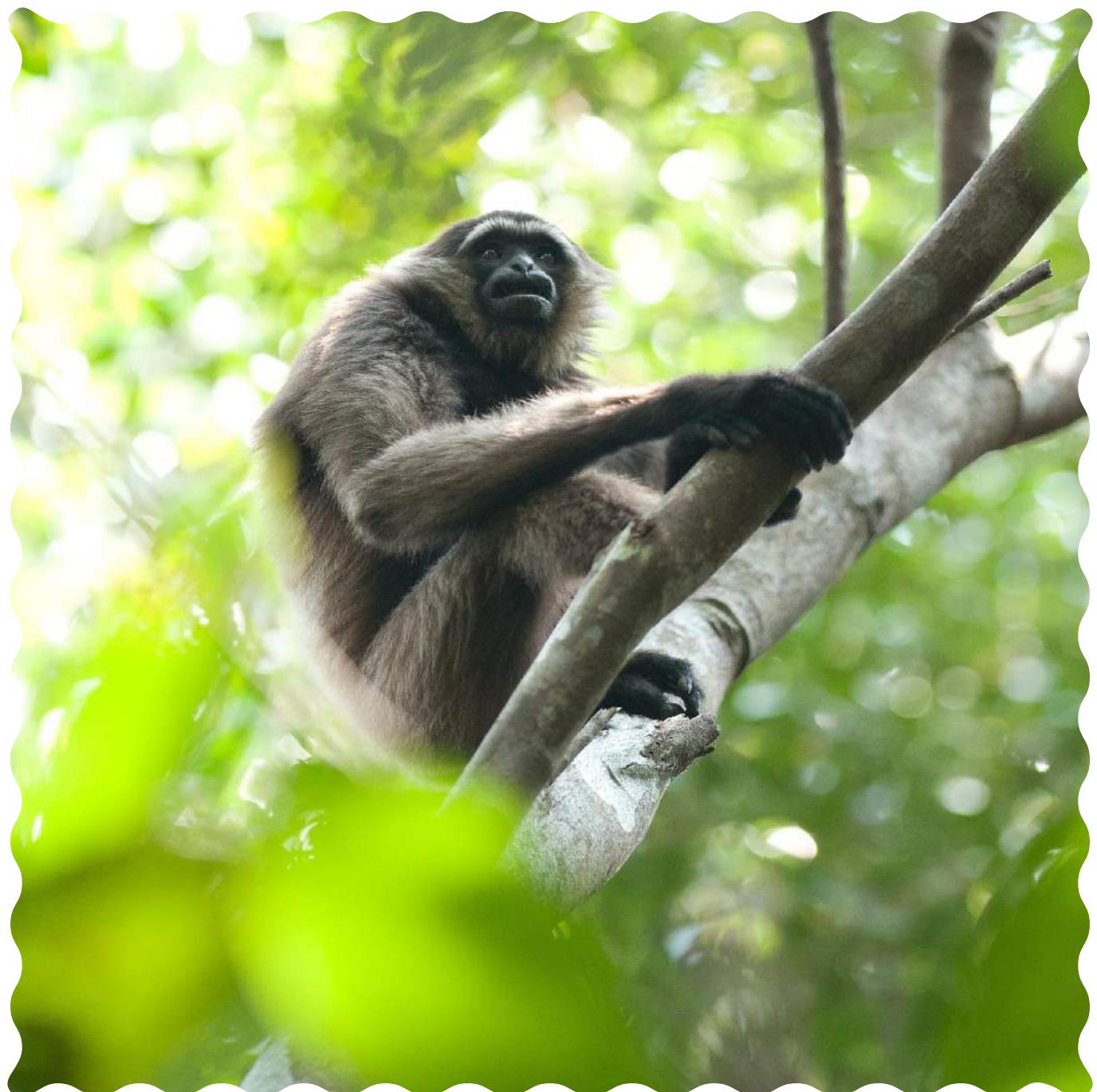


BORNEO NATURE FOUNDATION

ANNUAL REPORT 2020



Contents



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Executive Summary	4
Highlights of 2020	6
COVID-19 Response	8
Saving the Rainforest	10
Scientific Research and Monitoring	12
Research Highlight and Publication	14
Community Development	15
Environmental Education & Outreach	17
2020 in Numbers	18
Financial Summary	19
Acknowledgements	20

Executive Summary



The year 2020 was marked by the COVID-19 pandemic that hit almost the entire planet. For the world of forest conservation, the pandemic highlights two important aspects. Firstly, it reminds us of how increasingly crucial healthy forest ecosystems are for the survival of mankind in the future, and that we must work harder than ever to conserve forests for biodiversity and humanity alike. Secondly, the pandemic presents new challenges for all stakeholders in forest conservation in the form of limitations on activities, reduced mobility and lack of resources, and encourages us to innovate in the face of adversity.

