

**PROJECT EVALUATION REPORT**

**YAYASAN PARADISEA MANOKWARI**

**FOREST ZONE PROTECTION IN THE PAPUAN BIRD'S HEAD REGION THROUGH SUSTAINABLE  
FOREST MANAGEMENT BY INDIGENOUS COMMUNITIES AND GOVERNMENT**

**FUNDED BY:**

**RAINFOREST FOUNDATION NORWAY**



**Robert Hewat & Angel Manembu**

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**RAINFOREST FOUNDATION NORWAY & YAYASAN PARADISEA MANOKWARI**

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**PROJECT DATA**

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<b>Project Title:</b>	Forest zone protection in the Papuan Bird's Head through sustainable forest management by indigenous communities and government.
<b>Project Location:</b>	Arfak Mountains, North Tamberau and South Tamberau Strict Nature Reserves and three proposed connecting forest corridors. Manokwari, Pegunungan Arfak and Tamberau Regencies, West Papua Province, Indonesia.
<b>Starting Date:</b>	January 2013
<b>Proposed Completion Date:</b>	December 2020
<b>Evaluation Period:</b>	January 2013 – October 2016
<b>Executing Agency:</b>	Yayasan Paradisea Manokwari
<b>Funding Agency:</b>	<u>Rainforest Foundation Norway (RFN)</u>
<b>Estimated Total Budget (2013-2020):</b>	USD \$1,475,000 / IDR 20,000,000,000 (2013 – 2020)
<b>Actual Project Cost (2013-2016):</b>	USD \$765,403.00 / IDR 10,380,909,000
<b>Type of Evaluation:</b>	External Mid-term Evaluation

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**Cover Photos:**

1. Martin Manimbu in cocoa-agroforestry garden, Atori Village, Mubrani;
2. Alpius Sayori and his wives carrying red pandanus fruit and sweet potatoes to market, Mokwam;
3. Demina Wonggor with montane Rhododendron flowers, Mbemti Village, Arfak Mountains SNR;
4. Yunus Sayori standing by one of the boundary markers of the Arfak Mountains SNR;
5. Mpur woman and child harvesting papaya flowers in Atori Village, Mubrani.

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### **Disclaimer**

The findings presented in this report represent the opinions of the independent consultants contracted by Rainforest Foundation Norway (RFN) in order to carry out an external mid-term evaluation of the activities undertaken by Yayasan Paradisea Manokwari (Paradisea) in the course of implementing the project. Whilst both RFN and Paradisea have been given the opportunity to review and recommend changes to the final report, the opinions and finding presented herein remain those of the evaluators and the designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of RFN or Paradisea.

The term “Indigenous Peoples” is used throughout the report though the authors are aware that this term is not used in official government documents and discourse.

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## List of Acronyms and Abbreviations

AMAN	Alliance of Indigenous Peoples of the Archipelago
BRWA	Customary Lands Registration Agency ( <i>Badan Registrasi Wilayah Adat</i> )
CCAD	Coastal Community Agricultural Development Project
CB-NRM	Community-Based Natural Resource Management
CIFOR	Centre for International Forestry Research
CII	Conservation International Indonesia
CPB	Cocoa Pod Borer
CSO	Civil Society Organization
DAP	Papuan Customary Council ( <i>Dewan Adat Papua</i> )
FPIC	Free, Prior, Informed Consent
GHG	Greenhouse Gas
HuMA	Association for Community and Ecology Based Law ( <i>Perkumpulan untuk Pembaharuan Hukum Berbasis Masyarakat dan Ekologis</i> )
ICDP	Integrated Conservation and Development Project
IPO	Indigenous Peoples Organizations
IUCN	International Union for Conservation of Nature
JKPP	Indonesian Participatory Mapping Network ( <i>Jaringan Kerja Pemetaan Partisipatif</i> )
LMA	Customary Consultative Council ( <i>Lembaga Musyawarah Adat</i> )
MoF	Ministry of Forestry (Replaced in 2015 by the Ministry of Environment and Forestry)
MoEF	Ministry of Environment and Forestry
MoHA	Ministry of Home Affairs
NGO	Non-Government Organization
NICFI	Norway's International Climate and Forest Initiative
NORAD	Norwegian Agency for Development Cooperation
NRM	Natural Resource Management
RFN	Rainforest Foundation Norway
SADP	Sustainable Agriculture Development Project
SKP	Sekretariat Keadilan dan Perdamaian (Catholic Secretariat for Justice and Peace)
SNR	Strict Nature Reserve
TEK	Traditional Ecological Knowledge
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNFCCC	United Nations Framework Convention on Climate Change
UNIPA	University of Papua, Manokwari
WWF	World Wide Fund for Nature
YBLBC	Yayasan Bina Lestari Bumi Cenderawasih - Foundation for the Conservation of the Land of the Bird of Paradise

## Executive Summary

This report presents the findings of the mid-term evaluation of Yayasan Paradisea Manokwari's (Paradisea) work on implementation of the Rainforest Foundation Norway (RFN) funded project titled "*Forest zone protection in the Papuan Bird's Head through sustainable forest management by indigenous communities and government*" between January 2013 and October 2016. The evaluation was conducted by two independent consultants during October 2016, using qualitative methods, including document review, interviews, group discussions and field observations as well as quantitative and spatial analysis methods.

**Rainforest Foundation Norway (RFN)** was founded in 1989 as the Norwegian branch of the international Rainforest Foundation network and became an independent foundation in 1996. Today it is one of Europe's leading organizations within the field of rainforest protection. RFN espouses a rights-based approach to rainforest protection, as well as civil society strengthening and legal and policy advocacy. RFN works with local partners in 13 rainforest countries in South and Central America, Africa, South-East Asia and Oceania with funding from the Norwegian government, other international funds and donations. RFN has been working in Indonesia since 1998 and currently supports 8 Indonesian civil society organizations (CSOs) working in Sumatra, Kalimantan, Sulawesi and Papua as well as at the national level.

**Paradisea** is a local NGO which was founded in 1998 with support from World Wide Fund for Nature Indonesia Program (WWF-IP) to support indigenous communities in the area of agroforestry, ecotourism, indigenous rights and sustainable natural resource management. Up until 2012 Paradisea was a small organization, which mainly focused on assisting local birdwatching guides in the Mokwam Valley (Arfak Mountains) and farmers in the Kebar Valley (Tambrau Mountains) with marketing of cash crops.

**The Arfak and Tambrau Mountains** - The project focuses on empowering indigenous communities to manage forests in and around the Arfak Mountains, North and South Tambrau Strict Nature Reserves (SNRs) and 3 proposed connecting corridors. The Arfak Mountains SNR was proposed in the early 1980s and gazetted in 1995 with an area of 68,325 ha. It is situated near the east coast of the Papuan Bird's Head and ranges from near sea-level to around 2,940 meters altitude, including most of West Papua's highest peaks. The North and South Tambrau SNRs are located in the north and central Bird's Head and cover an area of 368,365 ha and 519,621 ha. They cover the heart of the Bird's Head Montane ecoregion, which is a globally important hotspot for floral and faunal biodiversity.

**Highland Arfak and Tambrau communities**, include the Hatam, Moile, Meyah, Soughb, Mpur, Ileres and Miyah tribes, who traditionally lived a semi-nomadic lifestyle focused on swidden agriculture, hunting and gathering. Since the 1950s they have been resettled into nuclear villages, though their traditional subsistence systems remain more-or-less intact and sustainable. Influxes of migrants as well as logging, oil palm and other forms of resource exploitation and infrastructure development has led to significant environmental impacts, and the acceleration of processes of social and economic change, including loss of land, and the erosion of traditional ecological knowledge and resource management systems. Papua and West Papua Provinces have the lowest Human Development Index (HDI) in Indonesia (57.3 and 61.7 respectively) and Tambrau and Pegunungan Arfak Regencies have the lowest HDI's in West Papua (49.77 and 53.73 respectively in 2015). In particular access to education and health services and life expectancies are low, and maternal and infant mortality rates, and food insecurity are high.

**The rights of Indonesia's indigenous peoples** were recognized in the Indonesian constitution, but have always been provisional on the national interests, and were effectively annulled by subsequent laws. Since the 1970s many of Indonesia's indigenous peoples have been dispossessed to make way for logging,

mining and plantations, and the establishment of conservation areas. Since 1999 the process of constitutional and legal reform and decentralization has generated opportunities for the recognition of indigenous rights and application of traditional ecological knowledge (TEK) in community-based natural resource management (CB-NRM). Most notably in 2013 the Constitutional Court ruled that the national forest estate was unconstitutional and forests growing in areas legally recognized as belonging to indigenous peoples should be returned to customary owners. Since 1999 successive presidents have made commitments to strengthen recognition, protection and empowerment of indigenous peoples. For example, President Widodo's electoral platform (Nawacita Agenda) included commitments to empower indigenous and local communities, including returning 12.7 million ha of forest to communities under various social forestry schemes, including customary forests (*Hutan Adat*). However, progress has been slow, with only 15,577 ha of customary land claims recognized by regional decrees and regulations, whereas no customary forests have been recognized by the National Government.

### **The RFN-Paradisea Program**

The project goal is to protect over a million hectares of the most biologically and ecologically significant areas of the Bird's Head Montane Ecoregion through indigenous community empowerment to sustainably manage forests in Arfak, North and South Tamberau SNRs and 3 proposed connecting corridors, through:

- 1) **Strengthening sustainable livelihoods:** through training and promotion of cocoa and coffee production, processing and marketing (as well as ecotourism in the 1<sup>st</sup> year of the project);
- 2) **Securing Customary Territory and Resource Rights** by establishing clear boundaries of the tribes and clans whose customary territories overlap with the project's target corridors and adjacent areas of the Arfak Mountains, North Tamberau and South Tamberau Nature Reserves;
- 3) **Building Customary Institutions:** Building consensus within and between tribes and clans regarding territorial boundaries and the rules, roles and responsibilities relating to forest management, revival of traditional ecological knowledge (TEK) and customary resource management systems;
- 4) **Promoting Good Governance:** Achieving formal government recognition and protection of customary territories mapped in the target corridors, and advocacy on spatial planning and monitoring;
- 5) **Promoting Conservation Area Management:** Advocating for the status of the Arfak, North and South Tamberau SNRs to be changed to national parks, to allow for zonation based upon customary land-uses, incorporation of 3 proposed connecting forest corridors, and other important areas into the park, and engagement of indigenous communities in collaborative management;
- 6) **Environmental Awareness Raising and Civil Society Capacity Building:** Furthermore the project promotes environmental awareness raising across all of the four work streams.

### **Relevance**

The project is highly relevant to the needs of target communities and local, national and international level concerns relating to sustainable development, including:

- The protection of Indonesia's forests, biodiversity and ecological services, including water supply and mitigation of soil erosion, landslides and greenhouse gas emissions;
- The protection and recognition of indigenous rights, including land and resource rights, self-determination, self-governance and economic participation, as encapsulated in the UN Declaration of the Rights of Indigenous Peoples and President Widodo's *Nawacita* commitments;
- Implementation of Constitutional Court Ruling no. 35 (2013) and the national social forestry program;

- Promoting green economic development based on sustainable utilization of natural resources; and
- Promoting good governance through inclusive policies and implementation of existing laws relating to indigenous rights, sustainable development and social and environmental impact management.

As such the RFN-Paradisea project helps to address the key aspects of Indigenous peoples' empowerment and sustainable local development, albeit with a need to strengthen the approach in certain areas.

### **Key Achievements**

The major achievements of the RFN-Paradisea project up until the end of October 2016 include:

#### **Strengthening Sustainable Livelihoods**

1. Assisting indigenous farmers to establish cocoa and coffee agroforestry systems adapted to local conditions. However, adoption levels remain low, production, market linkages and economic benefits remain limited, and these crops remain vulnerable to pest infestations and market shocks;

#### **Securing Customary Territory & Resource Rights**

2. Assisting indigenous forest-dependent communities to secure legal access to their own land, forests and resources, including mapping 365,474 hectares of customary territory;
3. Supporting fulfilment of legal compliance of customary territories living in and around the 3 proposed connecting forest corridors by processing local regulations (perda) and decrees;
4. Contributing to the preparation of spatial data on customary territories as part of the legal requirements for the realization of Constitutional Court Ruling 35 (2013);

#### **Building Customary Institutions**

5. Increasing the awareness of indigenous communities on the importance of their customary forest areas, especially to the younger generation in order to mitigate deforestation and resource depletion;
6. Contributing to documentation and revival of indigenous culture and ecological knowledge systems;
7. Facilitating dialog to help resolve conflicts and build consensus;

#### **Promoting Good Governance**

8. Contributing to strategic linkages between customary communities, local government and NGOs to support the indigenous communities and conservation areas;
9. Supporting efforts to develop a regulation for Tambrau Regency to become a conservation regency in collaboration with other CSOs;
10. Leading advocacy on spatial planning, which contributed to the protection of 1.3 million hectares of forest, including around 500,000 hectares adjacent to the nature reserves and forest corridors;
11. Gaining a seat on the Provincial Social Forestry Committee, thereby greatly increasing the probability of achieving the goal of legal recognition of customary forest rights;

#### **Promoting Conservation Area Management**

12. Initiating moves towards expanding the area and changing the status of the Arfak, North Tamberau and South Tamberau SNRs to a major national park covering over a million hectares;
13. Establishing an MoU and commenced collaborating with UNIPA to prepare a proposal and supporting academic study to support the establishment of the proposed national park;

#### **Awareness Raising and Civil Society Capacity Building**

14. Raising the profile of indigenous rights and sustainable forest management through advocacy and media campaigns at the provincial level;
15. Raising awareness of the importance of protecting their forests amongst indigenous communities;

16. Contributing to regeneration of civil society through recruiting and training recent graduates;
17. Establishing trust amongst West Papuan CSOs as spatial data managers and advocates of indigenous rights and good forest governance and management.

### **Impact and Efficiency**

In the period 2013- 2016 the total value of the RFN-Paradisea contract was IDR 10 billion or USD 765,403. Despite various ongoing threats, the project is considered to be on track to achieve the desired results and has directly contributed to the protection of forest areas in the three corridors with a total area of 125,243 hectares. Direct beneficiaries include around 7,000 Arfak and Tamberau peoples, whose customary rights have been strengthened, although not yet fully secured. It is hard to put a monetary value on indigenous rights and livelihoods, or biodiversity, but clearly this represents a significant outcome. Moreover, the greater project area includes the upper watershed of the major rivers which provide water for an estimated 400,000 indirect beneficiaries living in Manokwari town and five Regencies.

Paradisea's spatial planning advocacy work has resulted in the prevention of the downgrading of an area of 1,386,706 hectares of forest throughout West Papua, including over 1 million hectares that was to be rezoned for conversion. This is to be equivalent to 160 million metric tonnes of avoided emissions, at a cost of IDR 65, or less than US\$0.5 per metric tonne. Whilst it's impossible to predict when these forests would have been converted, and difficult to determine to what extent Paradisea was responsible for this outcome, based upon these avoided CO<sub>2</sub> emission alone this project represents a very efficient investment.

Additionally, it is difficult to attach a monetary value to RFN's investment in civil society capacity building, but this appears to be an investment which will continue to deliver returns over many decades. Paradisea's work has also been supported by many government, civil society and community stakeholders and has contributed to overall improvements in environmental governance and respect for human rights.

As such the evaluators found that Paradisea's work is producing good value for money and that the comparison of the total expenditures to the results, indicates that the RFN investment is efficient.

### **Project Management**

Paradisea's financial management system is reasonably well developed and efficient. Standard operating procedures (SOPs) have been developed for accounting and procurement and budget advances are based upon Terms of Reference (TORs) developed for each activity and reviewed by the director and finance manager. External audits are conducted annually, and the recommendations are followed up. Paradisea's financial resources have mainly been used to support project activities (53.3%) and staff salaries (31.2%), whereas administrative overheads and office rent are relatively low (5.25%). This distribution of financial resources represents value for money.

The project documents are simple but sufficient. RFN has minimized reporting requirements, and has not been overly concerned with numbers of project beneficiaries, which is often a problem in Papua where population densities are low and project delivery costs are high. The project documents clearly explain the project implementation risks and challenges. They include gender and stakeholder analyses, but these should be improved, especially given that the project's success is highly dependent upon support from a wide range of provincial and regency level government, civil society, community stakeholders.

Paradisea's team consists of 22 staff, including 10 women. The team is relatively inexperienced, only a few have any previous work experience prior to joining Paradisea, and around half of them have joined the team in the last 2 years. On the other hand they are enthusiastic and eager to learn. This is partly an intentional strategy to mentor a new generation of civil society activists, but the implication is that most

team members are learning on the job and senior staff have to spend time mentoring junior staff. Consequently progress has been slower than planned, but since 2015 they have gained momentum as their experience and skills have increased and they've overcome many social and political conflicts.

Monitoring and evaluation is largely consultative and is not systematically structured. The logframe is fairly rudimentary, it does not clearly elucidate the projects goals or clearly demonstrate how different activities will contribute to the achievement of those goals, and over the years some activities have moved between outputs. It also lacks clear output indicators or means of verification, making it difficult to use as a tool for tracking progress towards achievement of the goals.

### **Recommendations**

**The RFN-Paradisea Partnership** is effective and mutually beneficial. Paradisea's capacity has increased significantly as a result of RFN's support and their work on indigenous empowerment and sustainable forest management is making a significant contribution to RFNs goals. The effectiveness of RFN's support is based on flexibility, responsiveness and willingness to minimize administrative burden on their partner.

**Relevance and Goals** – The ambitious program goals should be maintained and even augmented with several additional goals, but with the understanding that Paradisea may not be able to achieve all of the projects goals by 2020 for a variety of reasons, which are beyond their ability to control.

**Project Design / Logframe** – The logframe is rudimentary and not entirely consistent. It should continue to be treated as a planning tool rather than a binding workplan. As the current project has reached the mid-point it is a good time to overhaul the structure of the workplan / logframe including:

- The outputs should be redefined to more clearly convey the goals of the project;
- Stronger linkages should be made between activities and how they contribute to outputs and goals;
- Objectively verifiable indicators and means of verification should be included;
- An additional column be included to clarify why certain activities were not implemented as planned;
- Outputs 2 and 5 should be combined as they are the same set of activities in different areas;
- Each major target area should be allocated a clearer name;
- Empowerment and mitigation of negative impacts on women, youth and marginalized community members should be strengthened, either as a separate output or cross-cutting theme;
- Environmental awareness raising activities should also be incorporated either as separate output or as a cross-cutting theme incorporated into all outputs.

**Network and Alliance Building** –Paradisea needs to strengthen collaboration with local and national CSOs, UNIPA, and government agencies and to build alliances with a wider range of strategic partners including:

- Paradisea Board of Directors, who include several key representatives of provincial government;
- Various provincial and regency level government agencies in Manokwari, Pegaf and Tambrau;
- Key government agencies in Manokwari Selatan, Teluk Bintuni and Maybrat Regencies in order to gain their support for the proposed national park;
- Key customary representative institutions including Lembaga Adat West Papua, Dewan Adat Papua and Dewan Adat Daerah and the Papuan Peoples' Council (MRP);
- Major international conservation organizations including Conservation International and WWF;
- UNDP, who are about to commence a program in Pegunungan Arfak Regency;
- Reporters and other representatives of local print and electronic media organizations;
- Religious organizations such as Catholic Sekretariat for Justice and Peace and the GPKAI church.

**Communications and Outreach Strategy** - Paradisea should develop a communications strategy to improve awareness of their work and maximize the pressure on policy makers. This should include:

- Stakeholder analysis to identify stakeholders and what kind of approaches/materials are needed;
- Development of clear messages regarding the project to be conveyed to various stakeholders;
- Identify potential partners who can support communications campaigns;
- Engagement with the wives of decision makers through Family Welfare Groups (PKK);
- Strengthen use of mass media including radio, print media, television and posters/billboards;
- Build a network of environmentally concerned journalists;
- Development of appropriate communications media such as posters, comics and AV-materials;
- Strengthen use of social media including the Paradisea Facebook page, website and blogs;
- Text message blasts may be a useful means of conveying information to large number of people;
- Recruit a communications and awareness raising specialist;
- Improve documentation of media coverage.

**Communications Media and Methods** - Paradisea should also consider trialling the use of participatory media approaches, such as 'Photo Voices' or 'Self-directed video' approaches, whereby communities are empowered to develop their own communications media and reflect upon matters of concern to them.

**Study tours** - The study tours to Jambi, Ransiki and Yapen were amongst the most impactful activities undertaken. Unfortunately only men participated in these study tours. RFN and Paradisea should conduct at least one study tours to other parts of Papua, and/or other provinces, during each of the remaining 4 years of the project and should make every effort to ensure at least 50% of participants are women.

**Staff development and capacity building** – Considering that the Paradisea team is inexperienced much greater effort and resources for staff development and capacity building is required including:

- Annual staff performance reviews including the development of personal development plans;
- Staff exchanges/internships with organizations implementing similar programs;
- Opportunities to attend training, workshops or seminars in Indonesia or internationally;
- Recruitment of consultants to help with specific programs whilst transferring skills to staff.

**Staff Wages and Benefits** - Wages and benefits are comparatively low and the risk of staff leaving to join other organizations is high. RFN/Paradisea need to consider improving wages and benefits to ensure retention of staff and minimize loss of knowledge and skills and recruitment and training costs.

**Organizational Capacity Building and Strategy Planning** – An organizational development strategy should be developed to maximize sustainability and reduce dependence on donor funding. RFN/Paradisea should consider visiting other CSOs who've developed mixed not-for-profit and income generating models.

**Sustainable Economic Development** – Income generation is one of the greatest needs of target communities, and there's a need to increase the project's economic impacts and to diversify income sources, both as an entry point, as well as providing economic alternatives to the sale or rental of land and resources. Output 1 should be changed to "*strengthen community income generation through sustainable enterprises based upon the interests, needs and potential of participating communities.*" This should build upon the outcomes to date, including:

- Agroforestry (see below) and horticulture (vegetables, pineapples etc.);
- Ecotourism (see more below);
- Trial the use of soil improving plants to reduce fallow cycles;

- Non-timber forest products – Agarwood (Gaharau), Lawang (*Cinnamomum culilwan*) etc.
- Training and support on household economy management and small business development;
- Post-harvest processing and packaging of cocoa, coffee, nutmeg, fruits, etc.;
- Market linkages, such as supplying local coffee, handicrafts, etc. to hotels, cafés and airport shops;
- Subsidized market access, such as bus or truck services to help get community products to market;
- Traditional handicrafts for sale to visitors and through hotels and airports.

**Agricultural and Agroforestry Development and Farmer Field Schools** - Paradisea should strengthen their support for development of multi-species agroforestry systems, including cocoa, coffee, nutmeg, fruit and nut trees and other species. Skilled Farmer Field School (FFS) facilitators should be recruited to provide intensive training and support to Paradisea personnel, male and female community facilitators and extensions workers in participatory training and empowerment approaches. Cultural techniques which Paradisea should promote to assist with integrated cocoa pest management include:

- Propagation from old Dutch cocoa varieties which display a higher degree of resistance to CPB;
- Planting cocoa in smaller, spatially separated blocks, minimize the spread of CPB between gardens;
- Promoting balanced agro-ecosystems through multi-species agroforestry systems;
- Discouraging the use of pesticides, as it disturbs the agro-ecosystem and favors populations of CPB;
- Frequent harvesting, pruning, shade management, organic fertilizers and removal of leaf litter and pod husks;
- Spraying with seaweed or fish emulsion, as a fertilizer and to attracting ants (natural predators of CPB).

**Ecotourism Development** - Paradisea should explore options for promoting ecotourism and building the capacity of local ecotourism operators including:

- Survey and needs assessment on existing and potential ecotourism;
- Organize a workshop to promote development of various ecotourism activities;
- Lobby for streamlining of travel permits for eco-tourists visiting the Arfak and Tamberau areas;
- Strengthen existing ecotourism activities including:
  - Cooking training for local women to provide a more varied menu for guests;
  - Assist ecotourism guides to construct *Kaki Seribu* style guest houses and other facilities;
  - Other training for local ecotourism guides / staff as identified through the needs assessment;
  - Create opportunities for ecotourism guides to present at conferences, etc.;
- Organize a study tour for ecotourism guides / entrepreneurs to visit ecotourism in Raja Ampat;
- Support the establishment of an Association of West Papuan Ecotourism Guides / Entrepreneurs;
- Provide assistance with marketing / promotions, or encourage the Tourism Service to play this role;
- Support social entrepreneurs to work with communities on ecotourism activities, such as white water rafting, caving, marine turtle watching, and establishment of butterfly gardens, around guest houses.
- Promoting customary rights and establishment of the Arfak-Tamberau National Park through the 2<sup>nd</sup> International Conference on Biodiversity and Ecotourism (ICBE) to be held in Manokwari in 2018.

**Participatory Planning for Sustainable Village Development** - The 2014 Village law creates opportunities for community empowerment, but the current utilization of the village funds is weak and is arguably even dis-empowering communities and creating dependency. RFN and Paradisea should consider augmenting their program with a sustainable village development program, by working with community leaders and training village facilitators to strengthen participatory planning and the implementation of village development programs. At the same time they could support their own goals by promoting sustainable

economic development approaches, as well as improved education and health service delivery. This would support the development of sustainable village development and forest management plans.

**Participatory Mapping – Community Perspectives, Engagement and Ownership** – Paradisea needs to improve community awareness and engagement in the mapping processes, including the engagement of women, youths, children and other marginalized groups, who all have different interests and perspectives to contribute. They need to strengthen community ownership of the maps, such as through displaying them near the entrances of churches or other prominent locations, and strengthen awareness regarding the risks involved in the loss of customary land, especially amongst younger generations.

**Gender, Youth and Management of Social Change** – Paradisea needs to pay greater attention to the engagement and empowerment of indigenous women, in terms of sustainable economic development and to ensure their customary rights are not downgraded as a result of mapping and legally formalizing customary tenure systems. They also need to strengthen youth engagement to mitigate potential for intergenerational conflict, migration to urban centers, loss of TEK and instill concern for sustainable environmental management in future leaders. Suitable experts should be engaged to conduct more in-depth analysis of social change, identify opportunities for strengthening engagement with women, youth and marginalized community members, and develop strategies to help communities to adapt to change.

**Participatory Mapping, Indigenous Rights and Forest Management Innovation Forum** - RFN and Paradisea should collaborate with Samdhana, JKPP, AMAN, HuMA, Conservation International Indonesia (CII) and other organizations to conduct an Indigenous Mapping, Rights and Forest Management Innovation Forum in Manokwari. Various organizations from Papua and other regions who have worked on participatory mapping and forest management could present their work and lessons learnt. Participants should include representatives of relevant government agencies and other key stakeholders, and should also include a radio or television talk show to convey key issues to a broader audience.

**Documentation of Cultural and Social-Ecological Aspects** – Whilst Paradisea has contributed to the documentation of customary land tenure, resource management systems and other aspects of indigenous cultures, the identification and analysis of socio-cultural aspects remains superficial and generalized. It is recommended that efforts to build their knowledge and skills in these areas be a priority, either through participating in training courses and/or workshops, or through recruiting consultants who can assist with the documentation of socio-cultural aspects whilst transferring their skills to Paradisea personnel.

**Advocacy for Territorial and Forest Rights** - Paradisea's approach is inconsistent with the laws and guidelines relating to the recognition of customary territories and forests. They need to focus first on recognition of territorial rights through local decrees or regulations, before developing customary forest management plans as a requirement for having customary forest rights recognized by the Ministry of Environment and Forestry (MoEF). Even if the MoEF does not support the recognition of customary forest rights, these documents may be used as the basis for further action in the constitutional court.

**Local Regulations on Customary Forests** - Paradisea should conduct a seminar to bring together key regency, provincial and national level stakeholders to discuss the proposed regulations on the recognition of customary territories and forests. In preparation for such a seminar a strong academic paper and draft local regulation need to be developed. This process needs to involve people with an in-depth understanding of the issues and who are respected by the national government especially the MoEF.

**Valuation of Environmental Goods and Services** - A conservation economist could be hired to put an economic value on natural resources and environmental services derived from the forests of the Arfak

and Tambrauw mountains, including water, biodiversity, mitigation of erosion and landslides, fresh air, carbon sequestration, etc. Participatory valuation may also be useful to raise community awareness regarding the value they derive from forests, and help them plan for sustainable resource utilization,

**Financial and Administrative Management** – Whilst the project’s financial management and administration is quite good, there are some weaknesses which need to be addressed, including:

- Training in budget planning and tracking;
- An office manager should be appointed to relieve the administrative burden on the executive director;
- Other administrative tools are required, such as a standard price guide for budget planning and tracking, standard formats for SOWs and SOPs to mitigate misuse or corruption of funds.

Office rental is a high recurrent costs, and moving office is time consuming and expensive. Consolidation of office rents to purchase a permanent office could reduce costs and providing a stable operational base.

**Data Management** – A number of steps are need to improve data processing and management, including:

- Advanced training in GIS and data management;
- Development of proper databases and SOPs for data processing, archiving and management;
- Need to encourage other organizations to lodge their spatial and other relevant data with Paradisea;
- Need to establish a back-up repository of all of Paradisea’s data.

Paradisea personnel and representatives of provincial/regency level government agencies, should visit the spatial data management units (SIMTARU) recently established in the Provincial and several Regency level Planning Agencies in Papua Province to learn about their spatial data management systems.

**Spatial Planning Analysis Training** – Paradisea’s skills in relation to spatial planning analysis need to be strengthened. RFN and Paradisea should consider collaborating with CII to support training workshops in:

- Strategic Environmental Assessment;
- High Conservation Value (HCV) assessment and Landscape Conservation Planning;
- Carbon stock surveys.

**National Park Proposal** - The establishment of a million hectare national park will require support from a range of stakeholders. Paradisea needs to ensure free, prior and informed consent is obtained from affected communities. Support from the provincial and the 6 affected regency governments needs to be generated through assessment and dialog regarding the importance of the park in the context of West Papua’s vision as a conservation province. Support from the MoEF and other central government agencies is also necessary. Engagement with major international conservation NGOs such as CII is also necessary, as they have the resources and networks needed to bring this plan to fruition. Discussions should be held with UNESCO to explore the possibility and benefits of establishing this as a “Man and Biosphere Reserve.” If possible members of the Norwegian Royal Family should visit to promote the park.

**Renewing and Sustaining West Papua Civil Society / Graduate Volunteer Program** - West Papuan CSOs suffer from a drain of experienced people into government, politics, aid projects and the private sector, which undermines their capacity and the sustainability of donor investments. Paradisea has made a small but significant contribution to civil society renewal through recruiting a team of fresh graduates. They should consider scaling-up their contribution to civil society renewal through a graduate volunteer program, or a graduate certificate course in community empowerment and sustainable development, whereby recent graduates could undertake work placements with Paradisea and other NGOs to gain practical experience, whilst also undertaking structures training in sustainable development.

## 1. Background to the Evaluation

### 1.1 Scope and purpose of the evaluation

This evaluation encompasses Yayasan Paradisea Manokwari's (Paradisea) work on implementation of the Rainforest Foundation Norway (RFN) funded project titled "*Forest zone protection in the Papuan Bird's Head through sustainable forest management by indigenous communities and government.*" This project focuses on the Arfak, North and South Tamberau SNRs (Cagar Alam) and 3 proposed connecting forest corridors. However, in order to maximize the relevance of the evaluation's findings and recommendations to the project's current context, the evaluators also considered the project within the broader context of national, provincial and local level social and political dynamics, existing and emerging legal and policy frameworks, previous and concurrent conservation and sustainable development projects in the project area and other areas of the Papuan Bird's Head and existing and emerging challenges and threats.

The main purpose was to document and learn from Paradisea's activities, processes and achievements, and to provide informed recommendations for the next steps. Additionally the evaluation is intended to:

- Document the significance of the support from RFN to Paradisea;
- Contribute to strengthening Paradisea's organizational capacity;
- Strengthen Paradisea's and RFN's work on project implementation.

In order to produce relevant information for the above mentioned objectives, the project was assessed based on its own performance criteria as specified in the project design documents and logical framework matrixes (see annex 2). The main focus of the evaluation is on project implementation, outputs and impact during the period of January 2013 through until the end of October 2016.

### 1.2 Audience for and use of the evaluation

The audience for the evaluation includes the management and staff of RFN and Paradisea, as well as the Norwegian Agency for Development Cooperation (NORAD) as the funding agency. The full evaluation will also be submitted to NORAD and the executive summary is to be published in the NORAD's database so as to make the key findings accessible to a broader audience. The evaluation is intended to provide guidance for RFN and Paradisea to revise and strengthen the project design for the period from 2017 to 2020 and to identify lessons learned with wider relevance and that can be generalized beyond the project.

### 1.3 Objectives of the evaluation

The evaluation has the following objectives:

- To assess the relevance, effectiveness, efficiency, impact and sustainability of the Paradisea's work in the Arfak, North and South Tamberau SNRs, connecting forest corridors and surrounding areas;
- To provide an overview of the strengths, weaknesses, challenges and gaps in project implementation, and recommendations for how weaknesses can be addressed and strengths can be consolidated;
- To provide an overview of the strengths and weaknesses of organisational structure and internal management, and recommendations for how challenges can be addressed and strengths consolidated.

### 1.4 Evaluation methodology

The methodology applied during the evaluation was largely qualitative and participatory, but also included limited quantitative and spatial analysis. Specific methods applied included:

- **Literature review:** covering project planning documents, annual reports, activity reports and other administrative documents from 2013 to 2016, maps, customary forest proposals, audio-visual materials and other advocacy materials prepared by Paradisea and other local organizations, as well as relevant secondary references on social and ecological conditions in the project target area, government

statistical reports, news articles and relevant national, provincial and regency level. In total over 100 project documents and over 60 secondary information sources were reviewed as detailed in Annexe 5.

- **Consultations and interviews:** including semi-structured interviews, informal discussions and focus group discussions (FGDs) with management and staff of Paradisea and RFN, representatives of other civil society organizations and the University of Papua (UNIPA) based in Manokwari, representatives of key agencies from the government of West Papua Province and Tambrau, Pegunungan Arfak and Manokwari Regencies, private sector stakeholders and direct project participants from selected communities, including men, women and children from the indigenous Hatam, Moile, Sougb, Miyah, Irires and Mpur ethnic groups. In total 135 respondents were consulted as detailed in Annexe 4.
- **Field visits:** including visits to communities spread across each of the three corridors in order to meet and discuss with local community members and representatives of village, district and regency level government, directly observe the outcomes of project interventions and threats on the ground and discuss progress and obstacles to project implementation with Paradisea field staff. In total 10 villages were visited as outlined in Annexe 3.
- **Presentation of findings:** At the commencement and conclusion of the evaluation the evaluation team facilitated brief workshops involving the majority of Paradisea's personnel. The initial workshop focused on introducing the evaluation team members, clarifying the purpose of the evaluation and canvassing the expectations of Paradisea personnel in relation to the evaluation. During the final workshop the evaluators presented the preliminary findings of the evaluation and provided Paradisea's team members with the opportunity to provide direct feedback and draft their own recommendations for the way forward towards the achievement of the project's goals.
- **Data Analysis:** Data was analyzed by the evaluators based upon the 5 key criteria laid out the ToR including relevance, effectiveness, efficiency, impact and sustainability, as well as a review of Paradisea's strengths and weaknesses in relation to organizational structure and capacity, administrative and reporting procedures and performance, and structures for decision-making and following up and implementing decisions. These analyses were primarily qualitative, based-upon the evaluators' experience with similar programs. Where appropriate and feasible quantitative analysis methods were also applied, such as to evaluate efficiency and financial management, whereas spatial analyses were used to measure progress towards realizing the projects goals of mapping customary territories and its impact on provincial and regency spatial planning. Participatory analysis was also conducted through consultations with Paradisea team members and through the final workshop.

### 1.5 Composition of the evaluation team

The evaluation team consisted of two independent evaluators, Robert Hewat and Angel Manembu, who both have extensive experience working on forest conservation, sustainable development and indigenous rights in Papua, West Papua and throughout Indonesia and Melanesia. This includes experience relating to Papua's social-ecological context, the history of nature conservation and development, government, private sector and CSOs in Papua (including NGOs and Indigenous Peoples Organizations – IPOs) and the legal and policy framework relating to forest conservation, indigenous rights and collaborative resource management in Papua and Indonesia. Brief biographies of the evaluators are included as [Annexe 8](#).

### 1.6 Evaluation Timing and Location

The field work for the evaluation was conducted in Manokwari and selected field sites in the Tambrau and Arfak Mountains over 2 weeks from the 10<sup>th</sup> of October to the 23<sup>rd</sup> of October 2016. However, the evaluation team leader remained in Manokwari through until November 12<sup>th</sup> 2016, during which time he conducted a number of follow-up meetings with Paradisea personnel to clarify key points and develop supporting materials such as maps and diagrams, as well as interviews with additional stakeholders.

## **2 BACKGROUND TO THE PROJECT**

### **2.1 Rainforest Foundation Norway (RFN)**

RFN was founded in 1989 as the Norwegian branch of the Rainforest Foundation and in 1996 it became an independent foundation, though it still maintains strong links with Rainforest Foundation UK and US. RFN consists of five Norwegian member organizations and is one of Europe's leading organizations within the field of rainforest protection. RFN espouses a rights-based approach to rainforest protection, founded on the notion that indigenous peoples and other rainforest dwelling communities who for generations have developed their cultures and societies in balanced interaction with rainforests have fundamental rights and a crucial role to play in their sustainable management. They also emphasize civil society strengthening, building long-term partnerships with local and national organizations that share its objectives, and supporting the development of indigenous representative associations and community-based organizations. RFN also targets governments at the local, regional, and national levels, with all projects including provisions for policy advocacy and development activities, with the aim of influencing all levels of government to improve legal and policy frameworks and practices that affect rainforest ecosystems and the communities that depend upon them.

RFN initially focused on conservation of rainforests and empowerment of indigenous peoples and forest dependent communities in Brazil, but over the past 26 years they have expanded their work to include programs in 13 rainforest countries in South America, Central Africa, South-East Asia and Oceania. RFN's main sources of funding include multiyear contracts with Norwegian public authorities, such as Norway's International Climate and Forest Initiative (NICFI), managed by the Norwegian Agency for Development (Norad). They also derive additional funding from individuals and bequests including regular private donors (designated "Rainforest Guardians"); contributions from members of the business community, and international funds and foundations such as the Rainforest Foundation Fund and the Ford Foundation.

RFN has also conducted campaigns aimed at influencing the Norwegian Government, people and private sector organizations to take measures to support protection of rainforests globally. For example in the lead up to the 2007 United Nations Climate Change Conference in Bali RFN and Friends of the Earth Norway proposed that the Government of Norway should commit to grants of up to US\$500 million annually for rainforest protection in developing nations in order to halt climate change (which was subsequently increased to US\$1 billion). RFN has also successfully campaigned for the Norwegian Government Pension and Sovereign Wealth Funds to purge shareholdings in companies considered to drive rainforest deforestation. Similarly in 2012 RFN launched a campaign to expose the link between deforestation and palm oil production in South-East Asia, resulting in an estimated 65% reduction in Norway's total consumption of palm oil.

According to RFN's 2013 Annual Report out of total expenditures of NOK 138.4 million, 88.6% was spent on projects, 3% on fundraising, 2.7% on communications and 6.4% on administration (RFN, 2013). RFN has been active in Indonesia since 1998, with their program expanding significantly following the 2007 United Nations Climate Change Conference in Bali. They currently support 10 Indonesian CSOs working in Sumatra, Kalimantan, Sulawesi and Papua as well as at the national level.

## 2.2 Indigenous peoples in Indonesia

Indonesia's indigenous peoples (referred to as *adat* or *adat* law communities) are amongst the most numerous and diverse in the World, including an estimated 710 different major ethno-linguistic groups<sup>1</sup> (and thousands of sub-groups) and 50-70 million people<sup>2</sup>, or approximately 20% of the Indonesian population and around 10-15% of the estimated total number of indigenous groups and peoples globally. According to the Alliance for Indigenous Peoples of the Archipelago (AMAN), their customary territory encompasses as much as 112 million hectares, including much of Indonesia's forests, mountains, small islands and nearshore marine areas, including areas designated as national parks and nature reserves.



Indonesia's indigenous peoples also suffer disproportionately from economic marginalization, with the poverty index for many indigenous peoples roughly twice the national average, whereas government development, basic services and social safety net programs often fail to reach indigenous peoples for various reasons including remoteness, cross-cultural miscomprehension and weak engagement and participation in program planning and implementation. Many are also highly vulnerable to natural resource depletion, climate change impacts and other natural and anthropogenic disasters.

Since 1999 the process of constitutional and legal reform and decentralization has generated opportunities for the legal recognition of indigenous peoples' rights to land and resources as well as increased participation in local governance and to apply their TEK in community-based and collaborative natural resource management. However, the realization of such rights remains very limited, with only a handful of communities actually achieving legal recognition of their rights. Engagement of indigenous peoples in planning and implementation of development and service delivery programs, local governance and natural resource management also remains very limited.

The 2014 Village Law provides for customary village government, though the first 2 years of its implementation indicates a need for greater understanding of indigenous peoples' institutions and challenges to participation.

<sup>1</sup> Based on ethno-linguistic data from the SIL Ethnologue (Lewis, 2009) and the Joshua Project (2016).

<sup>2</sup> This depends upon how one defines IPs - (AIPP, 2010; IWGIA, 2011; AMAN, 2016)

The greatest diversity of indigenous peoples is found in eastern Indonesia, and the island of Papua is the most ethnically and linguistically diverse region, with an estimated 274 indigenous ethnic groups including around 1.8 million people out of a total population of around 3.6 million people<sup>3</sup>. Whilst the majority of Papua's migrant population resides in urban and transmigration areas, most indigenous Papuans live in remote areas in the heavily forested and often mountainous interior or on small islands. Papua and West Papua Provinces have the lowest Human Development Index (HDI) in Indonesia (57.3 and 61.7 respectively compared to a national average of 68.4 in 2015). Within West Papua, Tambrauw and Pegunungan Arfak Regencies have the lowest HDI's (49.77 and 53.73 respectively in 2015). In particular access to education and health services and life expectancies are low, and poverty, maternal and infant mortality rates, poverty and food insecurity are high.

**BOX 1 FORMER PRESIDENT YUDHOYONO'S 2006 STATEMENT ON INDIGENOUS RIGHTS**

On August 9<sup>th</sup> 2006, Indonesian President *Yudhoyono*, addressing an audience of government officials, MPs, governors and selected indigenous leaders assembled at Jakarta's Taman Mini Indonesia, to mark World's Indigenous Peoples Day, called on government officials to pay more attention to indigenous people's interests when preparing development programs.

Referring to the 2<sup>nd</sup> amendment to Indonesia's Constitution (Article 18B, section 2): *"The state acknowledges and respects customary law communities together with their traditional rights as long as they still exist and are in accordance with the development of the people and the principles of the Unitary State of the Republic of Indonesia as regulated under legislation"* the president stated that, *"adat law communities are often in a weak position in the defense of their customary rights, surrounded by the power of capital which exploits land and natural resources."* acknowledging that, in the past, the concept of the unitary state had meant standardization in almost all spheres, but that today the attitude was 'moderate and appropriate'.

The president went on to say that, together with the national human rights commission (Komnas HAM), he'd personally received many complaints about the violation of indigenous peoples rights, mostly regarding contravention of communal land tenure rights (*hak ulayat*), not all of which he stated were well-founded or clearly argued, but that the government was aware that the problem needed to be dealt with, or it would become a new source of tension and conflict in society.

He went on to say that, *"We need to admit that in developing the nation and state, indigenous peoples have not played an optimal role so far. Moreover, their traditional rights have often been ignored, even violated and no longer respected. ... The government should, of course, take the side of the weak party, and try to find an appropriate and just solution, whilst still prioritizing the interests of the nation and state, without having to sacrifice the interests of indigenous peoples in the regions."*

*"Recognition and respect, it seems, also need to be assessed according to the development of our society, the principles of the unitary state of the Republic of Indonesia and our laws, so that things become clearer. It is the laws that can regulate the traditional rights of the adat law communities. As far as we understand, up to today, there is no law that regulates this. I hope that we can prepare a draft law in the near future."*

**Source:** *Down to Earth* No. 71, November 2006

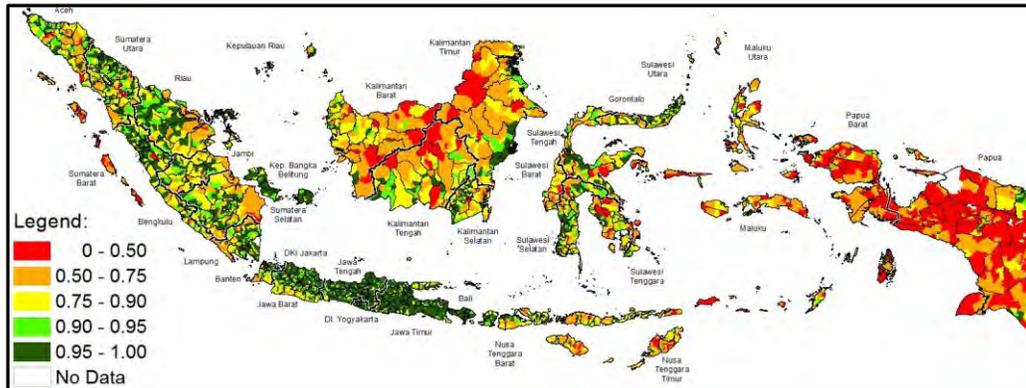
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<sup>3</sup> These are estimates based on analysis of the 2000 and 2010 census data by Elmslie (2010).