Although challenging, these two aspects only inject enthusiasm into the Borneo Nature Foundation (BNF), to continue to move, strengthen, and adapt in the midst of a pandemic to actualize rainforest conservation in Central Kalimantan. Together with partners, governments, communities, and donor agencies, BNF continues to expand the scope and impact of pioneered programmes, including forest restoration and research programmes in the Sebangau National Park, community empowerment through support for social forestry management in the Rungan landscape, education and outreach activities for young people concerned about the environment, and biodiversity research in Barito Ulu.

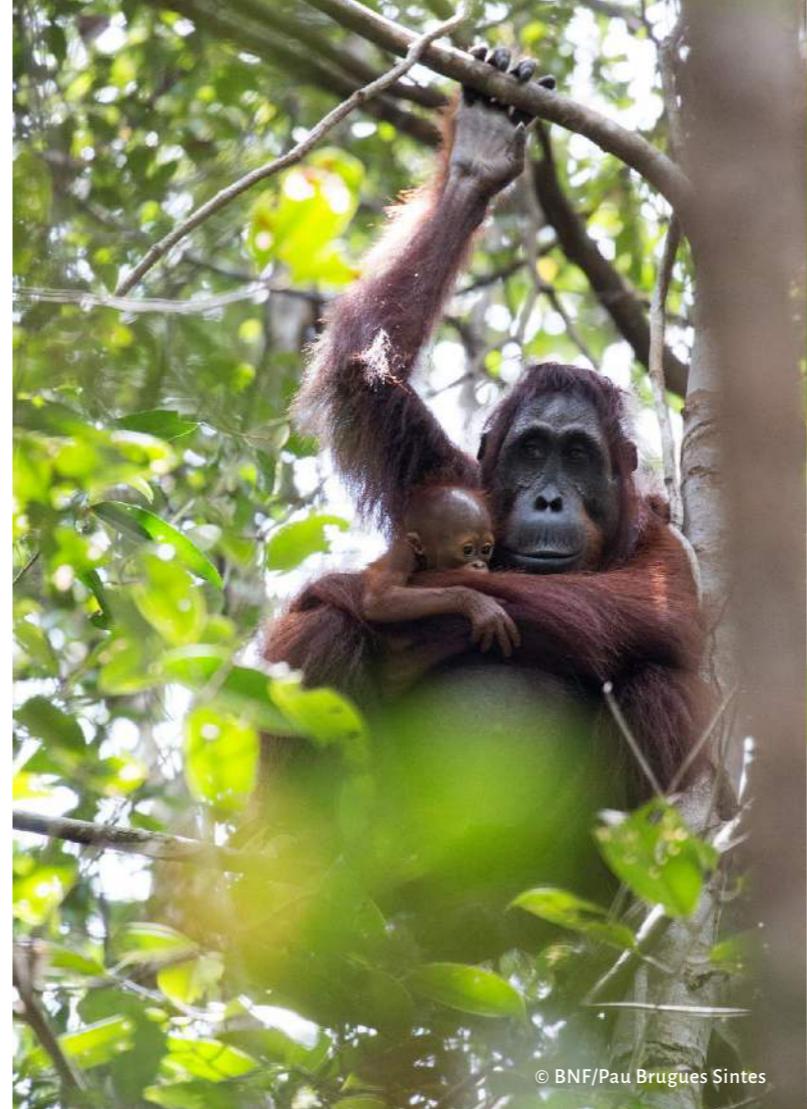
BNF also realizes that human resources are the backbone in running and achieving success in each of our programmes. Therefore, during this pandemic we have taken great care to protect our staff and collaborators by implementing a stringent COVID-19 protocol, regular COVID-19 tests, vaccinations, and creating safe working guidelines, both in the office and in the field, in order to protect those that we care about and the biodiversity we work with, whilst continuing our critical work in each of our programmes.

With all the achievements and efforts that have been carried out in 2020, the board expresses its gratitude to the trustees, management team and all employees for their hard work and support. The board also expressed its appreciation for BNF's partners, including the Indonesian government, donor agencies, universities, the private sector, community groups and other NGO's. The board encourages BNF management and staff to continue to increase their capacity and always strive to achieve their best for the protection and preservation of Kalimantan's precious rainforests.