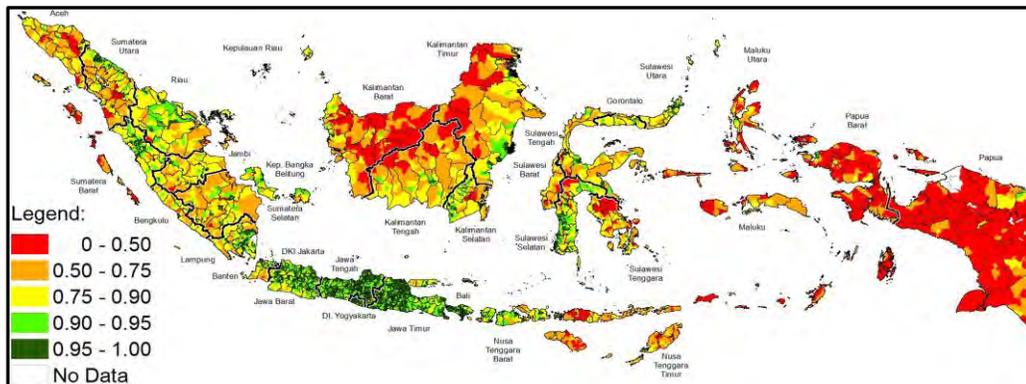
## Box 2 – Correlation between high poverty levels, poor service delivery and indigenous populations in Indonesia

The majority of lower category health and education index and high poverty rate areas (red and orange) are those that are predominantly indigenous populations, particularly in non-urban areas of Papua, West Papua, Maluku, NTT, NTB and the more remote areas of Kalimantan, Sulawesi and Sumatra.

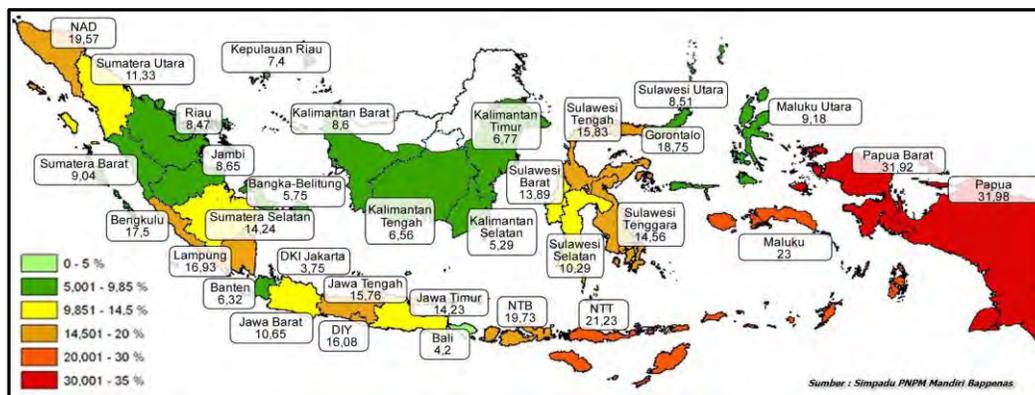
### HEALTH – COMPOSITE INDEX (2012)



### EDUCATION – COMPOSITE INDEX (2012)



### PERCENTAGE OF THE POPULATION LIVING IN POVERTY BY PROVINCE (2012)



Source: BPS 2012, PODES Infrastructure Census 2012, World Bank – PSF 2012

### 2.3 The State, Indigenous Peoples and Forest Management in Indonesia

Through the 1967 Basic Forestry laws the Ministry of Forestry (MoF) designated an area of around 127 million hectares as the national forest estate under their own management authority. Disregarding the fact that this area was inhabited by tens of thousands of indigenous communities who were highly dependent on the natural resources and ecological services provided by the forests, the MoF subsequently carved most of this forest estate up into large logging concessions, which were granted to large companies under licenses known as Forest Management Rights (Hak Pengelola Hutan – HPH), whereas other areas were granted as concessions for mining, plantations and other uses.

Between 1980 and 1999 the Ministry of Forestry also established a network of conservation areas within the national forest estate, covering approximately 10% of the total land area of Indonesia. Due to the lack of consultation and engagement in the process of establishing the national forest estate and the network of conservation areas, many indigenous peoples felt dispossessed of their customary rights and that their livelihoods, which are often highly dependent upon forest resources, were threatened. Indeed, in some cases indigenous communities were coercively resettled, sometimes on the grounds of improving their access to services, but more often so as to make way for commercial logging, mining and plantations. On the other hand the management of the conservation areas remained very weak as the Directorate General of Forest Protection and Nature Conservation (DirJen PHPA) lacked the resources to do much more than visit a few communities on the fringes of most major parks once or twice a year, thereby rendering the great majority of these conservation areas little more than “paper parks”.

Shortly after the fall of the New Order regime in 1998 the Ministry of Forestry promulgated a new Forestry Law (1999), which provided half-hearted or self-contradictory recognition of indigenous forest-dependent communities through stipulating that the management of customary forests is based on customary (adat) law yet on the other hand it has to be based on the state laws at the same time<sup>4</sup>.

Between 1999 and 2002 the government of Indonesia enacted a suite of political reforms known as the “big bang decentralization.” This included the first ever reforms of the Indonesian constitution since the declaration of independence in 1945, the introduction of the 1999 Regional Autonomy Law and 2001 Special Autonomy Laws for Papua and Aceh, and the introduction of direct elections for Governors, Regency Heads & provincial and regency parliaments. Whilst these reforms had many positive impacts, they also resulted in the politicization of religion, ethnicity and indigeneity, contributed to the wave of ethnic and sectarian conflict that swept across many regions between 1999 and 2002, as well as increased corruption and nepotism often along ethnic lines. It also set in motion a process known as *Pemekaran*, or the creation of new provinces, regencies, districts and villages, which further fueled the politicization of religion, ethnicity and indigeneity and increased corruption, often without significantly improving service delivery. *Pemekaran* has been most extreme in Papua, including splitting the province in two to form Papua and West Papua in 2003, and the splitting of regencies from 11 regencies in 1998 to 43 regencies in 2016 with another three proposed provinces and many more proposed regencies still awaiting central government approval. Papua now has over 1000 villages, in some cases with as few as 3 residents according to official census data.

One of the immediate effects of decentralization and democratization was a sharp increase in illegal logging and mining, mostly through small-scale logging and mineral exploration permits issued by provincial and regency level governments, often under the guise of community cooperatives. For example the coal industry experienced a massive expansion from 62,000 tonnes in 1998 to 420,000 tonnes in 2013, particularly in Kalimantan, with large & small-scale coal mining associated with severe environmental

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<sup>4</sup> See Article 67 clause 1b of Law No. 41/1999 on Forestry

impacts and loss of indigenous land and resources. Similarly the oil palm industry also underwent a period of rapid expansion, from 2.2 million Hectare & 5,000 Metric Tonnes per Annum in 1997 to 11.3 million hectares & 35,000 Metric Tonnes in 2016, whereas pulpwood plantations also boomed. Whilst illegal logging and mining activities abated somewhat following a central government crackdown in 2004-2005, decentralized licensing of natural resource exploitation has remained a major problem, leading to the 2014 law on regional government, which withdrew many functions bestowed upon regency level government under the regional and special autonomy laws to the provincial and national levels.

On the other hand in 2004 the Minister of Forestry Regulation No.19 (2004) on collaboration in the management of wildlife sanctuaries and nature protection areas allowed for greater community participation in the management of conservation areas, and between 2003-2005 a total of 9 new national parks covering an area of 1.3 million hectares were established, this time with greater involvement of indigenous communities in the processes of establishing and planning for the management of these parks. As such it would seem that at least some forest-dependent communities began to see national parks as a means of protecting their customary rights from the ravages of poorly controlled forest and mineral resource exploitation and land conversion.

Following the 2007 United Nations Climate Change Conference in Bali<sup>5</sup> the national government and various provincial governments (including the governors of Papua and West Papua) made commitments to reduce greenhouse gas emissions from forestry and land-use change and in 2011 President Yudhoyono enacted a moratorium on the issuing of new logging permits, whereas in 2015 President Joko Widodo renewed this moratorium and also enacted another moratorium on the conversion of peatlands.

In 2011 the Indonesian Constitutional Court<sup>6</sup> ruled that conservation areas and other areas of the forest estate which had not been properly mapped using ground-based surveys could not be considered legally recognizable. This was followed by a landmark ruling in 2013 wherein the Constitutional Court stated that the establishment of the national forest estate under the 1967 and 1999 Forestry laws and the designation of forests located on the customary lands of Indigenous people as part of that estate was unconstitutional and that any forests growing on land legally recognized as customary territory should be removed from the national forest estate and reinstated as customary forests (Hutan Adat). Whilst the first of these constitutional rulings led to a flurry of intensive activity on the part of the MoEF, as they sought to map and thereby secure their authority over the large swathes of the national forest estate which had hitherto been unmapped, their response to the second ruling has been far more muted and arguably even obstructive. Shortly after the 2013 constitutional court decision the Minister of Forestry promulgated a memorandum (Memo 1, 2014) responding to the constitutional court decision, and in 2015 the MoEF issued a regulation regarding forest rights (MoEF Regulation 32, 2015) both of which reserved the right to determination of customary forests to the Minister of the Environment and Forestry and established a number of criteria, including a highly restrictive definition of indigenous peoples. They subsequently added requirements for the development of management plans, though these are not specified in any formal regulations.

Three other laws and two presidential regulations, which potentially have major implications for the rights of indigenous peoples, are also currently under parliamentary review as outlined in Table 1. The Draft Law on the recognition and protection of indigenous peoples has been under development since 2013, and has been included in the priority list of laws for parliamentary review in 2017. The Draft Law on Land is also listed as a priority in the National Legislation Plan. A draft has been prepared and some

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<sup>5</sup> UNFCCC Conference of the Parties, Thirteenth session, 3-14 December 2007.

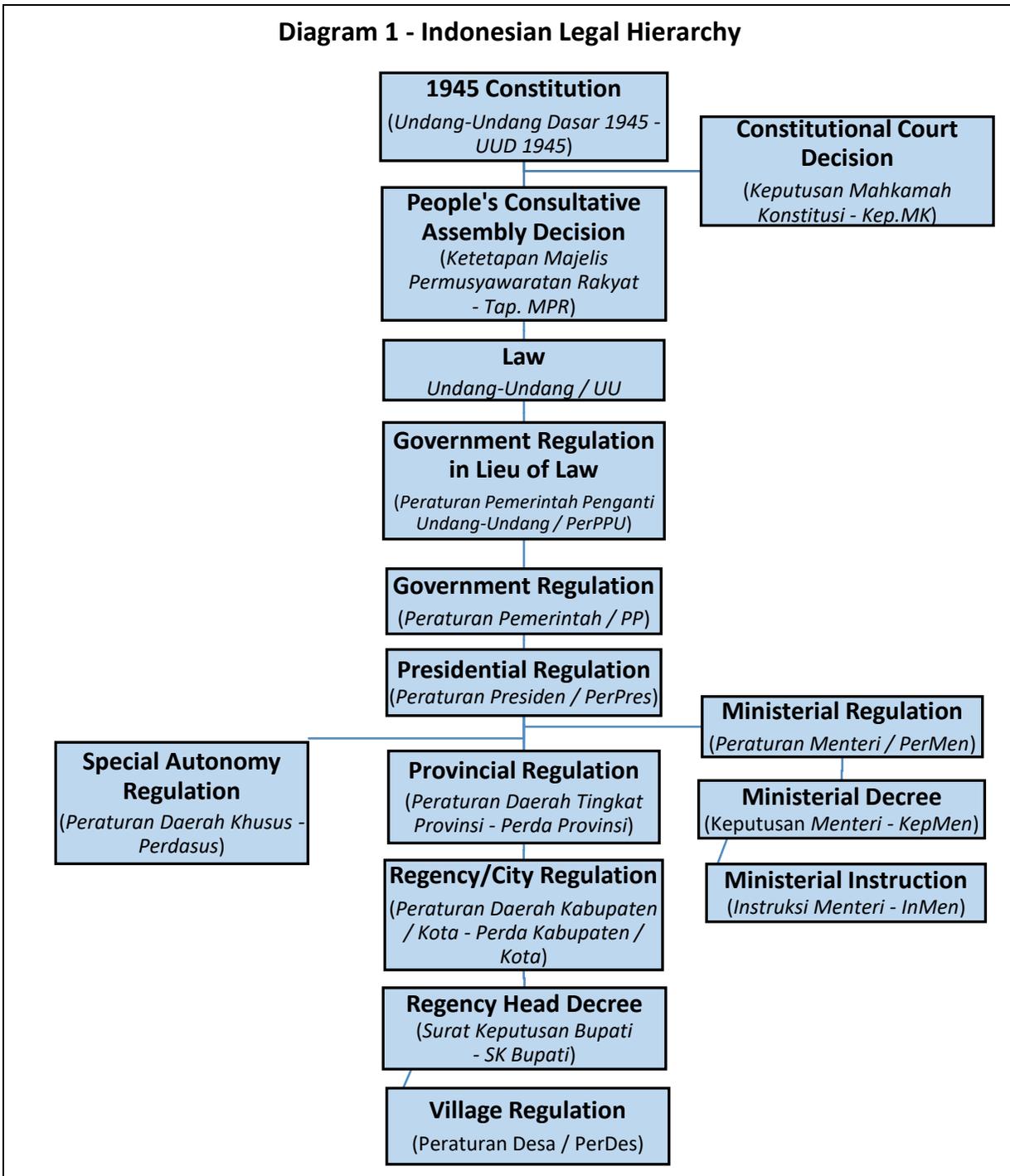
<sup>6</sup> See Constitutional Court Ruling No.45, 2011 regarding the Forest Zone (Keputusan MK No. 45 tahun 2011 tentang kawasan hutan).

NGOs and academics have been invited to comment. The Draft Law on Biodiversity Conservation is also listed on the National Legislation Plan but not as a priority. The Ministry of Environment and Forestry has formed an internal team to prepare the Draft Law, who have been working closely with NGOs to prepare the draft. President Widodo has stated that the draft Government Regulation on procedures for establishing forest rights is a high priority as it is required to support implementation of his Nawacita commitments on the rights of customary communities.

**Table 1 Draft Laws & Regulations with major implications for the rights of indigenous peoples**

No	Draft Law	Provisions on indigenous peoples
1	Draft Law on the Recognition and Protection of the Rights of Indigenous Peoples	<ul style="list-style-type: none"> <li>Recognizing the existence of indigenous peoples</li> <li>Recognizing the rights of indigenous peoples over land and natural resources, development, good and clean environment, spirituality and customary justice systems;</li> <li>Imposing some obligations to indigenous peoples;</li> <li>Establishing an ad hoc committee on indigenous peoples at district, provincial and national level.</li> </ul>
2	Draft Law on Land (dated February 2016)	<ul style="list-style-type: none"> <li>Recognition of the existence of indigenous peoples and their customary land rights, conditional on fulfillment of a number of criteria;</li> <li>Indigenous peoples who have formal recognition are allowed to exercise their customary authorities over land;</li> <li>The holder of cultivation rights on land (HGU) and building rights on land (HGB) have to protect the interest of indigenous peoples when running their business.</li> </ul>
3	Draft Law on Biodiversity Conservation (dated 25 February 2016)	<ul style="list-style-type: none"> <li>Introducing special zones or areas where indigenous peoples are allowed to access and practice their traditional conservation management</li> <li>The needs of indigenous peoples have to be taken into account in managing conservation areas</li> <li>Adat or adat law to be taken into consideration in biodiversity utilization</li> </ul>
4	Draft Presidential Regulation regarding procedures for resolving land control within the forest zone.	<ul style="list-style-type: none"> <li>This regulation is intended to replace the “Joint Ministerial Regulation No. 79 (2014) regarding procedures for resolving land ownership within the forest zone,” which is considered weak as no single ministry has responsibility for implementation;</li> <li>This regulation will also revise the role and procedures relating to provincial and district level Land Rights, Ownership and Use and Inventory Teams (IP4T) in resolving land claims within the forest estate;</li> <li>No draft has been made publicly available as yet.</li> </ul>
5	Draft Presidential Regulation regarding agrarian (land) reform	<ul style="list-style-type: none"> <li>This proposed Presidential Regulation is intended to support key elements of President Widodo’s Nawacita agenda relating to the redistribution of land to smallholder farmers and indigenous communities;</li> <li>No draft has been made publicly available as yet.</li> </ul>

**Diagram 1 - Indonesian Legal Hierarchy**



Despite these laws and rulings, progress towards the realization of the rights of indigenous peoples to participate in the management of forests including conservation areas has been exceedingly slow. According to the Association for Indigenous Peoples of the Archipelago (AMAN) the customary territories of Indonesia's indigenous peoples cover an area of around 112 million hectares, most of which is located within areas currently designated as part of the National Forest Estate, which is managed under the authority of the Ministry of the Environment and Forestry, including conservation areas, which are under

the authority of the Directorate General of Forest Protection and Nature Conservation. As of August 2015 AMAN had submitted maps covering 6.8 million ha of customary territory to the Ministry of the Environment, who committed to supporting the recognition of these territories at the national level, yet to date only 15,577 ha of customary land claims recognized by regional decrees and regulations and no customary forest areas have been recognized by the National Government (though an area of 300 hectares of forest is likely to be recognized as customary forest belonging to the Amatoa Kajang people in Bulukumba District, South Sulawesi, in the near future).

**Box 3 – Estimated Extent of Customary Lands of Indigenous Peoples in Indonesia and Progress towards Recognition**



- Estimated 112-141 million hectares as customary land (+/- 59-75% of Indonesia’s total land area)
  - High certainty – 42 million ha (22%)
  - Medium certainty – 70.5 million ha (37%)
  - Low certainty – 29 million ha (15%)
- AMAN committed to mapping 40 million hectares of customary forest by 2020.
- In August 2015 AMAN submitted maps covering 6.8 million ha of customary territory to the Ministry of the Environment, who committed to supporting national level recognition of these territories.
- Only 15,577 ha of customary land claims recognized by regional decrees and regulations
- No customary forest has been recognized by the national government to date.

Source: AMAN - JKPP - SEKALA

#### Box 4 - CUSTOMARY LAND AND RESOURCE TENURE SYSTEMS IN INDONESIA

Contemporary discourse regarding indigenous peoples in Indonesia almost inexorably relates to land, sea and natural resource rights, and particularly to the concept of Hak Ulayat or Territorial Rights. As with the term 'adat', 'hak ulayat' is derived from the Minangkabau area in Western Sumatra, but is now widely used throughout Indonesia, often alongside or interchangeably with the term "*Hak Tanah Adat*" (Customary land rights) and local terms such as '*Petuanan*' (Maluku) and '*Tapare*' (Mimika), which are all generally conceived as relating to communal rights systems.

Discourse on adat land, sea and resource rights dates back to the 19<sup>th</sup> Century, with the institution of Eminent Domain (the right of the state to alienate land) first instituted by British Governor of the East Indies in 1811, and then subsequently institutionalized into the laws of the Netherlands East Indies as *Domein Verklaring* through the enactment the *Agrarische Wet 1870* (AW 1870), in order to promote private investment in plantation agriculture and other natural resource industries, by allowing the lease of lands from the colonial state. This provided the colonial government has the power to declare all uncultivated land, including forest and coastal waters, as the domain of the state. Arguing against such policies, van Vollenhoven (1909) insisted that adat communities possessed a "Supreme Right of Disposal" identifying 6 characteristics of communal tenure:

- 1) The community itself and its member may freely use the wild lands situated within the area of its jurisdiction, reclaim them, found a hamlet, collect produce, hunt and graze;
- 2) Strangers may do this only with consent of the community;
- 3) Members sometimes and strangers always must pay something in recognition of the use of the land;
- 4) The community is responsible for certain definite misdemeanors committed within the area, the perpetrator of which cannot be detected;
- 5) The community cannot permanently alienate its supreme right of disposal;
- 6) It preserves the right to interfere even with reclaimed soil within the area of supreme disposal

Following independence the Indonesian Constitution did little to clarify this situation, on the one hand recognizing ancestral rights (*hak asal-usul*) whilst also declaring that the State was responsible for controlling natural resources for the common good. In 1960 the Basic Agrarian Law (BAL, 1960) attempted to 'normalize' land tenure rights, limiting it to the categories of ownership (*hak milik*), commercial use (*hak guna usaha*), construction (*hak guna bangunan*) and user rights (*hak pakai*). This was followed in 1967 by the Basic Forestry Law (BFL, 1967), which provided the state with legal authority to plan and manage all forest use and tenure arrangement for the national good. From that time through until the end of the New Order Regime community rights were more or less totally subservient to the interests of the state and private enterprise, with many communities labeled squatters and subjected to eviction or forced resettlement.

Since 1999 debates have focused on communal property rights, including land tenure, forest tenure and customary ownership of coastal waters, often resulting in conflict both at the elite and community level. At the forefront of this debate has been AMAN and their partner organizations (Samdhana Institute, JKPP & BRWA), who claim that the territory rightfully belonging to adat communities in Indonesia encompasses over between 40 and 80 million hectares of land, and as of August 2015 they had presented a total of 604 adat territory maps covering an area of just over 6.8 million ha to the Ministry for the Environment and the National Land Agency for incorporation into the national OneMap database (BRWA, 2015; Kementrian Lingkungan Hidup RI, 2013), although to date only 15,577 hectares of customary land claims have been recognized through regional regulations (Malik, 2015).

However, indigenous systems of resource rights are actually far more complicated than simply communal ownership, involving complex bundles of different rights. Furthermore, the holders of *Hak Ulayat* may not actually reside in their territory, and others who only have limited rights, such as rights to cultivate (*Hak Garap*) or 'eat' (*Hak Makan*) or use (*Hak Guna*), may be far more dependent on the land than the holders of the *Hak Ulayat*. Furthermore, systems of inheritance and rights to transfer specific areas or resources as parts of bridewealth, dowry and other payments, complicate matters considerably. As such indigenous / adat systems of land, sea and resource rights need to be further clarified through participatory research approaches involving all levels of indigenous communities, not simply between adat elites and government.

## 2.4 Participatory Mapping and Land-Use Planning

*“More indigenous territory has been claimed by maps than by guns. This assertion has its corollary: more indigenous territory can be reclaimed and defended by maps than by guns.” Nietschmann (1994)*

Over the past 25 years participatory mapping has emerged as an important means for engaging with indigenous peoples, through which indigenous peoples and local communities can articulate and communicate their spatial and social-ecological knowledge of the landscapes in which they live to external stakeholders, who otherwise usually lack the cross-cultural interpretive tools, the time and/or the will to comprehend the largely undocumented bodies of TEK. They can also help communities to share, reflect upon and analyze their knowledge internally, and assist them with sustainable land-use and resource management planning and the strengthening of local institutions. Last but not least, they can enable communities to advocate and act for change, including lobbying for recognition of land-, sea- and resource rights, and to address resource-related conflicts (IFAD, 2009). Since the first participatory mapping experiments were conducted in Kalimantan and Papua in the early and mid-1990s a range of methodologies have been developed and deployed by NGOs, research institutions and indigenous peoples’ organizations, with support from various donors, and in some cases local governments). These diverse approaches have been used with a wide range of goals in mind, including:

- Planning and zonation of terrestrial and marine protected areas and their buffer zones;
- As a tool for advocating for the recognition of indigenous rights to land, sea and forest resources;
- Investigating, prosecuting and resolving land conflicts, between communities, government & companies;
- Sustainable natural resource management;
- Community awareness raising and institutional capacity-building;
- Community-based forestry cooperatives;
- Village sustainable development planning;
- Bottom-up spatial planning approaches;
- Watershed management and payment for environmental services (PES);
- REDD+ readiness.

Considering the diversity of goals driving participatory mapping programs in Indonesia, it is unsurprising that what is mapped, and how it is mapped varies considerably. For example, organizations whose primary interest is in indigenous land rights advocacy tend to focus on communal land or sea boundaries, usually mapped to the level of major territorial units (the village, tribe or territorial group), whereas those focusing on community-based forestry are likely to map to a high level of detail, such as clans or lineages, so as to facilitate planning of production and profit distribution. On the other hand many conservation organizations are averse to overtly mapping territorial boundaries, on the basis that this risks conflict, and in some cases because they also fear that it may lead to claims over territory in conservation areas and/or the privatization and sale of land and natural resources.

A concomitant process is the documentation of social structures (kinship and leadership systems), local histories and stories relating to the landscape, which is required as evidence of ancestral relationships with the landscape, customary tenure systems, zonation systems and TEK, as well as the mapping of the distribution of major species, natural resource, ecosystems and important places, including sacred sites, is considered important to assist with planning for sustainable utilization.

Whilst advances in GPS, GIS, remote imagery and drone technology have made the task of participatory village mapping technically far easier, these cannot fully replace the need for ground-based surveys to verify or ground truth spatial data. Furthermore, the greatest challenges remain the facilitation of social

processes required to mitigate conflict and ensure that the maps are accepted by neighboring communities. Even more difficult is the process of securing legal recognition of these rights.

Unfortunately, in far too many cases participatory mapping practitioners has become overly 'project oriented' or focused on technical aspects, leading to shortcuts being taken particularly in relation to participation, the gathering social-cultural-ecological data and conflict mitigation processes. Furthermore, the projectization and/or standardization of participatory mapping methodologies is contributing to a loss of innovation amongst many participatory mapping practitioners, particularly in relation to the application of participatory mapping as a tool for raising awareness regarding the interations between social-cultural, ecological and economic aspects and building community capacity for the sustainable management and utilization of land and seascapes and natural resources.

## 2.5 Major Indigenous Peoples Representative Organizations

### 2.5.1 Alliance of Indigenous Peoples of the Archipelago / Aliansi Masyarakat Adat Nusantara (AMAN)

AMAN is an independent community-based organization which functions as an umbrella network for over 600 regional and local level adat institutions spread across 7 regions throughout Indonesia (see map ??). AMAN's National Council consists of 14 people, including a male and female representatives from each of AMAN's seven regions and three closely related branch organizations representing Youth, Women and Lawyers. AMAN claims to represent the interests of 15 million individuals from 2,230 indigenous communities across Indonesia. AMAN's network is strongest in Kalimantan, Sulawesi and Sumatera, from whence around 75% of AMAN's member organizations are drawn, and weakest in Maluku and Papua, where only around 7% of their members are located. The low levels of AMAN membership in Eastern Indonesia are partly due to the tyranny of distance, though in the case of Papua the existence of the Papua Adat Council (see below) provides adat communities with an alternative forum for political expression.



The precursor to AMAN was the Network of Indigenous Peoples Rights Defenders (*Jaringan Pembelaan Hak-Hak Masyarakat Adat - JAPHAMA*), which was established by a group of indigenous leaders, academics, human rights and civil society activists in 1993 as a response to threats to the rights and wellbeing of indigenous peoples. It was also during this meeting that the representatives of this new organization decided that the term Masyarakat Adat was the most appropriate translation of the term indigenous peoples, both as a riposte to the various government terms which characterized indigenous

people as being backwards and marginal, and also as a means for affiliating with the emerging international indigenous rights networks.

AMAN's formation was mandated during the 1<sup>st</sup> Congress of Indigenous Peoples of the Archipelago (KMAN 1) in March 1999, and was formally established as a legal entity in April 2001 as a result of the advocacy work conducted by Indonesian NGO networks, including the INSIST network (Indonesian Society for Social Transformation) and Indonesian Friend's of the Earth (WAHLI), as well as financial support from RFN and a number of other donors. AMAN has also established a youth organization known as the Indigenous Youth Front of the Archipelago (Barisan Pemuda Adat Nusantara - BPAN), and a women's organization known as Perempuan AMAN, which RFN is also currently supporting.

AMAN applies a highly inclusive definition of adat communities, including many adat communities which arguably fall beyond the category of indigenous peoples. They have proven to be a highly effective advocacy organization supporting participatory mapping activities, including the establishment of the Adat Territory Registration Board / Badan Registrasi Wilayah Adat (BRWA) and the submission of customary land tenure maps covering over 6.8 million hectares to the Minister of the Environment for incorporation into the national OneMap initiative in 2012. AMAN was also one of the key complainants behind the constitutional court ruling 35, 2013, has driven the drafting of the proposed law on the recognition and protection of the rights of indigenous peoples, and has participated actively in national and international forums on climate change, particularly in relation to the role of IPs and potential impacts of REDD+. As such AMAN can reasonably be described as Indonesia's preeminent adat institution, though its authority to represent Indonesia's indigenous peoples remains contested by other national and regional level adat institutions, and some communities which to date have resisted becoming members.

## **2.5.2 Customary Representative Organizations in West Papua**

There are also three major organizations claiming to represent the rights of indigenous peoples in Papua and West Papua, as well as hundreds of smaller organizations, as outlined below.

### **West Papua Customary Consultative Council / Lembaga Musyawarah Adat – Papua Barat**

The oldest of the major indigenous peoples' representative organizations in Papua is the Customary Consultative Council or Lembaga Musyawarah Adat (LMA). This organization was originally formed as the LMA Irian Jaya in 1992 under the leadership of Theys Eluay, who went on to lead the Papua Presidium Council and Papua Adat Council (see below). The LMA's foundation was sanctioned by the Government and military, who considered it a useful tool for "representing" the 250 tribes of Papua. Over time regency and tribal level branches of the LMA were established throughout the island, and the LMA Papua Barat was established shortly after the establishment of Papua Barat Province. Many people consider the LMA to be an extension of government, and in some cases the heads of regency government serve as the head of the LMA. There is also a perception that the LMAs tend to pursue their own interests, often at the expense of the indigenous communities they claim to represent, such as in relation to the sale or disposition of land for infrastructure and resource projects. The LMAs are also quite politicized, with many LMA leaders also active in political parties and the campaign teams of candidates for governor, regents and parliament. On the other hand they are arguably the most vocal and effective adat organizations in West Papua at the present time, and in some cases indigenous communities appear to feel that the LMAs are legitimate representatives of their interests. Paradisea has strong links with the LMA Papua Barat through their secretary George Dedaida, who is also the director of the Konservasi Papua Foundation.

## **Papua Presidium Council and Papua Adat Council**

The Papua Presidium Council was formed in July 1998, just 2 months after the resignation of President Suharto. The origins of this organization are somewhat murky, though it appears to have received significant funding from the Pancasila Youth movement (Pemuda Pancasila), which was closely associated with the New Order Regime, and therefore the motives of the people who originally backed this organization are dubious. During the presidency of Abdurrahman Wahid (November 1999 to June 2001), the PDP were afforded considerable freedom, including permission to organize a series of mass congresses, as well as the right to openly call for independence and display the symbols of Papuan independence. However, the security services were less open to such activities, leading to a number of crackdown operations. Following the murder of the head of the PDP, and self-styled great leader of the Papuan nation, Theys Eluay by Special Forces (Kopasus) personnel in November 2001, Amungme leader Tom Beanal was elected as the new PDP head.

The Papuan Adat Council (Dewan Adat Papua – DAP) was formed during the fourth congress of the PDP in 2002 and there is considerable cross-over amongst both organizations. It sees itself as the reincarnation of the Nieuw Guinea Raad, which was formed by the Dutch in 1961, and claims to represent the 253 tribes<sup>7</sup> of Papua. Its primary aim is to force the National Government into dialog regarding the past history and future of Papua and to advocate for the tenurial and political rights of indigenous Papuans. The DAP has been highly critical of the central government’s policies in Papua, including the process of implementation of Special Autonomy Law and the national government’s unilateral decision to split Papua into two provinces in 2005, which led to their symbolically handing Special Autonomy back to central government.

Whilst the DAP still maintains separatist inclinations, its stance is more tempered than the PDP and it has proven more capable of organizing peaceful protests, including brokering agreements with the police to avoid confrontation during protests. The DAP has also organized several youth organizations including the Papua Task Force (Satgas Papua) and the Papuan Children of the Grove Foundation (Yayasan Anak Dusun Papua – YADUPA). Whilst the DAP has moderated its position on independence it continues to be viewed with suspicion by the Government and security services. The DAP also has a network of regional organization, known as Regional Adat Councils (Dewan Adat Daerah - DAD) and tribal organizations known as Tribal Adat Councils (Dewan Adat Suku - DAS). The heads of the the Tribal Adat Councils are referred to as the grand tribal chief (Kepala Suku Besar). However, given that most Papuan societies are highly egalitarian and traditionally did not have chiefs, but rather a number of “*big men*” (and sometimes also “*big women*”) the extent to which these organizations truly represents the interests of the communities is dubious, and the designation of grand chiefs can be seen as a distortion of Papuan culture. During the period of the evaluation the designated Grand Chief of the Arfak Tribal Adat Council passed away, so the evaluators were unable to consult with him regarding their attitude towards the RFN-Paradisea program.

## **Papua Peoples Council / Majelis Rakyat Papua - MRP**

The Papuan Peoples Council or MRP is one of several organizations mandated under Papuan Special Autonomy Law to safeguard the rights and customs of indigenous Papuans, women and religious communities in Papua. It was established in 2005 and is considered to be on a par with the parliaments of Papua and West Papua Provinces, though its legislative functions are restricted to the review, provision of recommendations and approval of legislation drafted by the government and parliament, particularly

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<sup>7</sup> This is the DAPs own count of tribes in Papua.

relating to indigenous, religious and women's rights and empowerment issues. They have no powers of veto over legislative processes. Papuan Special Autonomy Law also mandated that the MRP be given powers of consultation and assent over candidates for key political positions, including candidates for governor, vice governor, district heads, etc. as well as powers of consultation and veto over decisions and regulations relating to the basic rights of Papuans. However, given that the MRP's members are appointed by the government rather than elected by the people, their ability to effectively implement these powers is severely curtailed. As such the MRP is generally considered to have failed to live up to the expectations, and is widely seen as a powerless or rubber stamp authority. On the other hand they do maintain a degree of moral authority and unlike the DAP are considered politically legitimate. As such engagement with the MRP remains an important element of strategies for securing legal recognition and protection of indigenous rights in Papua. At the time this evaluation was conducted the members of the West Papua MRP had been stood down pending the appointment of new members following the election of a new governor in 2017. The MRP does not have a network of lower level affiliate organizations.

### **Local Level Adat Institutions**

Besides the 3 institutions outlined above, there are also a number of local or tribal level adat organizations or IPOs. Many were founded with assistance from local or national CSOs independently of the 3 major adat organizations, though many have become affiliated with the larger IPOs particularly the LMA Papua Barat, DAP and to a lesser extent AMAN. Several examples of independent IPOs in West Papua include:

- The Malamoi-Sorong Adat Community Council (***Lembaga Masyarakat Adat Malamoi Sorong – LMA-MS***) was founded in 1998 with support from local NGOs with the aim of advocating the rights of indigenous Malamoi peoples, whose customary lands around Sorong Town and on Salawati Island were rapidly being acquired for oil drilling projects, palm oil plantations and urban and infrastructure expansion. Over recent years they have worked closely with AMAN on participatory mapping, resistance to oil palm companies and advocacy for the recognition and protection of Malamoi rights;
- ***Bin Mata Hom*** was founded to represent communities in Bintuni Bay with support from a local NGO (Yalhimo Foundation) in 2005, and has since become affiliated with the LMA Papua Barat.
- ***Aka Wuon*** was originally established as an association of students from the Abun, Miyah, and other tribes from Tambrau Regency. They subsequently received funding from the Samdhana Institute (a partner of AMAN) and Paradisea to conduct participatory mapping and tribal congresses in the Miyah area. Aka Wuon's capacity has recently declined as many of their members have found employment in the civil service or been elected to local parliament in Tambrau, though a small core of people remain active in the organization.

To the best of the evaluators' knowledge there are no formal independent IPOs representing communities in the Arfak Mountains or the Mubrani and Kebar areas, though each clan, community and tribe maintains informal adat structures based upon customary kinship and leadership structures.

### **Box 5 - CONSTITUTIONAL COURT DECISION NO. 35, 2013 AND SUBSEQUENT LEGAL AND POLICY DEVELOPMENTS**

Paradisea's approach to participatory mapping is focused upon the goal of formal recognition of customary land and resource rights known as Hak Ulayat in Indonesian) and their rights to manage forests and resources within their customary territory (Customary Forest Rights or *Hak atas Hutan Adat*).

The possibility for achieving recognition of customary forest rights was engendered through the Indonesian Constitutional Court Decision No. 35 (2013), which found that the MoF's designation of the national forest estate through the 1967 and 1999 forestry laws was unconstitutional and that forest areas located in customary territories should be recognized as customary forests and returned to their traditional owners, as long as the customary communities still existed and could demonstrate an ongoing relationship with a specific territory. Since then a number of legal instruments through which the realization of these rights may be achieved have emerged, generally requiring recognition either through regency and/or provincial level decree (*Surat Keputusan Bupati / Gubernur - SK*) or regulation (*Peraturan Daerah – Perda*). For example:

- MoF Circular No. 1 (2014) regarding Constitutional Court Decision No. 35 (2013), which stipulates that the recognition of customary forest rights is the prerogative of the Ministry of Forestry and should be based on recognition of customary land tenure through regional regulations;
- MoHA Regulation No. 52 (2014) regarding guidelines for recognition and protection of customary (adat) law communities, which stipulates that the recognition of indigenous communities should be based on the recommendations of a provincial or regency level "Committee on Customary Law Communities (Panitia MHA)" and enacted through a decree by the governor or regency head ;
- MoEF Regulation No. 32 (2015) regarding forest rights (hutan hak), which stipulates that the recognition and determination of customary forest rights is the prerogative of the Ministry of Forestry based upon regional legal instruments (though not specified whether this should be by decree or regulation) regarding customary law communities and their rights to land tenure, and with reference to regional spatial plans, and the ability of communities to properly manage such forests.
- Minister of Lands and Spatial Planning Regulation No. 10 (2016) regarding procedures for determining communal land rights (Hak Communal), which stipulates that the resolution of land tenure conflicts and the allocation of communal land rights should be based on the investigations and recommendations of provincial or regency level "Land Ownership and Use Inventory Teams (IP4T)", and a decree by the governor or Regency Head, which in turn should be forwarded to the local office of the National Lands Agency for registration as communally owned land.

Furthermore the legal and regulatory framework relating to indigenous rights in Indonesia and Papua continues to evolve quite rapidly, with a number of relevant laws currently under parliamentary review including: 1) a draft law on communal rights; 2) a draft law on recognition and protection of indigenous peoples rights; 3) a draft government regulation customary forests; and 4) a revision of the 1990 law on natural resource conservation and protected areas. Furthermore, regulations on the recognition of customary land rights in West Papua Province and Tamberau Regency are also currently being drafted.

Progress towards the implementation of Constitutional Court ruling No.35 (2012) has been slow, and the diversity of different legal instruments, procedures and institutions contributes to legal and administrative ambiguity and conflict. Furthermore, in most regions, including West Papua, the bodies tasked with identification of indigenous communities (Panitia MHA) and investigation of customary land tenure claims (IP4T) are yet to be established. However, these legal ambiguities may be resolved through the legal instruments currently under parliamentary review. In the mean time CSOs such as Paradisea have a crucial role to play in the mammoth task of mapping the territories of Indonesia's indigenous peoples, pushing regional governments to enact suitable regulations and decrees to recognize the rights of indigenous peoples, and assisting communities to develop plans and their capacity to sustainably manage forests and resources.

## 2.6 The Arfak and Tambrau Mountains

The Arfak Mountains and the North and South Tambrau<sup>8</sup> Mountains are located in the north-eastern and north-central part of the Birdhead (Vogelkop or Kepala Burung) Peninsula in West Papua Province, Indonesia. They are the highest mountain ranges in West Papua, including the peaks of Mt Humeibo<sup>9</sup> (2,925 metres), Mt Gombian (2,856 metres) and Mt Ndon (2,655 metres) in the Arfak Mountains, Mt Irau (2,402 metres) and Mt Bantlam (2,236 metres) in the North Tamrau Mountains, and Mt Niefieb (2,544), Oranfibi (2,526 metres) and Mt Mansibaer (2,370 metres) in the South Tambrau Mountains. These mountains form the major part of the Vogelkop Montane Rain Forests Ecoregion and are an important and threatened site of plant and animal biodiversity including many endemic and restricted range species.

Most of these ranges remain densely blanketed in primary rainforest, ranging from lowland and foothill forests through lower, mid- and upper montane forest, to areas of sub-alpine scrub and grassland on the highest mountain peaks. Small areas of secondary forest are also found in abandoned swidden garden sites around indigenous settlements, whereas open scrub and grasslands (caused by intermittent burning by local communities) and mountain screw pine (*Pandanus adinobotrys*) swamps mostly occur on the high plateau around the Anggi lakes outside of the nature reserves. However the area is increasingly under threat from logging, agricultural encroachment, road construction, mining and population growth, particularly migration of settlers to new towns and villages around the Tambrau Mountains.

Due to their isolation from the other major mountain ranges of New Guinea, the Arfak and Tambrau Mountains are considered one of the most important centres for plant and animal diversity and endemism in New Guinea (Supriatna, 1999)<sup>10</sup>. This includes:

- 320 species of birds, including 14 endemic and 15 restricted range species and a total of 13 species of birds of paradise;
- 110 mammal species including 10 endemic or near-endemic species;
- 16 species of montane reptiles and amphibians (excluding lowland species) including 7 endemic species;
- Freshwater fishes – including the Arfak Rainbow fish *Melanotaenia arfakensis*;
- 323 species of butterflies, including 23 endemic species, such as the spectacular Birdwing butterflies (*Ornithoptera* spp.);
- Numerous species of moths, beetles, cicadas and other insect taxa, which remain poorly documented.

During the 1980s and 1990s the government of Indonesia in collaboration with the International Union for Conservation of Nature (IUCN) and the World Wide Fund for Nature (WWF) established a network of nature reserves throughout Papua (or Irian Jaya as it was known at that time), which included strict nature reserves (Cagar Alam) covering 956,311 hectares of the Arfak and Tambrau Mountains (see table 1). Additionally a 4,000 hectare wildlife sanctuary was proposed to protect breeding populations of bats roosting in caves in the Minggima area of the Arfak mountains, though to date this reserve remains un-gazetted.

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<sup>8</sup> The Tambrau Mountains are also known as the Tamrau, Tambrau and/or Tamarau Mountains.

<sup>9</sup> Also known as Mt Arfak or Mt Mebo

<sup>10</sup> See Annexe 7 for a list of the endemic and near-endemic fauna found of the Arfak and Tambrau Mountains.

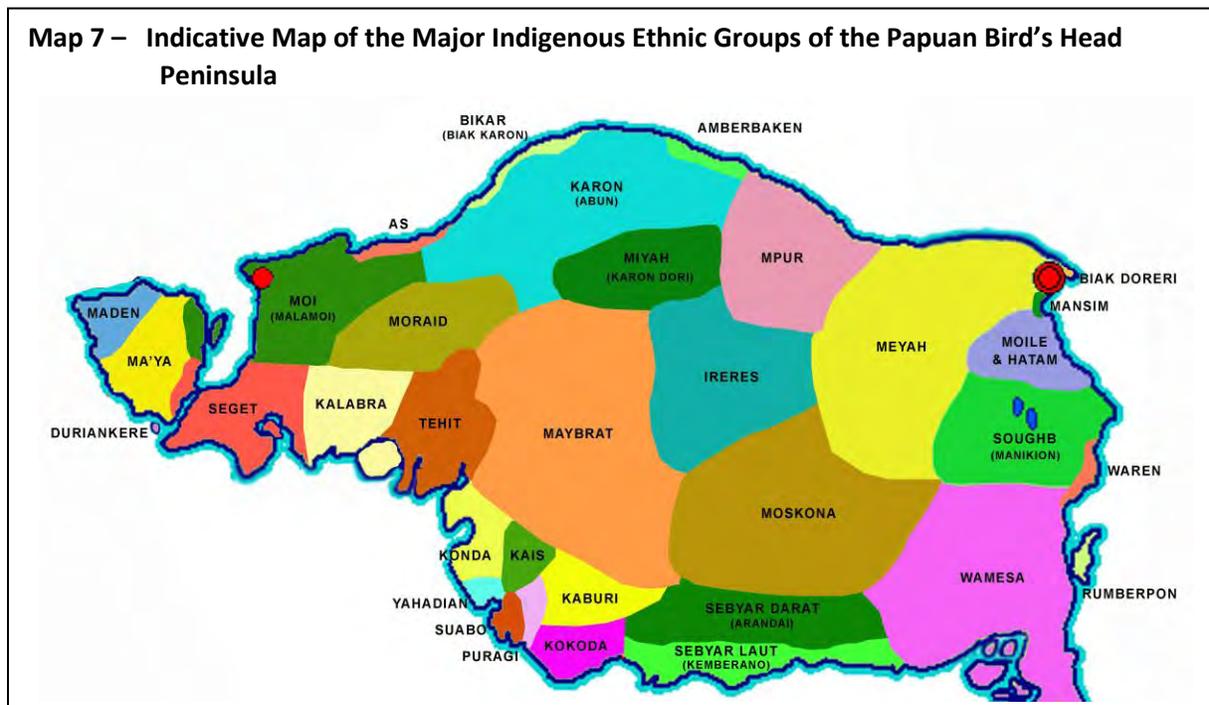
Three marine wildlife sanctuaries (Jamursba-Meidi, Mubrani-Kaironi and Sidei-Wibian) were also established along the north coast of the Bird's Head, adjacent to the North Tamberau Nature Reserve, in order to protect the World's most important breeding sites for leatherback turtles (*Dermochelys coriacea*), with approximately 3,000 nest laid each year along the Jamursba Meidi beach alone (Teguh, 2000), as well as smaller nesting populations of green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*) and olive ridley (*Lepidochelys olivacea*) sea turtles. For many years WWF has proposed that these sites be joined to the North Tamberau Nature Reserve and that a fourth reserve be established to protect turtle populations breeding on the Warmon beach. However to date these efforts have been unsuccessful.