2020 has brought great developments within BNF and we will see changes in the management structure of BNF starting in early 2021. The new structure is expected to further strengthen the organisation as a whole to meet new challenges in the coming years. With these changes and expansion within BNF, we will only work harder and with continued passion to achieve our mission as a strong and supportive team. Therefore, BNF continues to be committed to realizing the mission carried out, through cooperation and support from all parties, both internal and external.

This pandemic is not over, and I don't know when it will end, but we must remain aware so that we can all continue the conservation effort in Central Kalimantan.

----- **Juliarta Bramansa Ottay**
Chairman of Yayasan Borneo Nature Foundation Indonesia



Highlights of 2020



© BNF/Jack Lammas

2020 has been a challenging year for all those around the world, but at BNF, the dedicated efforts of our team and partners meant that we were able to continue, and even expand, our important research and conservation work, and innovate in the face of adversity. We are extremely pleased to share with you some of the highlights of our work this year, which give testament to the hard work and devotion of our teams and collaborators to conserving the tropical rainforests of Borneo; for biodiversity, for people and for the global climate.

RUNGAN

Identified 5 species of rare wild cat, over 200 species of bird, and one of the largest unprotected populations of Bornean orangutans in the world

The Indonesian Ministry of Environment and Forestry (MoF) published the revised Indicative Map for Social Forestry schemes (PIAPS) leading to several more Social Forestry schemes, conceding 17,039 ha of forest for community management.

New Social Forestry permits approved, allocating 17,039 ha to community management

Supported the establishment of the Indigenous Customary Group (MHA), granting the indigenous communities of Mungku Baru legal ownership over their ancestral forests

Expanded our community development programme into 5 villages, empowering over 1,773 individuals from 415 households

BARITO ULU

Established discussions with Murung Raya local government and the Heart of Borneo Working group (POKJA HoB) regarding priority plans for the Rekut area, including forest and wildlife monitoring and strategic development needs

Mapped and established a wildlife monitoring plan and study design using camera traps

Became a member of the Water Resources Management Coordination Team (TKPSDA) of the Barito River Basin

SEBANGAU

Established BNF-BTNS partnership and signed the Sebangau Program Work Plan

Expanded partnerships with 2 community firefighting teams, 2 women's groups and 4 local schools

Founded four new community nurseries

Extended BNF – LLC CIMPTROP – University of Palangkaraya collaborative agreement for another two years for research and conservation

Built a new boardwalk, blocked drainage channels and built a new in-situ seedling nursery

No fires in the Northern Sebangau boundary in 2020!

BNF INTERNATIONAL

New international team set up to increase awareness and raise funds internationally, working actively in the UK, Spain, France and the Netherlands

COVID-19 Response



At the very end of 2019, a novel Coronavirus (COVID-19) was detected in Wuhan, China, quickly spreading to other regions and, shortly thereafter, worldwide. However, even in the midst of these difficult and uncertain times, our teams demonstrated a strong spirit, going out of their way to support one another and improve existing research and conservation work.

Throughout this crisis, BNF supported all existing staff members to retain skills and knowledge, and to continue essential conservation and monitoring activities within the parameters of local restrictions. BNF and our partners increased forest patrols, firefighting preparedness and socially-distanced community outreach in response to potential increased threats. Abiding by gathering size and local travel restrictions, we held sessions to raise community awareness of COVID-19 and its risks to both human and ecosystem health. Hand sanitiser and BNF-branded facemasks were disseminated, as well as pamphlets instructing people on how to stay safe during these uncertain times.

BNF started developing new strategies and conservation initiatives in the context of COVID-19, securing rainforests for local livelihoods and resilience to current and long-term COVID-19 impacts, specifically working on the following objectives:

1. Supporting local communities to increase awareness and knowledge of the relationship between environmental health and well-being, enabling them to take active measures to reduce COVID-19 related impacts on their health and livelihoods.
2. Strengthening monitoring and patrolling of the forests in order to reduce COVID-19 related impacts.

In 2021, BNF will continue to deliver a series of small COVID-safe workshops / webinars, stakeholder meetings and community outreach and awareness events in order to discuss new emerging environmental threats and provide advice on good practices, support and resources to mitigate COVID-19 transmission in Central Kalimantan.