**Table 2 – Conservation Areas in the northern Bird's Head Region of West Papua**

	<b>Name of Conservation Area</b>	<b>Area</b>	<b>Established</b>	<b>Location</b>
1	Cagar Alam Pegunungan Arfak Arfak Mountains Strict Nature Reserve	68,325 ha	1995	Pegunungan Arfak Regency Manokwari Regency Manokwari Selatan Regency
2	Cagar Alam Tamberau Utara North Tamberau Strict Nature Reserve	368,365 ha	1982	Tamberau Regency
3	Cagar Alam Tamberau Selatan South Tamberau Strict Nature Reserve	519,621 ha	1999	Tamberau Regency Pegunungan Arfak Regency Maebrat Regency Teluk Bintuni Regency
4	Minggima Wildlife Sanctuary (Cave roosting bats)	3,800 ha	Proposed	Pegunungan Arfak Regency
5	Tuwanwouwi Special Use (Education and Training) Forest	7,656.25 ha		Manokwari Regency
6	Gunung Meja Nature Tourism Reserve	460,25 ha	1980	Manokwari Town
7	Mubrani-Kaironi Marine Wildlife Sanctuary - Turtle Nesting Beach	20 km 170.53 ha		Tamberau Regency
8	Jamursba Meidi Marine Wildlife Sanctuary - Turtle Nesting Beach	28 km 900 ha		Tamberau Regency
9	Sidei-Wibian Marine Wildlife Sanctuary - Turtle Nesting Beach	157.97 ha		Manokwari Regency
10	Pantai Wermon Marine Wildlife Sanctuary - Turtle Nesting Beach	Approx. 10 km	Proposed	

## 2.7 Indigenous People of the Arfak and Tamberau Mountains

Like other areas of the island of New Guinea, the Papuan Bird's Head Peninsula is ethnically diverse with around 34 different indigenous ethno-linguistic groups (see map ??). The indigenous people living in the project area can be broadly categorized as belonging to two major cultural groups, the Arfak and Tamberau peoples, both of which can be further divided into 5 sub-groups.



### 2.7.1 Arfak Highlanders

The indigenous people of the Arfak Mountains include around 55,000 people identifying themselves as members of the Hatam, Moile, Sougheb, Meyah, and Moskona tribes.

- The **Moile** people (estimate population 6,000 people) and **Hatam** (estimated 15,000 people) are culturally and linguistically very closely related groups. They mostly reside in the Warmare area just north of the Arfak Mountains, and in small scattered settlements in the Mokwam, Menyambouw, Catabouw and Hingk valleys along the western edge of the Arfak Mountains Nature Reserve with a number of small hamlets and hunting camps located deep within the reserve. Mixed communities of Moile, Hatam and migrants (mostly from Biak island) reside in a string of villages along the Arfak coast immediately east of the Arfak Mountains, in Tanah Rubu District, Manokwari Regency and Oransbari District, Manokwari Selatan Regency. They are the main group of customary owners of lands within the Menyambouw-Catabouw connecting forest corridor and Moile communities in the Mokwam, Indabri and Menyambouw Valleys have been the main groups involved in participatory mapping activities conducted as part of the RFN-Paradisea project in the Arfak area to date.
- The **Sougheb** (or Manikion) people are estimated to number around 12,000 people, most of whom reside in villages on the high plateau around the Anggi Lakes and in the Testega and Iranmeba Valleys, which is situated on the south-eastern boundary of the South Tamberau Nature Reserve. Mixed communities of Sougheb people and migrants can also be found around Ransiki in South Manokwari

Regency, at the southern end of the Arfak Mountains SNR. Soughb communities are not a major focus of RFN-Paradisea project activities to date but may become more involved in coming years.

- The territory of the **Meyah** (estimated population 15,000 people) stretches from Manokwari town, through the Prafi Valley to the north-eastern part of the South Tamberau Nature Reserve. Paradisea has recently engaged with a number of Meyah communities in participatory mapping.
- The **Moskona** (estimated population 6,000 people) live in extremely remote villages along the southern boundary of the South Tamberau Nature Reserve. They are not a focus of the project;
- The **Waren** and **Mansim** people (estimated 1,000 people) are a mixed descent group of Arfak people who historically intermarried with migrants from Biak and Numfor Islands in Cenderawasih Bay, who reside in a number of villages along the Arfak Coast. They are not a focus of the project.

### 2.7.2 Tamberau Peoples

The indigenous people of the Tamberau mountains include the Mpur, Irires, Miyah, Karon and Karon-Biak people. Of these groups three are currently a focus of the RFN-Paradisea project.

- The **Mpur** (estimated around 7,000 people) mostly live in the Mubrani and Amberbaken areas on the north coast of Tamberau Regency, and in the eastern part of Kebar Valley, between the North and South Tamberau Mountains. Their main settlements include Arfu and Saukorem on the north coast and Anjai in the Kebar Valley. Coastal communities have historically intermarried with migrants from Biak and Numfor Islands in Cenderawasih Bay, and represent a sub-group who are somewhat distinct from the highland Mpur of the Kebar Valley. They are the main group of customary owners of much of the eastern part of the North Tamberau SNR, part of the South Tamberau SNR and land within the proposed Mubrani-Kebar connecting forest corridor;
- The **Irires** (estimated around 1,000 people) are a small ethnic group closely related to the Miyah and Maybrat people. Their customary territory includes much of the western and central part of the South Tamberau SNR and extends into the limestone mountain ranges south of the reserve. Due to the extreme isolation of their original settlements, many of the Irires were resettled to Astiti and Senopi Villages in the Western part of the Kebar Valley, where they reside on land owned by Miyah people.
- The **Miyah** (estimated around 5,000 people), also known as the Karon Dori, live in the headwaters of the Kamundan River (the longest river in West Papua) and the main settlements include Senopi Village in the western part of the Kebar Valley, Siakwa, Brat and Asses, as well as Fef, which is currently being developed as the new administrative capital of Tamberau Regency. Their customary territory includes the southern part of the North Tamberau SNR, and the eastern part of the South Tamberau SNR, as well as land within the proposed Miyah connecting forest corridor.
- The **Karon** (estimated around 3,000 people), also known as the Abun, inhabit around 20 villages north and west of the North Tamberau SNR and are the customary owners of the northern and western parts of the North Tamberau SNR and the Jamursba Meidi and Wermon turtle nesting beaches. They are not currently a focus of the Paradisea project.
- The **Biak-Karon or Bikar** (estimated 800 people) and **Amberbaken** (estimated 800 people) are a mixed descent groups of Karon and/or Mpur people who historically intermarried with migrants from Biak and Numfor Islands in Cenderawasih Bay. They reside in a number of villages along the north coast of Tamberau Regency. They are not currently a focus of the Paradisea project.

Additionally around 20,000 Maybrat people, inhabit Maybrat Regency to the west of the South Tamberau Nature Reserve, though they not a focus of the project.

### 2.7.3 Culture and Contact

Each of the Arfak and Tamberau tribal groups have their own cultural traits, and there are very few reliable ethnographic accounts of these societies and their land and natural resource tenure and management systems, and most of the available information relates to the Moile and Hatam cultures<sup>11</sup>. These sources are probably a reasonable reflection of the cultures of the other Arfak groups (ie. The Meyah and Soughb) but may be less relevant to the Tamberau peoples, who are likely to share many cultural traits with the Maybrat people of the central Bird's Head region. As such the information provided in the following section should be considered to be broad generalizations. Given that the RFN-Paradisea project has a strong focus on formalizing customary leadership and natural resource management systems, further ethnographic research is clearly required to fill in the numerous gaps in our knowledge, particularly relating to land and natural resource management systems and ongoing processes of culture change, to which the project interventions are a contributing factor.

All of these indigenous ethnic groups traditionally lived in very small and hamlets scattered across the mountain valleys consisting of one or several traditional stilt houses, known in Indonesian as "*Rumah Kaki Seribu*" (see Box 7 below). They were often semi-nomadic, regularly moving between two or more hamlets of forest camps in different locations. They relied heavily on swidden agriculture based on sweet potatoes, taro, bananas, sugar cane and other root and vegetable crops, which was augmented by pig husbandry, hunting and the exploitation of various forest products. Descent systems are primarily patrilineal, and settlement practices appear to be mostly patrilocal, ie. women moving to their husbands hamlet. However some elements of matrilineality (descent and inheritance through female bloodlines) are still extant. For example respondents in Indabri village claimed that clan territories are owned by women and most men had married into the village, whereas individual garden sites were inherited patrilineally. Furthermore, the overall level of spatial and social mobility appears to have been quite high, with many cases of people moving from one location to another and/or changing clans. For example the Mandacan clan spreads across the Moile, Hatam, Meyah and Soughb tribes, suggesting that there has been a long history of intermarriage between tribes and/or switching clan and tribe alliances, and that kinship was defined more by shared territory rather than genealogical descent. This suggests that Arfak and Tamberau societies may still be in the process of transitioning from matrilineal-territorial kinship systems, which are common in small-band societies, towards a patrilineal descent system and patrilocal settlement patterns, which are more common in more sedentary tribal societies.

Leadership systems follow the "*Big Man*" system, which is widespread throughout the highlands of Papua, whereby social status is acquired through the deeds and capacity of individuals, rather than inherited, although some elements of sacred knowledge may be passed down through generations, thereby giving certain individuals an advantage in acquiring *Big Man* status. Amongst the Arfak and Tamberau people the ability to accumulate wealth, in the form of pigs, ikat cloth (*kain timur*) and other customary valuables, and redistribute it to relatives and affines for the payment of bridewealth and customary fines, appears to be the primary determinant of status. However, the ability to control supernatural forces and skills in

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<sup>11</sup> Available anthropological texts on the Arfak and Tamberau people include Laksono et al, (2001) and Sumule (1994).

negotiation, conflict resolution and warfare may also have played a significant role. Most leaders are men, though there are occasional cases of women being elected as village heads.

### Traditional land tenure and management systems

Land and resource rights amongst the Arfak and Tamberau people include a mix of communal and individual rights. At the highest level of social organization Arfak and Tamberau communities lived in communities of scattered hamlets, which under the influence of the Dutch colonial and Indonesian governments coalesced into centralized villages (though the process of “pemekaran” is reversing this process in many areas with many villages breaking up into small hamlets of just a few households). These communities possessed large territories stretching from river valleys up to or beyond the mountain ridges. In some areas a moiety system (splitting of communities and territories into two halves) exists, though

#### Box 6 - Customary Forest Zonation amongst the Hatam and Moile People

**Susti** — Gardens, fallows and secondary forest areas. This can be used for farming and is divided into two types: *susgoisi*, which is farmland left for a year with young secondary forest beginning to grow, and *susmahan*, which is former farmland left for more than 5 years where older secondary forest has been established.

**Nimahanti** — Primary forest usually located higher than the settlement area. Such land cannot be used for farming or settlements, though it may be used for hunting and the gathering of timber, tree bark and lianas for house construction as well as a variety of other forest products.

**Bahanti** — High altitude moss forests. These areas may not be used as garden land, and only a very limited range of non-timber forest products (such as certain medicinal plants) could be gathered there.



Ingrris and Mesak Wonggor with a sketch map of customary forest zones in Mbenti Village. This map shows the Susti zone extending from the village almost to the first mountain ridge, the Nimahanti extending to the river valley beyond, and the Bahanti extended all the way to the highest peaks.

these do not seem to have any functional role in land and resource management and most likely represent a vestige of older forms of social organization. These territories were divided into areas communally- by localized clan groups, the boundaries of which (known as *Hanjop* in Moile and Hatam) are marked by natural features such as streams, mountain peaks and ridges and major trees. These boundaries are fiercely guarded against incursions by outsiders in a system known as “Igya ser hanjop” or standing to defend the boundaries. These territories were further divided into several zones, known amongst the Hatam and Moile peoples as *Susti* (intensive use zone), *Nimahamti* (limited-use zone) and sacred areas in the upper montane forest known as *Bahamti* (see Box 6). Similar zonation systems exist amongst the other Arfak and Tambrauw societies, though these have not yet been properly documented.

Within the *Susti* or secondary forest zone, clan members were free to establish swidden gardens and/or house sites, as long as they did not impinge upon the fallow gardens of others. Once a garden had been cleared and tended it became the individual property of the person who had cleared it or their offspring, even through fallow cycles, for as long as they continued return to that garden site on a regular basis. Similarly certain fruit trees and valuable timber trees might be claimed and marked as individual property and could be gifted or passed down to others. Non-clan members who resided within a community could also request permission from clan leaders and members to use land for gardening and house construction and also to access timber, tree bark and other forest resources. Once again, once a non-clan member had cleared a site it could not easily be alienated from their control. Clan members, and non-clan members with permission, were also free to hunt within the *Susti* and *Bahamti* zones, but should their game cross into the territory of another clan they would usually have to abandon their pursuit or risk being fined for transgressing clan boundaries.

**Gift exchange economics and the Kain Timur Network** – Gift exchange economics were the norm amongst Arfak and Tambrauw societies, though there is also evidence of trade between highlanders and coastal people that was arguably closer to barter. Bridewealth is a highly important aspect of both Arfak and Tambrauw cultures, and lifelong indebtedness is the norm, and arguably the main constituent of the social glue which binds small groups together. Bridewealth was traditionally paid in the form of ikat cloth (*Kain timur*), glass beads, antique firearms (such as Portugese and Dutch Blunderbusses), shell armbands and other rare imported valuables, as well as pigs. Nowadays cash, motor vehicles, wrist watches and other goods often make up the major part of bridewealth payments, though antique ikat cloths, other traditional valuables and pigs are still considered indispensable elements. Whereas the Maybrat link bridewealth with a woman’s level of education, this is not the case amongst the Arfak people (though it’s not clear amongst the the Tambrauw people, who share greater cultural and linguistic similarities with the Maybrat), so there is a strong preference towards educating boys, whereas many girls are often only have access to primary level education, if at all. Besides bridewealth, customary fines for a variety of transgressions was one of the main ways in which wealth was transferred.

**Warfare, Magic and Witchcraft** – Whilst the majority of the Arfak and Tambrauw people are now followers of the Protestant or Catholic faiths, their traditional belief systems and worldview remain largely intact, with many elements syncretized with their new Christian beliefs. This includes elements of ancestor worship and animism, and beliefs in black magic and supernatural forces. Initiation rites are still practiced in secret locations over several months, though only selected boys go through this process and little is known regarding the details of these practices.

Unlike many groups from Papua's central highlands, open warfare was uncommon amongst Arfak and Tambrau people, though small-scale conflicts and raids occurred and were one of the main ways in which new land could be acquired. There is historical evidence of head hunting raids against coastal communities during the colonial period, whereas coastal communities of Biaki people raided Arfak and Tambrau communities to capture slaves. It is unclear if they ever practiced head hunting against other highland communities, and head hunting does not appear to have been a central element of their culture as was the case in some of the South Coast Papuan societies. In its place male witchcraft (referred to by the Indonesian term "suanggi" remains a widespread concern amongst Arfak communities. Suanggi are described as working in a variety of ways, usually involving the utilization of magical or poisonous plants. For example *suanggi* may sneak into a person's house to poison their food, they may physically attack and kill somebody and then use magical plants to hide their wounds. Magical plants may also be used to enable human assassins travel long distances or increase their strength to strike their targets down, or to render them invisible or conceal their presence after an attack. *Suanggi* can be hired to kill ones enemies, or to defend against or counteract the attacks of other suanggi or supernatural beings. They could be revered or reviled depending upon a person's relationship with them. Belief in suanggi means that people tend to strive to maintain good relationships with other people, as there are various reasons why somebody might wish to hire a suanggi to kill them, such as adultery, failure to share wealth with others and failure to repay fines or debts incurred by oneself or ones relatives. These practices were largely repressed during the early years of missionization, with large ceremonies conducted to burn fetishes and *suanggi* medicines. However, as it became apparent that Christianity would not provide deliverance from death and misfortune, suanggi practices and beliefs underwent a resurgence from the 1970s onwards.

**Social and Economic Change** – Whilst the mission station on Mansinam Island near modern-day Manokwari was one of the first European settlements established in Papua, and a number of naturalists explored parts of the coastal ranges of the Arfak Mountains and Anggi Lakes area and made contact with some local communities during the mid-19<sup>th</sup> Century, contact between most Arfak and Tambrau communities and the outside World remained very limited the late-20<sup>th</sup> Century. In the 1950s and 1960s American missionaries from The Evangelical Alliance of Missionaries (TEAM) began to penetrate the interior of the Arfak Mountains, establishing mission stations in Menyambouw, Anggi, Ninei and Testega in the Arfak Mountains and the eastern part of the Kebar Valley. Around the same time Catholic catechists from the Kei Islands in South-East Maluku began spreading the Catholic faith from Sorong town eastwards into the Miyah area and the western Kebar Valley. The protestant and Catholic missionaries brought with them not only the bible, but also a range of new crops, such as potatoes, tomatoes, carrots, garlic, shallots, peanuts, mung beans and coffee, etc., as well as access to basic health and education services and light aircraft services connecting them to the outside world. Whilst many Arfak and Tambrau people began engaging in cash cropping, most communities remained reliant of missionary aviation services to get their agricultural products to market, so cash incomes remained very low and subsistence agriculture, hunting and gathering remained the primary forms of economic activity. This began to change around the turn of the 21<sup>st</sup> Century, as the expanding network of roads allowed new opportunities for transporting produce to markets, though most Arfak and Tambrau people remain very marginal to the market economy.

Over the past 15 years a variety of government programs, such as the special autonomy fund, national community empowerment program (PNPM) and more recently the village fund (Dana Desa), have also become important sources of cash income. These programs were conceived as participatory development and community empowerment schemes, though in practice the lack of facilitation support

and monitoring and evaluation has meant that they have amounted to little more than cash handouts, which many observers, including many members of indigenous communities, see as undermining community self-reliance and creating dependency on government handouts. Similarly government social safety net program, such as the subsidized rice (Raskin) program and direct cash transfers have contributed to dependency on government aid as well changing dietary patterns.

### Box 7 - Traditional Kaki Seribu Houses of the Arfak Mountains

Most of the Arfak people continue to live in Kaki Seribu (Thousand Legs or Centipede) Houses, which are known as *Mod Aki Aksa* or *Igkojei* in the Hatam and Meyah languages. These houses are constructed from timber poles and tree bark with nibun palm floors. Traditionally the rooves were made from palm thatch, but nowadays most people prefer to use corrugated roofing iron due to its greater durability. The houses are quite spacious, and can accommodate several families. Long hearths with space for multiple fires are located along both walls, with slepping spaces situated in front of the hearth, and in some cases sleeping racks built over the hearths. Space within the house is segregated into male and female areas, though there are no windows, both to keep the heat in and the cold mountain air out, but also to prevent witch-assassins (*suanggi*) from creeping into the house to poison or otherwise kill the inhabitants. Consequently the interiors are warm but very smokey, which contributes to high levels of upper respiratory tract infections. In the past houses were often built on tall stilts to help defend against enemy attacks, but nowadays most are built much closer to the ground.

In communities close to Manokwari town the government has built modern houses. However, most Arfak people still prefer to sleep in Kaki Seribu houses, which are often built on the rear of modern houses.



Cooking inside a Kaki Seribu House



Soughb woman feeding her pigs in front of her Kaki Seribu house, Cernohu Village, Pegunungan Arfak Regency.

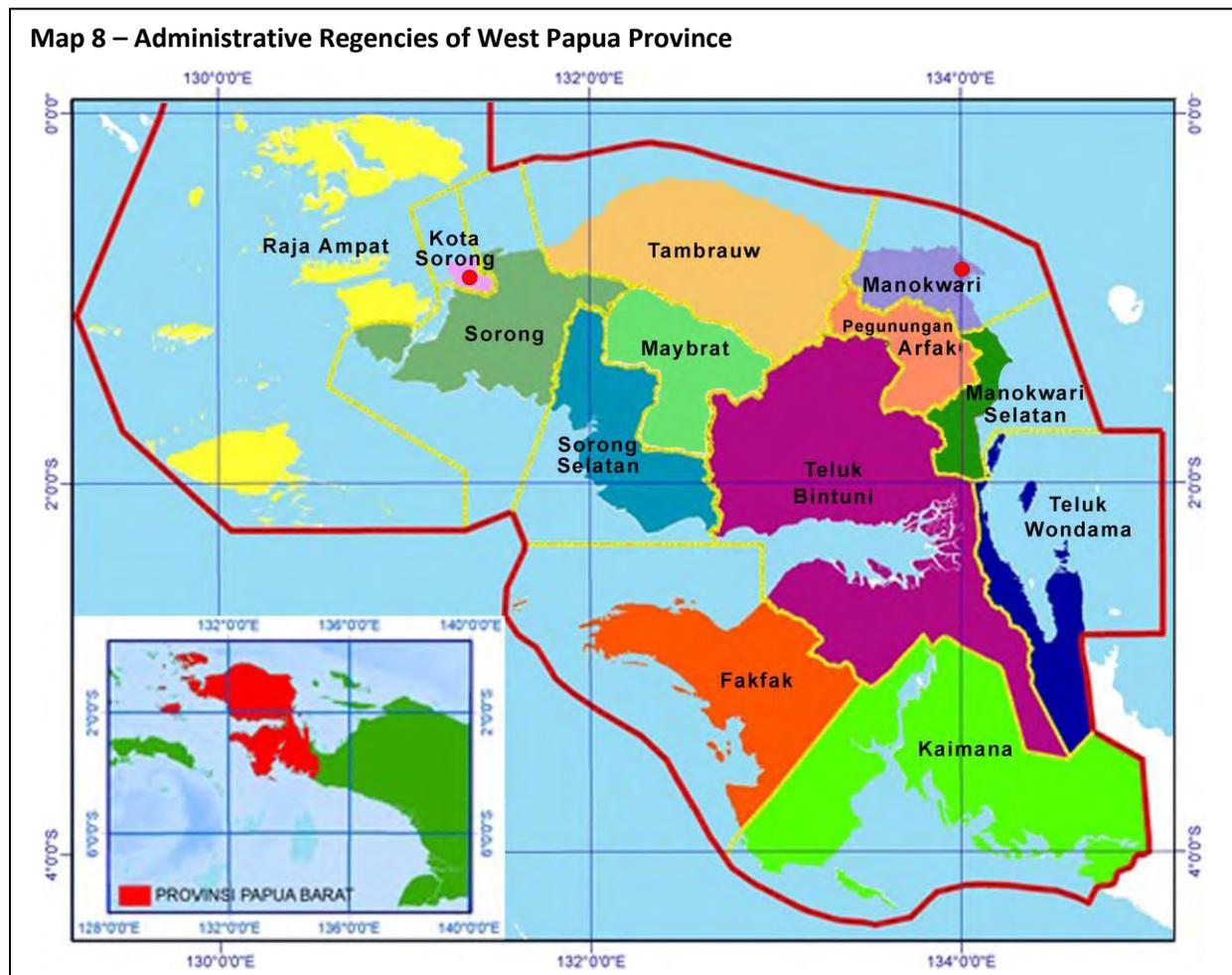
The acquisition of land for oil palm plantations, urban expansion and infrastructure development has also led some Arfak and Tamberau people to engage in “landlordism” or “rent seeking.” This is most notable amongst Meyah communities, who traditionally owned the Manokwari town area and the Prafi plains where oil palm and transmigration settlements were established from the 1980s onwards. Meyah people are known for door knocking in Manokwari each Christmas and Easter to demand rent payments from private home owners and blockading oil palm and cocoa plantations to demand rent. Since the establishment of West Papua Province in 2005 the increasing demand for land for the construction of public and private buildings has led to rapid inflation in land compensation claims, with a number of major construction projects abandoned due to exorbitant compensation claims.

Traditionally land could not be bought or sold, so the role of clan and community leaders related to the determining the rights of outsiders to access and utilize communally-owned land and resources as well as resolving conflicts, but did not extend to the right of disposal. The imposition of the Indonesian Basic Agrarian Law (1960), which lacks any allowance for communal land ownership, and the basic forestry and mining laws (1967), which empowered the state to appropriate uncultivated land, including fallow gardens, on the basis of eminent domain, as well as the lack of provisions for Free-Prior Informed Consent (FPIC) in Indonesian law, has undermined customary land and resource tenure systems. Furthermore, both the state and private entrepreneurs have encouraged tribal and clan leaders to act as land agents on behalf of their communities, signing away large swathes of territory for plantations, urban expansion and infrastructure projects. These practices have resulted in widespread agrarian conflicts, as other claimants to customary land and resource rights almost invariably emerge following such transactions. This not only results in alienation of communal land, but also violent conflict, criminalization of community members and costly delays and cancellations in economic and infrastructure development programs. As such there is a clear and urgent need for communal land-ownership laws, which limit the rights of individuals and communities to dispose of their property rights to non-clan members, and for robust FPIC laws which ensure that consent is given by all members of indigenous communities and that culturally, economically and ecologically important areas are properly identified prior to any land-use changes. Such safeguards are required both to protect the rights and ongoing livelihoods of indigenous communities, and also to ensure that investments in economic and infrastructure development programs can proceed efficiently and do not result in undesirable social and environmental impacts.

## 2.8 Sustainable Development Challenges

### 2.8.1 Urban and Agropolitan Growth Centres

Since West Papua Province was established in 2005 the rates of land conversion and expansion of urban and agropolitan centres has accelerated, with many areas experiencing annual population growth rates of around 3.5%, or over twice the national average, mostly due to migration from other parts of Indonesia. Furthermore, the process of “*pemekaran*” or the creation of new administrative regencies, districts and villages has reached absurd levels and is further driving land conversion and population growth. The two largest population centres adjacent to the Arfak and Tambrau SNRs are the provincial administrative capital of Manokwari to the east and the commercial capital of Sorong to the West. Furthermore there are a number of existing and proposed agropolitan centres and new towns which pose direct and indirect threats to the Arfak and Tambrau SNRs as outlined below.

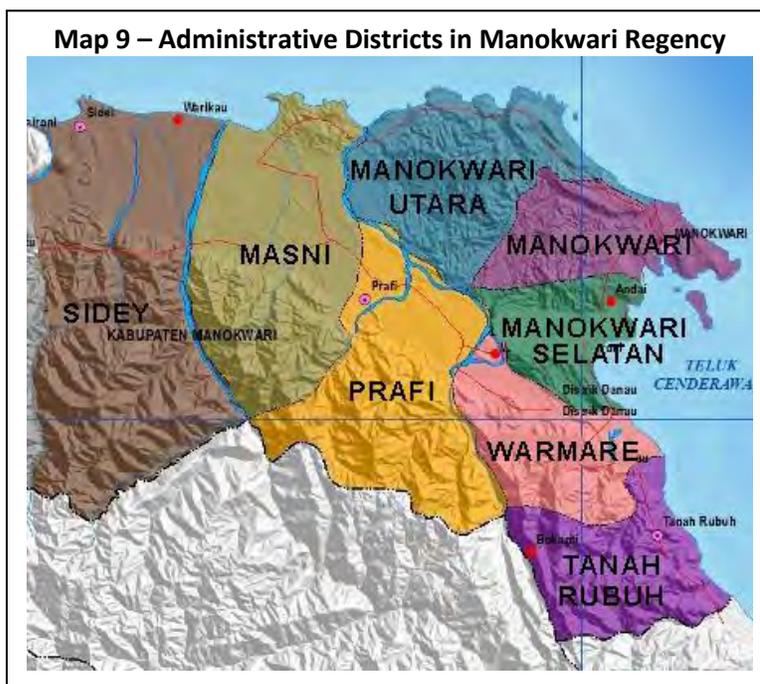


**Manokwari Town** is located approximately 20 km north of the Arfak Mountains SNR and approximately 60 kilometres north-east of the South Tambrau SNR. It has a population of over 136,000 people (2010 census) whereas the greater metropolitan area (including many peri-urban villages) has a population of 286,079. Since becoming the Provincial capital of West Papua Province in 2005 Manokwari’s population growth rate has been relatively high, at around 3.5% per annum (as compared to the national average of around 1.5%), though migration from Manokwari is not considered a major threat to the Arfak and

Tambrau Nature Reserves. Manokwari is largely dependent on the Arfak Mountains for its urban water supply, so there may be potential to develop a payment for environmental services scheme related to management of water catchment areas in the future.

**Sorong Town** is the largest city in West Papua Province and serves as West Papua’s major fishing port and the logistics hub for West Papua’s oil and gas industry and the adjacent transmigration, oil palm plantations and timber industries centred around Aimas in neighboring Sorong Regency. According to the 2010 Census Sorong had a population of 190,625 people, but since that time it has undergone rapid growth of around 3.5% per annum, with the latest official population estimated at 225,588 (Kota Sorong Dalam Angka, 2015). Sorong is located approximately 90 kilometres west of the North Tambrau Nature Reserve and migration from Sorong to settlements along the north-west coast of the Bird’s Head and into newly established settlements in the corridor between the North and South Tambrau SNRs is considered one of the most significant threats.

**The Prafi Plains**, which extend across the northern part of Prafi, Masni and Sidey Districts are the largest agropolitan centre in Manokwari Regency with a total population of around 35,000 people<sup>12</sup>. During the 1980s and 1990s a company known as PTP2 established over 33,000 hectares of oil palm plantations in the Prafi Valley, whereas a dozen transmigration and translocal settlements were also established, in part to supply labour for the oil palm estates. Most of the PTP2 oil palm estates have now reached senescence and production has declined considerably, and the evaluators observed little evidence of efforts to rejuvenate these plantations. Since 2008 PT Medco has established around 8,000 hectares of new oil palm plantations in Sidey District and has proposed a further 45,000 hectares expansion of their plantations westwards into Mubrani District. Additionally there are large areas of wet rice fields, vegetable gardens and cocoa plantations. Furthermore, over the past few years several roads, settlements and oil palm blocks have been established in and around the Tuwanwouwi Special Use Forest, a little known conservation area located between the Prafi Valley and Manokwari Town, which is both an important water catchment area and one of the last remaining areas of pristine lowland forest in Manokwari Regency, which provides habitat for species such as the rare and vulnerable Vulturine Parrot (*Psitturichas fulgidus*). Ongoing population growth in the Prafi valley and expansion of oil palm plantations westwards in Sidey and Mubrani Districts (towards the North Tambrau SNR) and westwards into the Tuwanwouwi Forest is considered one of the most significant threats to forests and indigenous peoples in Manokwari Regency, including direct impacts such as land conversion /



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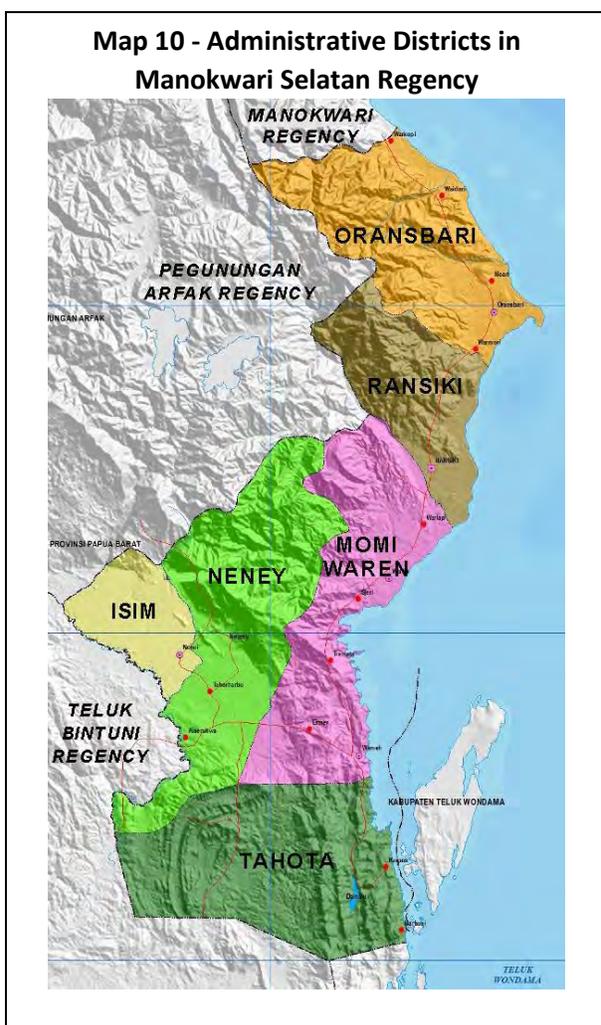
<sup>12</sup> According to official statistics Prafi District had a population of 15,519 people in 2015, Masni District had a population of 14,754 people, whereas Sidey district had a population of 4,578 people.

deforestation, hunting and harvesting of marine turtle eggs and indirect threats such as displacement of indigenous communities into the conservation areas.

Over the past year Paradisea has recently commenced working with a number of Meyah communities living around the fringes of the Prafi Valley to help them map and achieve formal recognition of their customary territories and raise their awareness regarding the long-term implications of the sale of customary land, as a means of preventing further expansion of oil palm plantation into forest areas.

**South Manokwari Regency - Ransiki and Oransbari Towns** are two minor urban centres located immediately east and south of the Arfak Mountains Nature Reserve respectively. According to the 2010

census Ransiki has a population of 7,683 people whereas Oransbari has a population of just over 5,010 people, whereas according to for 2014 Ransiki's population had grown to 9,003 people and Oransbari's had grown to 5,869, or around 3.5% per annum. The population includes a mix of indigenous Arfak Highlanders (mostly Soughb and Hatam) and indigenous coastal people (including Waran, Rumberpon, Wamesa, Biaki and Yapenese people) and migrants from other parts of Indonesia. Both are minor agropolitan centres. The economy of Ransiki was previously heavily dependent on employment with the PT Cokran cocoa plantation, which immediately abuts the southern boundary of the Arfak Mountains Nature Reserve. However, the PT Cokran plantation closed in 2006 due to heavy crop losses to the Cocoa Pod Borer, leading to the loss of hundreds of jobs. In 2012 Ransiki became the administrative capital of the newly established South Manokwari Regency and in 2016 the Head of South Manokwari announced plans to re-open the PT Cokran plantation, though the current owners of the plantation (PT. Aspram Ransiki) have cited claims of over Rp.18 billion (USD\$1.3 million) in back wages and other unpaid benefits as an insurmountable impediment to re-opening the plantation. As such the government of South Manokwari Regency is currently considering nationalizing the plantation. Oransbari, Ransiki and other small settlements along the eastern boundary



of the Arfak Mountains Nature are minor sources of threats, primarily through hunting, extraction of timber and other resources. Encroachment of plantations and settlements is a relatively minor concern along most of the Arfak coast due to the steep and rugged terrain, though some encroachment has occurred around Ransiki where the relief is less extreme.

South Manokwari Regency is not a major focus area for the RFN-Paradisea Project, though negotiations regarding the establishment of the proposed Arfak-Tambrau National Park will necessitate engagement with the government of Manokwari Selatan as part of the Arfak SNR is located in Manokwari Selatan.

**Tambrauw Regency** was established as a New Autonomus Region in January 2009. It is one of the most sparsely populated regions in Indonesia, with a total official population of 13,497 in (BPS Kab. Sorong, 2014) spread across an area of 11,592.19 km<sup>2</sup>, or a population density of just 1.17 people per km<sup>2</sup>. This includes the entire North Tambrauw SNR and most of the South Tambrauw SNR, most of which areas are uninhabited. The overwhelming majority of the population are indigenous Karon, Miyah, Mpur, Ileres and Bikar people. The migrant population is largely restricted to a handful of civil servants, police and

**Map 11 – Administrative Districts in Tambrauw Regency**



military personnel many of whom actually live in Sorong Town and commute to the regency capital at Sausapor, and a scattering of school teachers, health workers and small traders based in Sausapor and a few of the larger villages. The Human Development Index (HDI) for Tambrauw Regency was 49.77 in 2015 which is the lowest in West Papua Province and the 13<sup>th</sup> lowest out of a total of 514 regencies and municipalities nationwide<sup>13</sup>.

Tambrauw’s temporary administrative capital is currently located at Sausapor, which is located on the north-west coast of the Bird’s Head, approximately 5 kilometers west of the boundary of the North Tambrauw SNR and has a population of around 2,764 people in 2015. However, a new administrative capital is currently being constructed in Fef a few kilometers south of the North Tambrauw SNR and the seat of government is expected to relocate there in early 2018. Besides the establishment of a new administrative capital at Fef the government of Tambrauw Regency also has ambitious development plans, which present significant threats to the integrity of the North and South Tambrauw SNRs as well as the livelihoods of many indigenous communities. For example these include:

- Development of Sausapor as the commercial capital;

<sup>13</sup> See BPS (2016) Indeks Pembangunan Manusia Indonesia 2015.

- Construction a container port at Samparmon, located on the north coast of the Bird's Head near the Jamursba Meidi and Warmon leatherback turtle nesting beaches;
- Development of an agropolitan centre in the Kebar Valley (between the North and South Tambrau Mountains) including establishment of corn plantations and cattle ranching;
- Construction of a road from the Samparmon Container Port to the Kebar Valley agropolitan centre, approximately 60 kilometers of which will pass through the heart of the North Tambrau.

Furthermore, since its establishment in 2009 Tambrau Regency has undergone what is probably the most rapid rates of administrative division (pemekaran) in Indonesia, from 11 districts and 29 villages in 2009 to 29 districts and 216 villages in 2016. A number of these new districts have less than 100 residents, and many of the villages have fewer than ten residents. For example Tabamsere Village, the administrative capital of Wilhem Roumbouts District, has an official population of just 3 people. At the same time the government has used the Village Funds (Dana Desa) to construct five new houses in each of these villages. Whilst the

justification for the establishment of new districts and villages and the construction of new houses has been to improve the delivery of government services and improve living conditions, experience has shown that pemekaran generally does not lead to improved service delivery, whereas highland communities tend to prefer to live in their traditional houses. As such the creation of new districts and villages and construction of new houses are likely to contribute to the movement of migrants from Sorong into Tambrau Regency and consequently a range of threats to the forest areas.

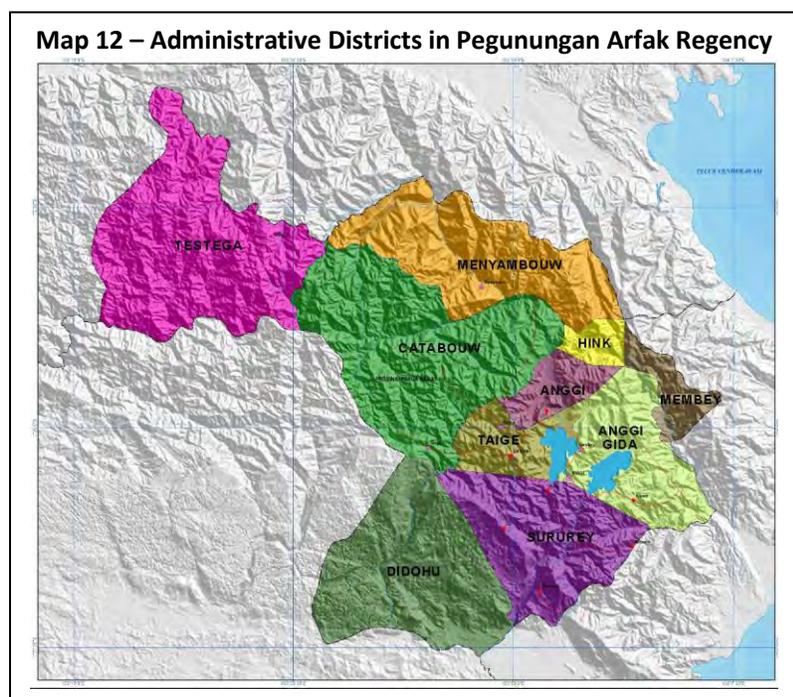


Newly established Tabamsere Village, the administrative capital of Wilhem Roumbouts District in Tambrau Regency, has 6 new houses and a population of just 3 people.

Tambrau Regency is one of the main areas where Paradisea has been working since 2013. They have succeeded in influencing the head of Tambrau Regency to declare Tambrau a Conservation Regency.

However, there is clearly a disconnect between this declaration and the government of Tambrau's development plans as outlined above. Therefore there remains much work to be done to secure the livelihoods of the indigenous peoples of Tambrau and the forests upon which they depend.

**Pegunungan Arfak Regency** was established as a New Autonomus Region in October 2012. The official population in 2015 was 28,271 people spread across an area of 4,650.32 km<sup>2</sup>, or a population density of 6.08 people per km<sup>2</sup>. Much of this regency lies above 1,800 meters altitude, including two large highland lakes, Anggi Gji and Anggi Gida, both located at around 1,900 meters altitude, most of the Arfak Mountains SNR as well as part of the South Tambrau SNR. The overwhelming majority of the population are indigenous Arfak people from the Moile, Hatam, Soughb and Meyah tribes, who maintain a largely traditional lifestyle based on swidden agriculture, pig husbandry, hunting and the utilization of other forest resources. The production of highland vegetables such as potatoes, carrots, cabbages, shallots and garlic as well as pineapples and to a very small extent coffee, are the primary sources of cash income for most local people. The migrant population is largely restricted to a handful of civil servants, police and military personnel many of whom actually live in Manokwari Town and commute to Anggi Town, and a scattering of school teachers, health workers and small traders based in Anggi town and a few of the larger villages. The Human Development Index (HDI) for Pegunungan Arfak Regency in 2015 was 53.73, which is the 2<sup>nd</sup> lowest in West Papua Province and the 14<sup>th</sup> lowest out of a total of 514 regencies and municipalities nationwide<sup>14</sup>.



The current administrative capital is located at Anggi, on the shores of Anggi Giji Lake, though there are plans to relocate the capital to the Ulong-Adang area, north or Anggi. However, there have been some issues with land acquisition, and furthermore, the Ulong-Adang area is dominated by swampy plains, which poses a number of both engineering and environmental impact management challenges. Up until the present the establishment of new administrative districts has been relatively limited, with just 10 districts at present, but most villages in Pegunungan Arfak Regency are currently in the process of being split into several smaller villages. Whilst the establishment

of the new capital at Ulong-Adang urban area and the establishment of new villages does not currently pose a major threat at present, there is a risk that migration and expansion of settlements will pose an increasing threat in coming years. Of most immediate concern is the construction of roads through the rugged mountain terrain, which has caused numerous landslides and other environmental impacts as described in the following section on roads. Further road construction is planned, including a road through the sensitive Lina and Longmot limestone karst mountains in Didiohu District, from Iranmeba village to the mouth of the deepest caves in Indonesia.

Pegunungan Arfak Regency is one of the main areas where Paradisea has been working since 2013, particularly in Menyambouw and Catabouw Districts, and the current head of Pegunungan Arfak regency

<sup>14</sup> See BPS (2016) Indeks Pembangunan Manusia Indonesia 2015.

has been supportive of their work, including making a commitment to develop a local regulation on customary forest rights.

### **2.8.2 Road Construction**

Up until the 1980s the only access to the interior of the Bird's Head was by foot, light aircraft, or a few logging roads. The first road into the interior was built in the 1980s connecting Manokwari town to the nearby Prafi plains to facilitate the establishment of oil palm plantation and transmigration settlements. In the late 1990s a road was built along the Arfak coast from Manokwari to Ransiki in places passing through the edge of the Arfak Mountains SNR, and soon after from Ransiki up to the Anggi Lakes area in the Arfak highlands,. A number of Arfak communities were resettled from within the Arfak Mountains SNR and the highland valleys to the west, settling in a string of villages along the road or around Ransiki and Oransbari. Around the turn of the 21<sup>st</sup> Century road connections were established between Manokwari and the Menyambouw Valley in the northern Arfak Mountains and to the Kebar Valley between the North and South Tamberau SNRs. However for many years these roads remained difficult to traverse due to numerous river crossing, severe erosion and frequent landslides.

Over the past five years the rate of road construction has accelerated dramatically including:

- The Trans West Papua Highway linking Manokwari to Sorong;
- Extension of the road from Menyambouw through to Anggi, around the Anggi lakes and beyond to the remote villages of Iranmeba and Testega;
- Part way along the north coast of the Bird's Head from Arfu to Waibem;
- Many feeder and connecting roads, including in places into the edges of the Arfak, North and South Tamberau SNRs and through the Tuwanwouwi Special Use Forest; and
- Widening of many of the existing roads.