Saving the Rainforest

© BNF/Yohanes Praharra



Indonesia's forests are under increased pressure owing to the impacts of COVID-19 on law enforcement, protected area management and monitoring. Increased forest-use during the pandemic raises the risk of peat-forest fires and further threatens biodiversity. We aim to overcome this through our community-led conservation initiatives, informed by rigorous scientific research.

In Sebangau, community members are engaged in fire prevention, peat-rewetting, reforestation and firefighting to protect and restore vital orangutan and gibbon habitat. Community patrols monitored the forest for fire outbreaks and deter illegal logging and poaching in partnership with BTNS authorities. As a result of these activities, no fires occurred in the northern boundary of the Sebangau National Park. BNF teams have continued to block illegal drainage channels to re-wet the peat, as well as expanding our reforestation activities through our community nurseries project. 48,902 seedlings for our 1 Million Trees campaign were planted this year in the Sebangau National Park restoration areas, most

of which were grown by community nurseries and some received through a donation from Watershed Management Centre and Protected Forest (BPDAS) in Central Kalimantan.

Our focus on upscaling community reforestation efforts has been recognised by multiple awards bodies and, in July 2020, we were awarded the Keeling Curve Prize for advancing technological and nature-based strategies for carbon capture. In September 2020, BNF was selected as a winner of the World Economic Forum's UpLink Trillion Trees Challenge and won the People's Choice Award. These awards have helped to bring BNF's peatland restoration expertise to global attention and given us the platform to upscale our work even further.

Across the Rungan landscape, we are collaborating with government departments, communities and the private sector to guide the creation of new protected areas, expand Indonesia's Social Forestry scheme, and encourage companies to sustainably manage High Conservation Value (HCV) forests within their concessions. In the last year, we carried out community

appraisal surveys in nine villages to identify the potential of each village to develop post-protection schemes, and identified the next steps to officialise the managerial rights granted to community members; helping them to develop community business models (KUPS) based on sustainable livelihoods and protecting over 17,000ha of forest.

In partnership with the Forest Area Consolidation Center (BPKH XXI), the University Muhammadiyah Palangkaraya (UMP) and the Central Kahayan Forest Management Units (KPH), BNF carried out community meetings and field surveys to socialise, validate and instigate the boundaries delineation of the research and education forest (KHDTK) of Mungku Baru village (4,910 ha). Regular monthly patrols have been implemented inside the KHDTK area, carried out by the BNF team and the Mungku Baru community to secure the area from illegal logging and poaching.

We are currently engaging with four plantation and timber concessions to identify HCV areas, delineate boundaries with community managed forests, and conduct biodiversity surveys within concession areas,

supporting the KPH to manage 20,000 ha of newly protected forest.

In December, we signed a Memorandum of Understanding with the Pulang Pisau District government. Together, BNF and the Pulang Pisau District have formed the Essential Ecosystem Area Collaboration Forum (Forum KEE) for the development of wildlife corridors. These wildlife corridors will connect otherwise fragmented populations, reducing the risk of extinctions. Areas of the Pulang Pisau Regency which form part of the Rungan landscape, including Kahayan Tengah and Banama Tingang Sub-Districts, will be proposed as part of the KEE scheme. In partnership with local governments and communities, BNF is working to develop a KEE corridor based on a multi-managed and multi-function scheme, connecting the Social Forestry protected areas managed by community groups, the High Conservation Value areas managed by Concessions and the protection & empowerment forest blocks managed by the FMU.



Scientific Research and Monitoring

High quality, long-term research is the bedrock of all effective and sustainable conservation strategies. This year, BNF and our local partners have endeavoured to continue as much of our research and monitoring activities as safely possible within COVID-19 restrictions. Orangutan population monitoring reveals that orangutan populations in the Sebangau National Park remain stable, with a gradual increase in density recorded. This is a continuation of the long-term trend seen since a logging-induced population crash in 2001, highlighting the success of the habitat protection efforts in Sebangau National Park. In 2020, tree deaths were roughly balanced by new growth, suggesting a stable forest dynamic. We will continue to monitor forest structure and dynamics to parse the lasting effects of external disturbance, such as haze from fires and climate change.

As the COVID-19 pandemic started to spread throughout the world, BNF complied with the IUCN SSC Primate Specialist Group recommendations and decided to suspend primate observations, thus minimizing the risk of SARS CoV-2 transmission. Our field teams are continuing with other vital research activities, including camera trap surveys, monitoring forest structure and productivity, assessing butterfly and dragonfly diversity and abundance as a bioindicator of forest health, and have even developed new mammal surveys in place of the suspended primate observations with great success. All field staff entering the forest for such research activities conduct regular COVID-19 testing to ensure the safety of their colleagues and wildlife populations.