Many other roads are currently planned including:

- Extension of the road along the north coast of the Bird's Head through to Sausapor;
- Construction of a road connecting the proposed Samparmon Container Port to the Kebar Valley agropolitan centre, approximately 60 kilometers of which will pass through the heart of the North Tamberau SNR; and
- From Iranmeba to the mouth of the ginat sinkholes near the south-east corner of the South Tamberau SNR.

Whilst roads are highly important to remote communities as they reduce isolation and improve access to markets, health care and education services, poorly planned and executed road construction projects present various threats including:

- Landslides as a result of insufficient drainage and terracing of cuttings in areas prone to frequent earthquakes and extremely high rainfall;
- Opening up areas along roads for illegal logging and mining activities;
- Increased erosion of riverbeds and increased flooding due to indiscriminate extraction of gravel and stones from local riverbeds;
- Opening up areas to hunting by non-indigenous peoples, which usually leads to the rapid decline in populations of major game species such as deer, cassowary and marsupials.
- Encroachment into the nature reserves and protected forests, including the establishment of new settlements in the North Tamberau SNR and settlements and plantations in the Tuwanwouwi Special Use Forest;
- Edge effects including the spread of weedy species and the disposal of rubbish along roadsides;

- Spread of cinnamon fungus (*Phytophthora cinnamomi*), a highly invasive soil-borne water mould that produces an infection which causes a condition in plants called "root rot" or "dieback." Cinnamon fungus is spread by earth moving equipment and on the tyres of vehicle and Antarctic Beech trees (*Nothofagus* spp.), which are a major component of the upper-montane rainforest, are highly susceptible to this disease. Large areas of Antarctic Beech forest can be decimated by this disease;
- Trampling of sensitive sub-alpine shrubberies by increased numbers of people visiting high altitude areas;
- Roads through limestone karst areas (such as the planned road to the caves south of Iranmeba village) have additional risks including siltation of cave systems, impacts on subterranean rivers and streams and potential collapse of roads into hidden sinkholes;
- Social impacts including encroachment on gardens, sacred sites and other economically and culturally important areas, social conflict over unequal distribution of benefits, and influxes of migrants potentially leading to economic marginalization and further loss of land and resources.

The establishment of new administrative regencies and the free flow of central government funding for road construction projects has encouraged regency level governments to push ahead with road construction projects with almost total disregard for environmental and social impacts assessment, management and monitoring and regulations and spatial planning regimes and without adequate attention to drainage, erosion and landslide control. Furthermore, public consultation and land acquisition processes fall far short of national and international standards, often leading to impacts on gardens, sacred sites and other economically and culturally important areas as well as unequal distribution of compensation payments and consequently social conflicts. In some cases insufficient public consultation and compensation processes also lead to the costly delays and/or failure of road and other infrastructure development projects, or blockading of roads by communities seeking to augment the direct economic benefits through tolls. Road construction also fuels in-migration so there is a need to prepare remote indigenous communities for the likely influx of settlers and the associated social and economic changes, including strengthening their ability to compete economically with migrants, secure their territorial rights and mapping of economically and culturally important areas where construction of roads and other infrastructure should be avoided. In ecologically sensitive high altitude and limestone karst areas additional measures are required, identification of the most sensitive areas including surveys of cave systems and mapping of high conservation value areas, efforts to limit the spread of cinnamon fungus, and public education measures and laws regarding the protection of scrublands and control of rubbish disposal.

As such there is an urgent need to strengthen the capacity, authority and will of the provincial and regency level planning agencies (BAPPEDA), environmental protection agencies (BAPEDALDA) and Public Works Services (DPU) to plan and execute road construction projects and ensure compliance with environmental and social impact assessment, management and monitoring and spatial planning regulations including FPIC and measures to ensure that compensation for loss of customary land is equitably shared amongst community members.

**Box 8 - Impacts of Road Construction in the Arfak Mountains**



1. Landslides along the Menyambouw – Anggi Road due to recent road construction activities
2. Extraction of road construction materials from a riverbed in Menyambouw



3. Tanah Rubuh District is located on the coast at the foot of the Arfak Mountains. Tanah Rubuh means landslide, referring to landslides that regularly destroy roads on the Acemo and Sayori Mountains.
4. Only very limited efforts have been made to stabilize road cuttings, such as the planting of soil stabilizing grasses along a short stretch of the roadside near Indabri Village

### 2.5.3 Plantation and Smallholder Estate Crop Development

#### Cocoa

During the 1950s and up until 1962 the Dutch Colonial Government made initial attempts to establish experimental plantations of cocoa (*Theobroma cacao*) in the fertile lands around Amban, near Manokwari and Ransiki. Whilst these efforts were cut short by the transition to Indonesian rule, a handful of old Dutch varieties of cocoa, are still growing in Ransiki and Oransbari. These varieties are believed to be more resistant to the Cocoa Pod Borer (CPB), and could be used as a source of propagules for establishment of CPB resistant smallholder cocoa plantations.

In 1978-1979 a large commercial cocoa plantation was established by PT Coklat Ransiki (PT. Cokran) near Ransiki at the southern end of the Arfak Mountains SNR. This plantation operated for over 25 years, and the cocoa produced had a reputation for high quality. However, the Cokran plantation closed in 2006 due to a combination of financial difficulties and infestations of CPB. In early 2016 the Government of South Manokwari Regency met with PT. Aspram, the current owners of the plantation, urging them to reopen the plantation, but Aspram claimed that the burden of unpaid wages and benefits made it untenable for them to reopen. The Government of Manokwari Selatan is now considering taking over management of the plantation. During the 1980s two other commercial cocoa plantations were established at the northern end of the Arfak Mountains SNR. These included the Nusa Indah Plantation near Mupi Village in 1983-1984, and the PTP2 (The state owned enterprise that also developed Oil Palm plantations in Prafi District around the same time) in Warmare District. Both of these plantations were permanently closed in the early 21<sup>st</sup> Century after they were invaded by local community members

Between 1994-2003 the Sustainable Agriculture Development Project (SADP) worked in around a dozen indigenous communities around the Arfak Mountains SNR (including in the Warmare, Tanah Rubuh, Oransbari and Ransiki areas), as well as along the north coast of Manokwari Regency. SADP placed extensions officers in each of the target villages who were tasked with establishing smallholder farmer groups, assisting them to develop cocoa plantations and training them in cocoa production methods (as well as some ancillary agricultural and aquaculture projects). Whilst this project specifically targeted indigenous communities, and previous experience had shown that the uptake rate of new agricultural technologies amongst Arfak communities was very low (Sumule, 1994), little effort was made to adapt cocoa cultivation methods to local practices. For example, in order to achieve their planting targets they developed large contiguous blocks of mono-culture cocoa (ranging from 12 to 90 hectares) and new hybrids varieties developed at the Jember research station in East Java were planted close together (4 metres x 2 metres). These approaches necessitated intensive farming practices such as high use of fertilizers and pesticides, which were at odds with the preferences of indigenous Arfak farmers,



Cocoa Pod Borer (CPB) pest can reduce cocoa yields by as much as 80%. Since 2001 it has devastated production in West Papua.

who have a strong preference for low-input mixed agroforestry systems. Furthermore, payments were provided for community involvement in all aspects of the projects, including land clearance and preparation, planting, maintenance and attendance of meetings and training activities. As such, whilst the SADP project was successful in terms of establishing over 500 hectares of smallholder cocoa gardens, the adoption of intensive cocoa cultivation practices was limited and within a few years many of the SADP trained cocoa farmers had more or less abandoned their gardens.

Around the year 2001 a pest known as the Cocoa Pod Borer (CPB - *Conopomorpha cramerella*) also began to attack cocoa plantations in Manokwari, leading to serious crop loss, which also contributed to the abandonment of cocoa production by many indigenous smallholders, including the closure of the commercial cocoa plantations, despite considerable application of pesticides. From 2003-2005 the USAID SUCCESS Alliance (Sustainable Cocoa Extension Services for Smallholders) trialled a Farmer Field School (FFS) approach which aimed to empower smallholder cocoa farmers to overcome the CPB pest through participatory training in agro-ecosystem analysis, observation of the CPB life-cycle, good cultivation methods (including frequent harvesting, organic fertilizing, pruning and sanitation) and promoting mixed agroforestry systems with wider cocoa tree spacing interspersed with other productive crops, including species such as soursop and kedondong, which attract ants (one of the main natural predators of CPB) into the garden. Whilst this approach was highly successful, the duration of the project was too short to have a meaningful impact. On the other hand some of the SUCCESS Alliance FFS Alumni went on to apply their knowledge and train other farmers. Most notable amongst these alumni is Agus Tarami, who now works for the Manokwari Selatan Agriculture Service and has been employed as a trainer by Paradisea foundation. Agus has continued to be a strong proponent of the FFS training approach and organic cocoa production techniques, including conducting successful trials on the use of low cost fish emulsion sprays to fertilize cocoa trees whilst simultaneously attracting ants into the garden as a defence against CPB.

### **Oil Palm**

During the 1980s and 1990s a state-owned enterprise known as PTP2 established over 33,000 hectares of oil palm estates in the Prafi-Masni area, including a 12,000 hectares company owned plantation and over 11,000 hectares of smallholder oil palm blocks, which are owned by 5,657 farmers living in a dozen transmigration and translocal settlements. Most of the PTP2 oil palm estates have now reached senescence and production has declined considerably, and there is little evidence of efforts to rejuvenate these plantations.

Since 2008 PT Medco has established around 8,000 hectares of new oil palm plantations in Sidey District and has proposed a further 45,000 hectares expansion of their plantations westwards into Mubrani District. Furthermore, over the past few years several roads, settlements and oil palm blocks have been established in and around the Tuwanwouwi Special Use Forest, a little known conservation area located between the Prafi Valley and Manokwari Town, which is both an important water catchment area and one of the last remaining areas of pristine lowland forest in Manokwari Regency, which provides habitat for species such as the rare and vulnerable Vulturine Parrot (*Psitttrichas fulgidus*).

A recent study on the impacts of oil palm development in the Prafi Plains by experts from CIFOR and UNIPA (Kesaulija, et al., 2014) found that whilst the development of oil palm plantations has had positive impacts on the regions economy and various stakeholders, these benefits have accrued disproportionately to migrants, whereas many indigenous peoples had been economically marginalized, including through dispossession of customary lands, often without compensation, which in turn created horizontal conflicts, injustice and envy among local communities toward immigrants. They also found that oil palm development had resulted in numerous negative environmental impacts including deforestation, changes in water flow patterns, reduced water availability and quality, increased erosion and flooding, river abrasion and sedimentation, air pollution, and more numerous instances of disease. They recommended that a moratorium be put in place on the conversion of forest to oil palm estates on the Prafi Plain and that efforts should be directed towards regenerating old plantations and other means of increasing productivity from existing plantations and other non-forested, degraded and unproductive land. They also recommended that the government needs to strengthen environmental impact assessment procedures and monitoring, supervision and regulation of company operations. (See Box 9 for the full conclusions from this research).



Gates of the PTP2 Oil Palm Plantation in Prafi District, Manokwari Regency. The proposed 45 ha expansion of oil palm estates into Sidey and Muhrani Districts threatens forests and indigenous community livelihoods.

### **Box 9 - The Impacts of Oil Palm Development on the Prafi Plains, Manokwari Regency**

Recent research by a team of experts from CIFOR and UNIPA (Kesaulija, et al., 2014) found that:

- Oil palm estates on the Prafi Plain have contributed to the region's economic development by creating employment and providing opportunities for various stakeholders to improve their standard of living. Oil palm estates also provide an opportunity for customary communities to interact with government officials, company employees and migrants. The operation of the estate, designed originally through the PIR-Trans scheme, has had positive impacts on various stakeholder groups such as company workers, former landowners and customary users, investing farmers and affected neighbors.
- The company's workers, in particular, experienced positive livelihood changes, which were attributed to increased income and more reliable income flow. Affected neighbor groups are positively affected by oil palm development as they are generally able to take advantage of the economic opportunities it brings, such as by operating a business. The change from swidden agriculture to fixed farming of oil palm with intensive cultivation technologies has increased farming households' cash earnings.
- However, the expansion of the oil palm estates has also resulted in some adverse environmental and social impacts, which may be important for policy-makers to consider when designing and implementing policies, and for other stakeholders to take into account as well. In terms of the environment, development of oil palm estates has resulted in a significant reduction of forest cover. As a result, forested lands on the Prafi Plain make up only 33.88% of the region's watershed, which is close to the minimum stipulated by law. Various stakeholder groups also consider the following to be negative impacts from converting forest to oil palm estate: changes in water flow patterns, scarcity of clean water in the dry season, reduced water quality, increased erosion and flooding, river abrasion and sedimentation, air pollution, and more numerous instances of disease.
- In terms of socioeconomic effects, oil palm estate development under the PIR scheme has not been able to satisfactorily benefit local communities, particularly the Arfak communities who hold customary land rights. PIR schemes that rely on immigrant workers are prone to creating horizontal conflicts, injustice and envy among local communities toward immigrants.
- Past processes for allocating and acquiring land for oil palm estate development were marred by lack of transparency and the company's inability to keep its promises. This has resulted in attempts to reclaim land and demands for compensation by customary landowners, and conflict over land ownership between customary landowners and migrants. Of villagers interviewed, 92% said they had received no compensation from the government or the company for their customary land converted to oil palm. Uncertainty regarding the status of the land once the company's business-use rights expire has also raised concern among landowners.
- In order to prevent further deforestation, it is recommended that a moratorium be put in place on the conversion of forest to oil palm estates on the Prafi Plain. Efforts to develop oil palm estates should be directed towards regenerating old plantations, taking advantage of high-yielding varieties, and using non-forested, degraded and unproductive land such as scrub or grassland for any new estates. When allocating land for agricultural development, special areas should be set aside for indigenous Arfak communities.
- The government also needs to increase the credibility of the environmental impact assessment procedure, take proactive action to monitor and supervise the company's operation, and strictly regulate the operation of oil palm estates. The company's environmental management and monitoring document should be reviewed and tested to ensure that it is in accordance with the law (Minister for Environment 2007). The government should also make serious attempts to seek resolution of conflicts over land ownership and tenure between customary landowners, the company and migrants.

## Coffee

Arabica Coffee (*Coffea arabica*) is an important cash crop grown by many indigenous peoples in the Central Highlands of Papua, especially as it is one of the few low weight, high value cash crops which can be cultivated in highland areas. However, production has been declining, partly due to fluctuating international market prices act as a disincentive to many smallholders, but also due to difficulties with gaining access to markets and also because of the easy availability of government cash handouts, such as special autonomy funds, village funds, etc. On the other hand there is growing domestic processing for local consumption, including in the burgeoning number of boutique coffee shops in Manokwari town, and highland Papuan coffee is of high quality and is likely to be favoured by local consumers. As with cocoa and nutmeg, coffee is considered an environmentally friendly crop which is grown in forest gardens and mixed agroforests. Coffee is also relatively pest free (at least compared to cocoa) and relatively easy to cultivate, though harvesting is time sensitive, with berries rotting on the tree if left too long. The main complexities relating to coffee are post-harvest processing techniques, which include both wet and dry processing techniques. Wet processing requires the availability of relatively large volumes of clean water, which should not be a major constraint in many highland Arfak villages.

A number of actors including missionaries, World Vision International and the government agriculture service have attempted to promote coffee production in the Arfak Highlands, particularly in the Menyambouw District, and small areas of coffee are still maintained in Mbanti and several other villages.



Arabica Coffee bushes growing in Mbenti Village

## Nutmeg

Nutmeg (*Myristica fragrans* and *M. papuana*) is highly suited to cultivation by indigenous peoples in the lowland areas around the Arfak and Tamberau Mountains. It is considered an environmentally friendly crop which can grow in forest gardens and mixed agroforests and on sloping sites, including in valleys up to 500 meters altitude. As such it may be a suitable option for areas such as Siakwa in Tamberau Regency, where the lack of flat land limits agricultural production. Grafting is advisable to reduce the number of unproductive male trees. It is not currently widely grown in the north-eastern Bird's Head, though UNIPA had a plantation near Amban.

## Betel Nut

The Betel palm is highly suited to cultivation in lowland areas around the Arfak and Tamberau Mountains and there is strong market demand for local consumption. It is easy to cultivate and well suited to mixed agroforestry systems as its narrow crown and limited root system minimizes competition with other crops.

## Fruit Trees

A wide range of fruit trees can also be cultivated as part of agroforestry systems and the establishment of a new town at Fef provides new opportunities for communities in the Mubrani, Kebar and Miyah areas to supply fresh fruits. See [annexe ??](#) for more details of fruit, nut and other tree species suitable for interplanting in mixed cocoa-nutmeg agroforestry systems.

#### 2.5.4 Mining

A large cement factory has recently been established at Maruni just south of Manokwari town and will commence production in early 2017. Apparently this factory is Chinese-owned, majority of the workers involved in construction were Chinese nationals, and the cement produced is to be exported back to China. As such the benefits for the local economy and the citizens of West Papua Province seem likely to be limited. On the other hand the environmental impacts seem likely to be considerable, particularly from the mining of limestone and quartz to supply the factory with raw materials. At present limestone mining is focused on the hills adjacent to the factory, which have been the



Part of the new huge cement works located at Maruni, just south of Manokwari Town.

object of small-scale limestone mining to supply road building and construction projects for many years. There are reports of negotiations to mine the quartz deposits at Gunung Botak (Bald Mountain), which is located on the coast in Momi-Waren District, south of Ransiki. Furthermore, given the size of this factory it seems likely that these resources will be consumed fairly quickly and in time they are likely to seek to mine other major limestone deposits such as at Isim in Manokwari Selatan Regency, or near Iranmeba at the south-eastern corner of the South Tamberau SNR. Given that these are sensitive karst environments that almost certainly provide habitat for a wide range of endemic, karst adapted flora and fauna, and are known to include the deepest cave systems in Indonesia, efforts should be made to protect these areas from mining, such as by including the highest conservation value areas thereof within the expanded boundaries of the proposed Arfak-Tamberau National Park. Furthermore, local CSOs need to advocate for the government to enforce strict environmental impact assessment procedures and monitoring, supervision and regulation of all of the company's mining and production operations.

Small-scale gold mining has recently been taking place in the north-eastern part of the North Tamberau SNR. Apparently this has been occurring under the auspices of a community-based cooperative and using an exploration licence, which is a frequent mode of operation for illegal mining in Indonesia. The evaluators were unable to visit this location or obtain any accurate information regarding this operation, though there were unconfirmed reports that they have already ceased operation. Local CSOs need to establish community-based networks as an early warning system for detecting such activities and work closely with the environmental protection agency (BAPEDALDA), natural resources management centre (BKSDA), planning agency (BAPPEDA), Mining and Energy Service (Dinas Pertambangan) and other relevant to government agencies and IPOs to ensure that such activities are quickly detected, investigated, and where appropriate shut down by the relevant authorities.

There were also reports of very-small scale artisanal gold mining by community members from Arfu village in Mubrani District. Whilst indigenous peoples rights should extend to the right to mine for gold, precious stones and other minerals, care needs to be taken to ensure that these do not pose serious health, safety and environmental risks. Paradisea and/or other CSOs should investigate such operations and if necessary seek technical support to improve health, safety and environmental impact controls.

Furthermore, a large number of mining exploration concessions exist throughout the eastern and central part of the Bird's Head Peninsula, including throughout much of the North and South Tamberau SNRs. Paradisea and/or other CSOs should closely monitor the status and activities in these concessions.

## 2.7 History of Nature Conservation, Development and Indigenous Empowerment efforts in the Arfak and Tamberau Mountains

During the late 1970s and early 1980s the International Union for Conservation of Nature (IUCN) and the World Wide Fund for Nature (WWF) conducted a series of biodiversity surveys throughout the Indonesian Province of Irian Jaya (which was renamed Papua in 1999 and subsequently split into Papua and West Papua Province in 2003), with the aim of establishing a network of protected areas to protect the regions rich biodiversity, natural beauty and ecosystem functions (Petocz, 1984).

As a result of these efforts two Strict Nature Reserves (Cagar Alam) covering an area of 68,325 hectares in the Arfak Mountains and 368,365 hectares in the North Tamberau Mountains were declared in 1982, whereas a third reserve incorporating an area of 519,621 hectares in the South Tamberau Mountains was also proposed but not officially established until 1999. However, no dedicated budget or staff were assigned to manage these reserves, with management responsibilities under the Ministry of Forestry's Directorate General of Forest Protection and Nature Conservation (PHKA) in Jakarta through the Irian Jaya Regional office of the Natural Resources Management Agency (Kanwil KSDA) in Jayapura, the natural resources management centre in Sorong (BKSDA) and its branch office in Manokwari (KKSDA). As such there was no effective management of these reserves, and up until the present they remain essentially paper parks.

In 1987 WWF Indonesia embarked upon a program of surveys and research in the Arfak Mountains and developed a management plan (1987) and Action Plan (1990). Based upon these planning documents WWF in collaboration with BKSDA implemented the Arfak Mountains Nature Reserve Integrated Conservation and Development Program (Arfak Mountains ICDP) between 1990 and 1999. Major elements of the Arfak ICDP included a butterfly ranching program (see box ??), freshwater fish aquaculture, efforts to develop terraced farming systems and improved vegetable production to reduce soil erosion and generate income, training and mentoring of village motivators, conservation cadres and birdwatching guides, and the demarcation of the reserves boundaries.

However, by around 1999 many of these initiative began to encounter difficulties. The once lucrative butterfly ranching enterprise began to run into difficulties relating to obtaining export permits, financial management and substantial unpaid debts to butterfly ranchers, whereas the agriculture and soil conservation programs encountered low adoption rates amongst local communities at least in part due to constraints of access to markets for selling vegetable products. As a result Arfak communities blockaded the offices of YBLBC and protested that the community development activities implemented as part of the ICDP had been a subterfuge to distract communities while WWF and BKSDA marked out the boundaries of the area to be alienated from customary ownership.

Other development projects in the Arfak Mountains have included:

- World Vision Indonesia Aerial Development Program;
- Coastal Communities Agricultural Development (CCAD) Program along the Arfak Coast;
- From 2003-2005 the SUCCESS Alliance cocoa farmer field schools program;
- In 2003-2005 the USAID-NRM III project worked on protection of the Gunung Meja Nature Tourism Reserve in Manokwari;
- ILO Papuan Indigenous Peoples Empowerment Program – 2006-2008 – trialed a people-centred development approach based on participatory planning in the Tanah Rubuh area of the Arfak Coast and Senopi in the Kebar Valley.