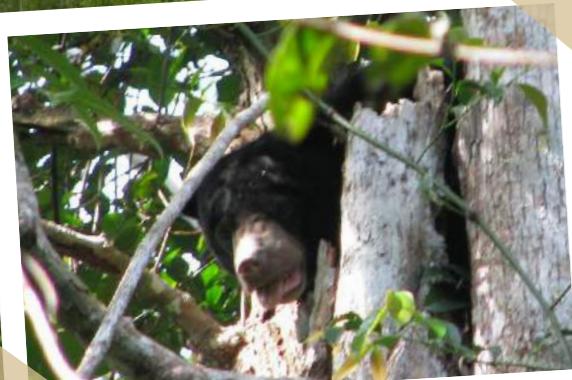
This year we saw some exciting new additions to our primate families! In February, our field team reported a newborn red langur within a very protective family! A baby gibbon was also born in November to the group known as 'Karate'. These births are wonderful news, demonstrating that our conservation efforts are succeeding, boosting populations of Borneo's threatened primates. Thanks to our camera-trap project, we observed many rare and unusual species in our research area in 2020, including a sun bear with a

missing foot on his left back leg, probably an old injury from a snare trap. The individual has been caught on our camera-traps multiple times, demonstrating its ability to move around and find food, despite the handicap. This brave sun bear is proof that protected areas work as a sanctuary for wildlife. We hope to see this special bear continue to thrive in the years to come!

We finalised the Rungan landscape survey phase and continued our regular research activities in the region, including land use and land cover change, orangutan population surveys and biodiversity monitoring. At present, monthly KHDTK survey expeditions focus on orangutan and gibbon population estimates, camera trapping to identify mammal diversity, forest structure and productivity, and monitoring forest health through bioacoustics.

Engaging and sharing information with stakeholders and the public remains a high priority. In 2020, BNF scientists in partnership with Indonesian researchers submitted and published several papers, many of which focused on COVID-19 as a major emerging issue influencing conservation agendas. We collaborated with Indonesian and international universities and researchers, supporting and advising on one BSc, eight MSc, one PhD and two post-doctorate research projects.

BNF is actively expanding our research capacity, introducing exciting new technology for biodiversity monitoring. As part of our Drones for Conservation project, we developed research trials using thermal camera technology which aid the detection of fire hotspots. We are also studying the effectiveness of thermal camera drones for detecting orangutan nests, picking up animals' heat signatures from deep in the forest, to estimate orangutan populations more efficiently. The use of drones will help to reduce costs and improve access to areas which would be difficult to access by foot. We are working to create a training workshop to teach local field assistants how to conduct orangutan surveys using these methods.



Research Highlights and Publications



Completed the Rungan landscape spatial mapping; including forest cover, forest loss, habitat types, orangutan population densities and distribution, and wildlife corridors for each of the managed areas.



Implemented research experiments on the use of drone technology for automated detection and monitoring of peat fires with thermal infrared sensors

12

Collaborated on 12 research projects.



Creation of new mammal surveys in the National Laboratory of Peat Swamp Forest.

PUBLICATIONS



Cheyne, S. and Bramansa Ottay, J. 2020. [Managing staff and health in wildlife conservation: a perspective from the Borneo Nature Foundation](#). *Biodiversity*, 21:2, 107-108. DOI: 10.1080/14888386.2020.1776154.



Chua, L., Harrison, M.E., Fair, H., Milne, S., Palmer, A., Rubis, J., Thung, P., Which, S., Büscher, B., Cheyne, S.M., et al. 2020. [Conservation and the social sciences: Beyond critique and co-optation. A case study from orangutan conservation](#). *People and Nature*, 2:1, 42-60. DOI: 10.1002/pan3.10072.



Harrison, M.E., Wijedasa, L.S., Cole, L.E.S., Cheyne, S.M., Choiruzzad, S.A.B., Chua L., Dargie, G.C., Ewango, C.E.N., Honorio Coronado, E.N., Ifo, S.A., et al. 2020. [Tropical peatlands and their conservation are important in the context of COVID-19 and potential future \(zoonotic\) disease pandemics](#). *PeerJ*, 8:e10283. DOI: 10.7717/peerj.10283.



Wyatt, E. 2020. [A personal account of health in conservation](#). *Biodiversity*, 21:2, 109-112. DOI: 10.1080/14888386.2020.1769729

Community Development

Our community development projects accelerated in 2020 for both Sebangau and Rungan programmes, incorporating a further village in the Rungan landscape for sustainable livelihoods training. Community appraisal surveys were initiated in nine villages to identify the potential of each village in order to develop post-protection schemes. We can then establish the next steps for officialising the managerial rights granted to community members, helping them to generate community business models (KUPS) based on sustainable livelihoods. We are now implementing capacity building and training sessions across five villages, using a holistic model to determine which methods are best suited to community members' respective needs and expertise. BNF currently offers training in fishpond aquaculture, kelulut honey cultivation and vegetable gardens.

Fishpond aquaculture reduces community members' reliance on river fishing. Mercury is used in an extractive process for illegal gold-mining, but often leaches into the region's rivers, poisoning people and wildlife. Harvesting fish from ponds instead of consuming fish caught in the river nullifies the risks of mercury poisoning, which is especially important for communities in rural Borneo where medical support is limited. Most ponds installed with BNF's help have succeeded, representing a significant source of income for local families. For example, in October, fishponds in Panjehang yielded 178.5kg of fish with a sale profit of nearly 5.5 million IDR.

Training in kelulut honey production was launched this year in the villages of Bukit Sua and Tambak villages. 12 colony boxes have been distributed to community members in Bukit Sua, which remain in good condition and beehives are multiplying. To date, Tambak village has 98 active hives and has successfully cultivated honey from 12 of these. We are continuing to work with community members to improve maintenance of home vegetable gardens which are currently producing crops of long beans, pumpkins, eggplants, chilies, several types of flowers,

and herbs, such as ginger, lemongrass and turmeric.

Around Sebangau National Park, six community seedling nurseries have so far been established in the Kereng Bangkurai and Sabaru villages, involving a total of 42 families. Community members are responsible to self-manage the Community nurseries and take care of and grow the seedlings, which B Nature Foundation (BNF) then buys back one large enough to plant, ready for planting in the rehabilitation area of the Sebangau National Park. We support with an initial investment to establish the nurseries, and run training sessions and workshops for community members to learn and improve techniques in maintenance and care of the crops, planting new seeds, land clearance, fish care and crop harvesting. The first harvesting was carried out in August 2020, yielding a successful crop of tomatoes, chillies, eggplant, kale, celery and turmeric. Furthermore, through our community nurseries project, we encourage and support community members to develop sustainable income sources and additional benefits through the reforestation project, including aligned permaculture and aquaculture initiatives, and the adoption of new peat-friendly land management practices across sectors.

BNF is working to empower women into conservation initiatives, currently 30% of the community nurseries are led by women and we have established two women's groups that weave purun (reeds) bags for purchase by BNF, providing a biodegradable alternative to the polybags used in most afforestation projects.

The BNF community development programme aims to develop networks of green and small-scale economy with a sustainability approach; providing conservation-related financial benefits to community members, which contribute to poverty alleviation at the local level, including direct benefits towards conservation initiatives, including community nurseries, canal blocking activities, community firefighting teams, women's groups and other green job opportunities.

Community Development

Aquaculture



Permaculture



Bee keeping



Community nurseries



Community firefighting teams



Women making seed bags



© BNF/Mohamad Burhanudin

Environmental Education and Outreach



Prior to the global spread of COVID-19, we organised the Borneo Initiative Youth Camp in collaboration with Bina Cita Utama school in Palangka Raya. 70 students from seven schools participated in gaining knowledge and experience in research and conservation through presentations, hands-on learning, cultural experiences, group discussions, campaign-creation and visits to local conservation and educational projects. Pandemic restrictions later complicated the delivery of our environmental education projects, but we innovated in the face of adversity. Our education team converted many of their sessions to online and developed weekly resource packs which were delivered to children in more remote villages without internet access. The annual Anak Sebangau (Children of Sebangau) Festival was successfully held online, reaching over 200 children, as was our 'Jungle Explorer' webinar. We also ran regular virtual sessions for the Sebangau Rangers, a group of passionate young people aged 12-18 based near the Sebangau National Park, and for Mungku Baru teenagers wanting to play a role in the protection of Rungan's forests. Beyond these child-centred education initiatives, we organised webinars for the wider public to learn about our work in Central Kalimantan.

In service of our international outreach efforts, BNF expanded its overseas teams with the formation of new offices in the UK and Spain. These European teams will be primarily responsible for raising funds

and conservation awareness on behalf of on-the-ground conservation work in Indonesia.

This year, BNF was featured in a wildlife conservation mobile game called 'Wildeverse', creating an immersive environment for players to protect the world's last remaining jungles and the endangered apes who call it home. All characters featured in 'Wildeverse', human or otherwise, are real and their storylines authentic.

We also successfully launched the first edition of our Natura magazine in October. Available both online and in print, the magazine serves to publicise BNF's conservation activities and make the results of our research accessible to a wider range of audiences.



2020 in Numbers

48,902

Seedlings planted in the reforestation area through our 1 Million Trees campaign.



Supporting 6 community nurseries involving 42 families in Sebangau.

186

Beehives in active use as part of our sustainable livelihoods initiative.



People involved in sustainable livelihoods training in the Rungan landscape.

147

70|7

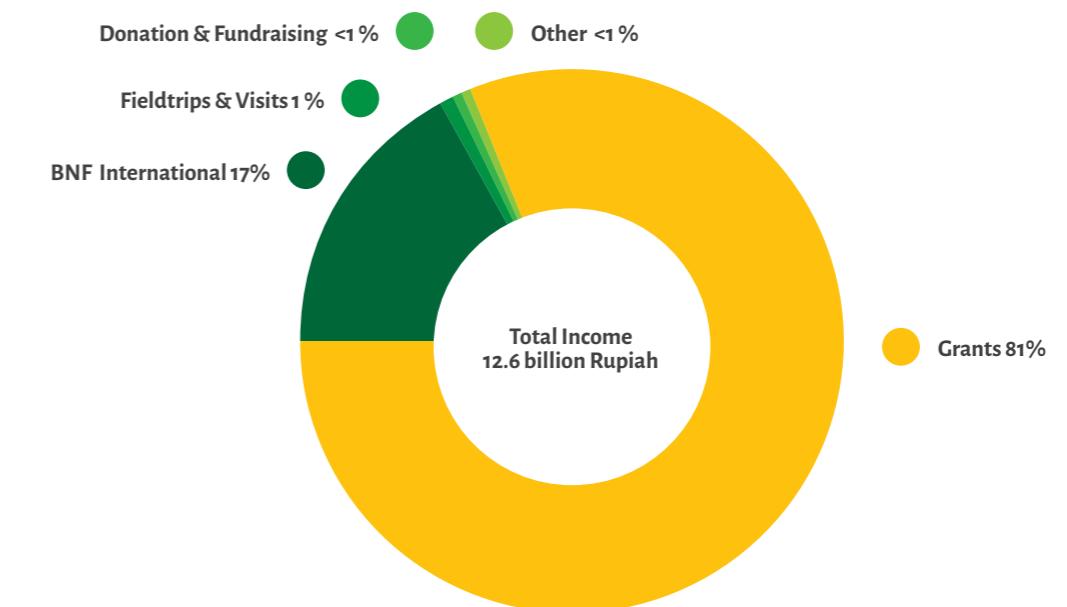
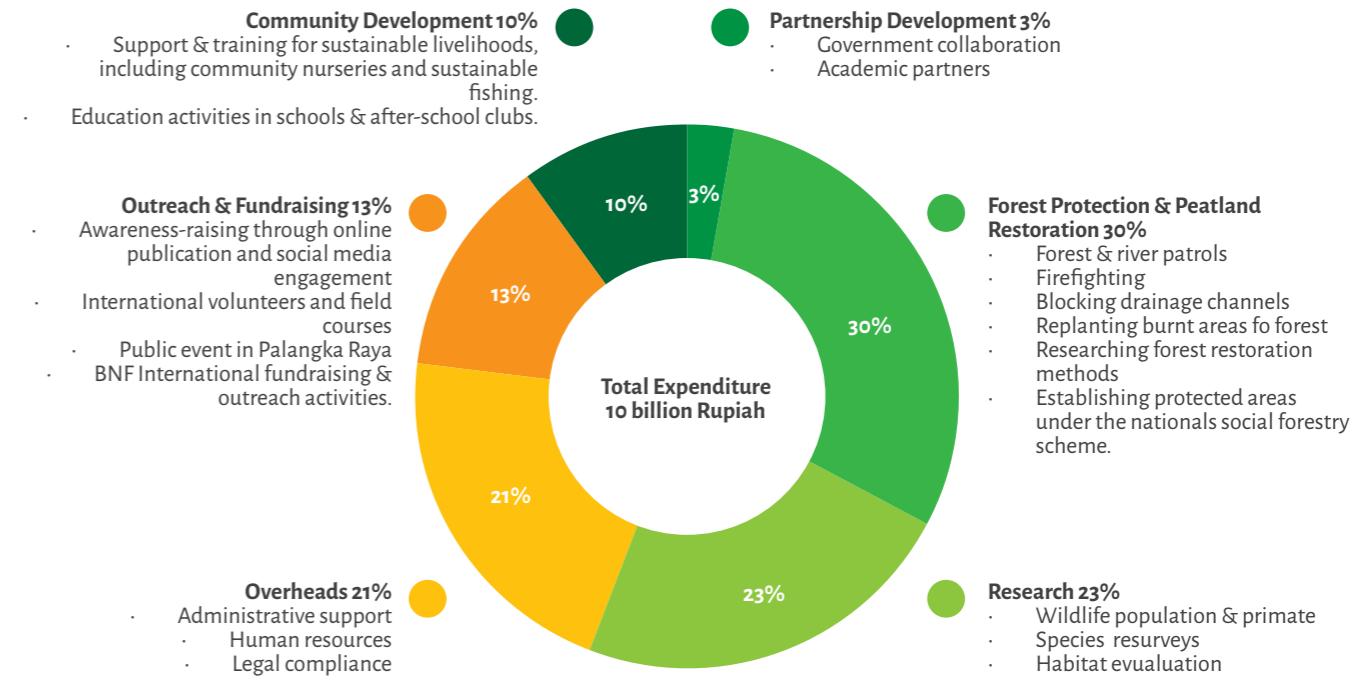
Supporting 4 patrol and firefighting teams across Sebangau and Rungan landscapes.



70 students from 7 schools participated in our Borneo Initiative Youth Camp.



Financial Summary



Acknowledgments

None of BNF's conservation efforts would have been possible without our dynamic network of partners, collaborators and supporters from Indonesia and beyond. Your contributions make all the difference! We look forward to our continued work together, forging a sustainable future for Borneo's rainforests and its globally-important biodiversity.

We are especially grateful to the **Government of Indonesia and its affiliates** for their invaluable support and partnership:

Indonesian Ministry of Environment and Forestry (KLHK)

General Directorate of Social Forestry and Environmental Partnership (PSKL)

Natural Resources Conservation Agency Central Kalimantan (BKSDA)

National Research and Innovation Agency (BRIN)

Sebangau National Park Authority (BTNS)

Central Kalimantan Environmental Agency (DLH)

Murung Raya District Environmental Agency (DLH)

Forestry Agency Central Kalimantan (DISHUT)

Education Agency Central Kalimantan (DISDIK)

Disaster and Fire Management Agency Central Kalimantan (BPBD)

Technical Unit for Social Forestry Schemes Kalimantan (BPSKL)

Ministry of Tourism and Creative Economy

City Government of Palangka Raya

Pulang Pisau District

Gunung Mas District

Murung Raya District

Forest Management Units (KPHP – Central Kahayan) III, XIII and XVIII

Forest Management Units (KPHP) I and II Murung Raya District

BNF is pleased to partner with local and international universities, and we extend our thanks to all students for furthering scientific research in Central Kalimantan.



University of Palangka Raya (UPR)



Palangka Raya Christian University (UNKRIP)



National University (UNNAS)



Gadjah Mada University (UGM)



University of Exeter



Oxford Brookes University



Liverpool John Moores



University of Leicester



University of Kent, Cornell

We are proud to work alongside the CIMTROP Community Patrol Team and local firefighting teams, TSA CIMTROP Kalimantan Tengah, MPA Kereng Bangkirai, MPA Sabaru, MPA Mungku Baru and TSA Bukit Tunggal, facilitating effective training programmes and improving on-the-ground firefighting capacity in Sebangau National Park and the Rungan Landscape.

We offer additional thanks to the communities of Kereng Bangkirai, Sabaru, Mungku Baru, Petuk Berunai, Bukit Sua, Penjehang, Tambak, Kasali Baru, Penda Barania, Balukon, Petuk Liti, Tahawa, Tuwung, Sigi, Parahangan and Pamarunan for their engagement and enthusiasm.

We would like to have a special mention for Pak Yusurum Jagau (Director of UPT LLG CIMTROP - University of Palangkaraya) who passed away in March 2020 after a long illness. Dr. Jagau was a prominent academic figure at the University of Palangka Raya (UPR), and a dedicated researcher, environmentalist and a good friend of BNF.

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Finally, we owe a debt of gratitude to the following **organisations and institutions** for their generous support and collaboration:





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