### **Box 10 - THE ARFAK MOUNTAINS BUTTERFLY RANCHING PROGRAM**

The most widely praised and criticized element of the WWF Arfak Mountains Nature Reserve ICDP was the butterfly ranching program, which sought to increase stocks of several endemic butterfly species from the Arfak Mountains and surrounding areas, whilst generating income for indigenous Arfak communities through the semi-wild ranching of butterflies and the sale and export of live pupae and preserved specimens (and to a lesser extent beetles and other insects). Throughout the 1990s this program was upheld as a near perfect example the ICDP approach, as it served the multiple goals of conservation, income generation and awareness raising. However, by 1999 this program had run into severe difficulties and by 2003 the butterfly trading enterprise was forced to close its doors permanently. As such it is worth revisiting this program to see what lessons can be learned and to determine whether renewed efforts to promote butterfly ranching may contribute to conservation and income generation

The program was initiated by WWF in 1991 with funding from the USAID Biodiversity Conservation Network (BCN). Under the leadership of consultant Duncan Neville, local staff of WWF in Manokwari, worked with local communities to plant Dutchman's Pipe Vines (*Aristolochia spp.*) and other butterfly food plants, so as to attract and provide additional food sources for butterflies, some of which could then be harvested for sale and export. WWF also engaged with a newly established local NGO called YBLBC (Foundation for Conservation in the Land of the Bird of Paradise) to assist with supporting butterfly ranchers and the marketing, sales, shipment and arrangement of CITES (International Convention on the Trade in Endangered Species) export permits. By 1994 YBLBC had commenced exporting preserved specimens to collectors in several countries including France, England, Canada, USA, Japan and the Czech Republic, as well as live exports of pupae of some species (this was limited to those species listed as CITES register III) to the London Zoo.

According to Wells et al (1999) at its peak engaged around 1,400 people of the estimated 14,700 people living near the reserve and generated over US\$100,000 per annum in exports of live pupae. However, according to the former director of YBLBC, Sahat Seragih (pers. com. 2016), the total turnover from sales never actually reached \$50,000 per annum, and in most years was closer to US\$10,000, with most of the revenue derived from the sale of preserved specimens, whereas the export of live pupae only accounted for a small portion of sales. Furthermore, research conducted by Marwa (2000) indicated that by the late 1990s the market for Arfak butterflies had begun to be saturated and consequently demand for butterflies had fallen to the point where only a handful of households could derive a meaningful income from butterfly ranching (Sumule, 2000; Marwa, 2000).

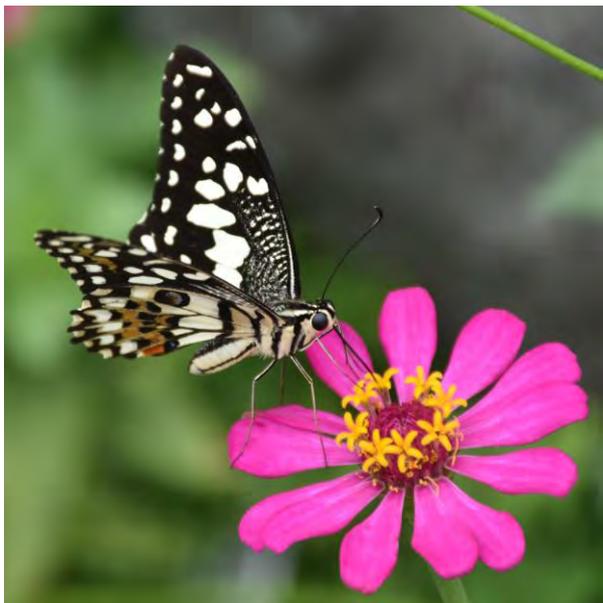
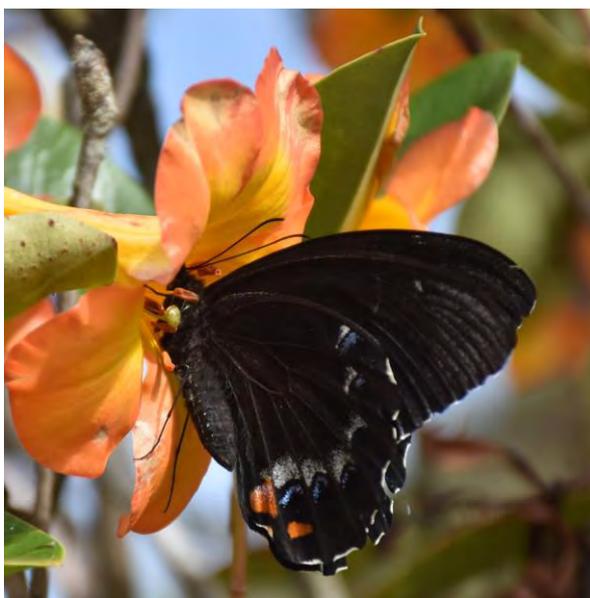
YBLBC also faced severe difficulties with the permitting process, which required organizing permits through the Ministry of Forestry's Directorate General of Forest Protection and Nature Conservation (PHKA) in Jakarta via the Papua Regional office of the Natural Resources Management Agency (Kanwil KSDA) in Jayapura, the Centre for Natural Resources Management in Sorong (BKSDA) and its branch office in Manokwari (KSDA). This complicated process was both costly and time consuming, resulting in a high percentage of the potential profits being expended on the permitting process, problems with cash flow as delays in sales impeded YBLBC's ability to continue buying stock from communities, as well as high mortality rates (around 50%) amongst pupae intended for live export.

For a number of years two small-scale commercial butterfly ranching operation operated near Meni and Ibenti villages in the Menyambouw area, though it is unclear whether these were really butterfly ranching operations or merely covers for the trade of wild collected butterflies and other insects. Both of these operations appear to have scaled-back or even shut down over recent years.

Paradisea also attempted to re-establish butterfly ranching activities in Mokwam around 2008-2012 but found it difficult to motivate community members and to identify and propagate the food plants, indicating that the data and know how on butterfly food plants collected during the 1990s must have been lost or destroyed.

Nowadays there is some scope for possible revival of butterfly ranching activities. The permitting process is considerably shorter and less complicated, only requiring permits from the Manokwari Natural Resources Management Centre and the MoEF in Jakarta, and the market for live pupae is now much greater, as many zoos and other institutions throughout the World have established butterfly houses. There is also potential for sales of mounted specimens or key chains etc. made from beetles and other insects mounted in resin, to be sold in local handicraft stores and Airports.

However, the potential contribution of butterfly ranching to local livelihoods remains limited, and efforts to revive it should focus on a few selected families who demonstrate a strong interest. Perhaps the best option is to promote communities and ecotourism operators to establish butterfly gardens as an additional tourist attraction close to their guest houses.



Native Rhododendrons and other flowers planted around villages and ecotourism lodges can attract a wide range of butterflies and provide an additional attraction for ecotourists

## 2.8 History of the Paradisea Foundation Manokwari (1998 – 2012)

Yayasan Paradisea Manokwari was founded in Manokwari in 1998 by a group of citizens concerned about the natural environment and well-being of the indigenous peoples of the Arfak and Tamberau Mountains. They included: Rudy Wondiwoi (head of the WWF Arfak Mountains ICDP); Daud Womsiwor (Head of the Manokwari office of the Natural Resources Management Agency – BKSDA); Agus Sumule (Senior lecturer in agricultural technology at UNIPA<sup>15</sup>); Moses Mosioi, of the Christian Biblical Alliance Church (GPKAI<sup>16</sup>); and Goliat Doansiba, a customary and religious leader from the Arfak Mountains.

Paradisea was conceived as an organization which could continue the work initiated through the WWF Arfak Mountains ICDP in the areas of sustainable livelihoods and income generation. In order to pursue this mission as the fledgling organization's director they recruited Mr. Peter Pelamonia, an agriculturist with extensive experience working on cocoa agroforestry development at the Nusa Indah Plantation at the north-eastern end of the Arfak Mountains as well as the SADP.

Paradisea's initial programs (1998-2002) focused on the development of cocoa agroforestry, freshwater fisheries and a savings and loans scheme for several communities living along the Arfak coast. These programs had limited success for a number of reasons. The cocoa agroforestry program was able to tie in with the ongoing SADP project and establish cocoa gardens in several villages and introduce improved cultivation practices amongst smallholder cocoa farmers, but from 2001 onwards the impact of CPB meant that many farmers began giving up on cocoa cultivation as harvests rapidly declined. The freshwater aquaculture program was able to establish a number of fish ponds and teach community members to raise carp and tilapia fish, but the uptake rate was low, and many farmers said they felt sorry for the fish as they were like pets and could not bring themselves to harvest them. This experience conforms with the findings of Dr. Agus Sumule (1994) regarding low adoption rates of new agricultural technologies amongst Arfak tribal communities. The savings and loans scheme was unsuccessful, with virtually no repayments made by loan recipients whereas there were only minimal savings, most of which were soon expended on the payment of customary fines, etc. This conforms with the outcomes of many other microfinance programs in Papua and other parts of Melanesia, as the highly consumptive expenditure behavior and low levels of social capital amongst Melanesian communities makes microfinance models developed in Bangladesh, India and Java culturally inappropriate. On the other hand some micro-savings programs in Papua and other parts of Melanesia have been quite successful, as long as these build upon local cultural values and concerns.

Paradisea also inherited responsibility for supporting a number of 7 community conservation motivators and a number of conservation cadres in the villages of Mokwam, Menyambouw, Subsai and Anggi in the series of valleys along the western side of the Arfak Mountains NR. Their support for these motivators and cadres produced some highly positive results, such as Seth Wonggor, who became the first independently operating birdwatching tourism guide in the Arfak Mountains, and others who conducted environmental awareness raising programs. However, it also aroused jealousy and conflict amongst the communities due to the fact that the motivators were paid a regular stipend, whereas other community members found it extremely difficult to generate cash income. As a result Paradisea decided to cease payment of community conservation motivators.

Paradisea and WWF also advocated for the status of the Arfak Mountains to be changed from a Strict Nature Reserve to a National Park on the basis that the 1990 law on natural resource management prohibits any form of human activity within a Strict Nature Reserve (though this is rarely enforced in

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<sup>15</sup> UNCEN's agriculture and forestry campus in Manokwari became the University of Papua (UNIPA) in 1999.

<sup>16</sup> GPKAI is the main church organization working with indigenous communities in the Arfak Mountains and parts of the Tamberau Mountains.

Papua), whereas national parks can include zones for traditional use. However these efforts were unsuccessful.

Following the collapse of YBLBC's butterfly ranching and marketing program Paradisea also took over responsibility for managing the few remaining butterfly ranching groups and other ecotourism activities in the Mokwam and Menyambouw areas.

In 2003 Paradisea in collaboration began working in the Kebar Valley, located between the North and South Tamberau Nature Reserves. Their initial focus was on socializing participatory mapping of customary land tenure and assisting communities with marketing their produce, particularly peanuts. However, problems soon arose, as rumors spread in throughout some of the villages that the purpose of the proposed mapping was to alienate customary land or natural resources, including that satellite imagery would be used to identify the location of gold resources which would be exploited by WWF, Paradisea or other parties<sup>17</sup>. Ultimately they were able to dispel these rumors, though they chose to refrain from participatory mapping activities and focus instead on small scale economic development activities.

In 2006 Peter Pelamonia stepped down as the Director of Paradisea, whereas WWF decided to discontinue its program in the Arfak and Tamberau Mountains and close its Manokwari office. Consequently Rudy Wondiwoy, one of Paradisea's founders and the former manager of WWF's Manokwari office stepped into the role of executive director of Paradisea.

Under Rudy's direction Paradisea continued to work on small scale economic development programs in the Tamberau and Arfak Mountains. During this period they continued supporting budding ecotourism guide Hans Mandacan from Kwau Village in the Mokwam Valley to develop his skills as a birdwatching guide, establish networks and establish bird watching hides. Hans also received assistance from Manokwari-based social entrepreneur and ecotourism guide Charles Roring, who helped to train Hans, brought tourist groups to Kwau and assisted him to develop a proposal to build a guest house, which was subsequently funded by the Papua Province Forestry Service. During this period Paradisea also began collaborating with RFN, who supported some of their work on small-scale economic development and environmental awareness raising in the Arfak and Tamberau mountains, mostly focused on ecotourism development in the Mokwam area and Social-economic surveys in Kebar.

In 2012 Paradisea faced a crisis when their executive director, Mr. Rudy Wondiwoy, suddenly passed away. This led to a leadership vacuum and a loss of vision and direction. Furthermore, the Arfak communities, who identified Rudy as one of their greatest benefactor, on the basis of the key roles he had played with the WWF, YBLBC and Paradisea programs in the Arfak Mountains since the late 1980s were deeply upset when his body was not returned to Manokwari. As a result a large group of Arfak people convened on the Paradisea and felled the flagpole and smashed the offices windows in a demonstration of their grief. A few days later the Paradisea supported Guest House in Mokwam Village (which was originally built as WWF and YBLBC Field Station in the mid-1990s) was burnt down. Whilst it remains unclear who was responsible or why this occurred, it is believed to have either been a case of expunging the memories or spirit of Mr Wondiwoy, as manifested in the field station, and/or jealousy over uneven distribution of benefits from ecotourism activities.

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<sup>17</sup> The ILO Papuan Indigenous Peoples Empowerment Program (ILO-PIPE) had a similar experience when working in the Kebar Valley and the Tanah Rubuh area of the Arfak Coast, when rumors spread that the funding they were using was actually compensation money from the United Nations relating to the incorporation of Papua into Indonesia, resulting in demands from community members that the funding be distributed directly to community members. This resulted in several months of delayed project implementation as the program staff had to explain to communities that this was not the case.

These events led to a period of internal reorganization, with their articles of association redrafted and the membership of the boards of founders and directors were revised. Mr Esau Yaung, one of Paradisea's longer serving staff, was also appointed as the new executive director of Paradisea. They also appear to have left the longer serving Paradisea personnel feeling somewhat traumatized in relation to the communities of Mokwam and Syoubri, around whom much of the outpouring of grief had centred, to the extent that the Paradisea team remained reticent to re-engage with these communities up until quite recently, despite the fact that they are located within Paradisea's target areas and are immediately adjacent to other communities with whom Paradisea is working intensively.

## **2.9 The RFN-Paradisea Project 2013-2016**

Following the tumultuous events of late 2012, RFN's program advisor in Indonesia, Mr. Oyvind Sandbukh, supported Paradisea to develop a new and more strategic direction, which sought to capitalize on emerging opportunities, particularly the Indonesian Constitutional Court Ruling No.35 (2012), which mandated the reinstatement of customary rights over forest growing within the territory of Indigenous communities, and the increasingly well organized and indigenous rights movement at the national level.

This new approach focused on participatory mapping of customary territories, advocacy for the recognition of customary rights to ownership and management of forests, the change of status of the Arfak, North and South Tamberau conservation areas from Strict Nature Reserves to National Parks, advocacy for the improvement of spatial planning and alternative livelihoods programs focusing on cocoa and coffee agroforestry. This new direction is consistent with Paradisea's long term vision and mission and has formed the basis of Paradisea and RFN's collaboration from 2013 to the present, which is the main subject of this evaluation. The project initially focused on three proposed forest corridors connecting the Arfak, North and South Tamberau SNRs, though over the past couple of years the geographical focus has broadened somewhat as RFN and Paradisea has become aware of areas outside of the 3 proposed connecting corridors which are ecologically important and threatened by

Implementation of this new approach was initially constrained by a number of social and political conflicts, including internal social conflict amongst Moile communities in the Mokwam-Syoubri area (Menyambouw-Catabouw Corridor) and amongst Miyah communities in the Senopi-Miyah Corridor, as well as a conflict over the boundaries between Manokwari and Tamberau Regencies in the Mubrani-Kebar Corridor. In response to these conflicts Paradisea decided to focus on working with communities in the Kwau and Indabri areas in the Menyambouw-Catabouw corridor, whilst cautiously engaging with the Mokwam-Syoubri, Miyah and Mubrani-Kebar communities and encouraging them to resolve their conflicts before pushing ahead with their project agenda. Over the past year or so these communities have been able to largely resolve these conflicts and Paradisea team has begun move ahead with participatory mapping and sustainable livelihoods activities in these areas.

Paradisea has also conducted a study tour to Jambi Province in Sumatra to help raise community awareness regarding the risks associated with loss of customary land and forests through meetings with RFN partner organization WARSI and indigenous *Orang Rimba* communities with whom WARSI has been working. They also conducted a study tour to the Ambaidiru highlands in Yapen Island to help Arfak and Tamberau community members learn about coffee cultivation and processing techniques from coffee farmers in the and to Ransiki in Manokwari Selatan Regency to help cocoa farmers learn about good cultural methods and integrated management of CPB and other pests. Following these study tours Paradisea has also supported coffee and cocoa farmers with further training and support for establishing cocoa agroforestry gardens.

Paradisea has also worked on spatial planning advocacy and in the past year has commenced working with UNIPA on the development of a proposal for the Arfak, North and South Tamberau SNRs and proposed connecting corridors to be combined into a major national park, covering over a million hectares, which they intend would be co-managed by the government and customary communities.

### **The Paradisea – RFN Collaboration on Participatory Mapping in the Arfak and Tamberau Mountains**

In response to these recent developments in relation to indigenous rights and co-management of forests and natural resources, since 2013 Paradisea and RFN have embarked upon an ambitious program which aims to map customary territories and secure legal recognition of the customary forest rights of Arfak and Tamberau communities, to support co-management of a proposed million plus hectare national park incorporating the Arfak Mountains, North and South Tamberau SNRs and 3 connecting corridors. Paradisea are working hard to keep abreast of these developments and are currently in the process of advocating for the recognition and protection of the customary land forest rights of four tribal communities (with other proposals still being developed) by decree or regional regulation.

The process which Paradisea has applied in mapping customary territories is based upon the standard operating procedures developed by the Indonesian Participatory Mapping Network or *Jaringan Kerjasama Pemetaan Partisipatif* (JKPP, 2014), which is also used by many other organizations such as AMAN and the Samdhana Institute. At the commencement of the project period in 2013 the Paradisea team had virtually no experience in participatory mapping. However, based on a single visit by representatives of JKPP in early 2013, and subsequently through learning by doing and with advice and support from RFN's field advisor (Oyvind Sandbukh) they have developed their skills and experience in participatory mapping. Similarly most of Paradisea's GIS staff are almost entirely self-taught.

Participatory mapping is not simply a technical process of making maps, but also involves also documenting social and cultural aspects and TEK systems, as well as a process of conflict resolution, reconciliation and consensus building. Paradisea's team members have not had any formal training in anthropology or sociology and there is very limited secondary sources available on the Arfak and Tamberau peoples. Consequently the customary forest proposals developed by Paradisea to date remain somewhat deficient in regards to their descriptions of social-ecological, cultural, TEK systems and biodiversity aspects. However, conversations with Paradisea's longer serving field personnel indicated that they have developed a good knowledge of the Arfak and Tamberau cultures and continue to delve deeper to understand more about these aspects. However, they clearly need more assistance, training and mentoring to improve their research skills and their ability to analyse and document the data collected in the field. Some social materials, such as migration stories are still lacking and need to be captured in the process of mapping clan boundaries and important places, which includes sacred sites that are often linked with migration stories. Ecological data is also still weak and needs to be strengthened through mapping ecosystems and natural resources and field surveys. UNIPA lecturers and students could also be engaged to assist with identification and documentation of biological aspects.

Working with 9 Hatam communities in the Indabri and Kwau areas of the Menyambouw-Catabouw corridor, Paradisea has applied the JKPP participatory mapping methodology more or less as depicted in diagram 2 below) and are currently approximately half way through the process. However, Paradisea's approach when working with Mpur communities in the Mubrani-Kebar Corridor) and Miyah and Ileres communities in the Miyah Corridor has deviated from the original process, because these communities requested that customary clan congresses be held to discuss and resolve long standing territorial disputes. Paradisea therefore used this opportunity to conduct indicative mapping activities, based on overlaying sketch maps on satellite images. These maps have not yet been properly verified

through ground based GPS surveys, but Paradisea has moved ahead with the development of customary forest proposals based upon these indicative maps anyway (see diagram 3 below), with the intention of conducting ground-based GPS surveys in the near future. This shows that the RFN – Paradisea approach is able to adapt to local contingencies and avail themselves of opportunities as they arise.



It is also very important to note that participatory mapping in remote mountainous areas presents particular challenges including:

- Relative paucity of terrain features, such as major rivers, which can be used as reference points for sketch mapping
- High degree of contestation and conflict over clan and tribal boundaries, which is usually less intense in more sparsely populated lowland areas;
- The physical difficulties involved in traversing the rugged mountainous terrain in order to properly verify sketch map data through ground-based GPS readings.

As such it is quite remarkable that the Paradisea team has risen to the numerous challenges involved in participatory mapping in the Arfak and Tamberau mountains.

Up until the end of October 2014 Paradisea has succeeded in completing participatory tribal territory boundary maps covering an area of 365,474 hectares of customary territory in six areas including:

- Ground surveyed tribal boundary maps covering the customary territory of 9 villages in the Kwau Indabri area, covering an area of 7,293 ha;
- Indicative tribal boundary maps of the territory of Ugyehék and Dirie villages, covering 5,401 ha (see map 19);
- Indicative tribal boundary maps of the territory of 14 Miyah Clans, covering an area of 99,004 ha (see map 17);
- Indicative tribal boundary maps of the territory of the Ileres tribe, which covers an area of 201,617 ha (see map 18);
- Indicative tribal boundary maps of the territory of 4 Mpur clans in the Mubrani area, covering an area of 49,819 ha (see map 15);

- Indicative tribal boundary maps (based on sketches overlaid on satellite images) of the territory of Auri clan in the Kebar area, covering an area of 2,340 ha (see map 20);

Currently Paradisea are at best half way through the mapping process in each of these areas and around 90% of the Menyambouw – Catabouw Corridor remains to be mapped. Clearly Paradisea still has a huge amount of work to do in order to complete much more detailed maps including clan boundaries, customary land-use / zonation systems, major ecosystems and important natural resources, as well as the documentation of social-cultural aspects and TEK systems.

Whilst the experience they have accrued from the work undertaken to date should enable them to map these remaining areas much faster, there remains a strong possibility of conflicts and other contingencies, which makes it impossible to judge with any degree of certainty whether or not they will be able to complete mapping of these areas by the end of the project period.

Paradisea will also need to develop sustainable forest utilization and management plans to support the proposal of recognition of customary forest areas by the MoEF. As such they need to consider adopting elements of other participatory mapping methodologies, such as the CIFOR / CII Collaborative Land-use Planning (CLUP) methodology. Convening a Participatory Mapping and Indigenous Forest Rights Innovation Forum where various organization working on participatory mapping and community-based forest management can present their work may be a useful way for Paradisea personnel to learn about participatory mapping methodologies being developed by other organizations, and exchanges or internships with other organizations, such as YALI in the Mamberamo area in Papua province may also be a useful way to strengthen the skills of Paradisea’s mapping team members.

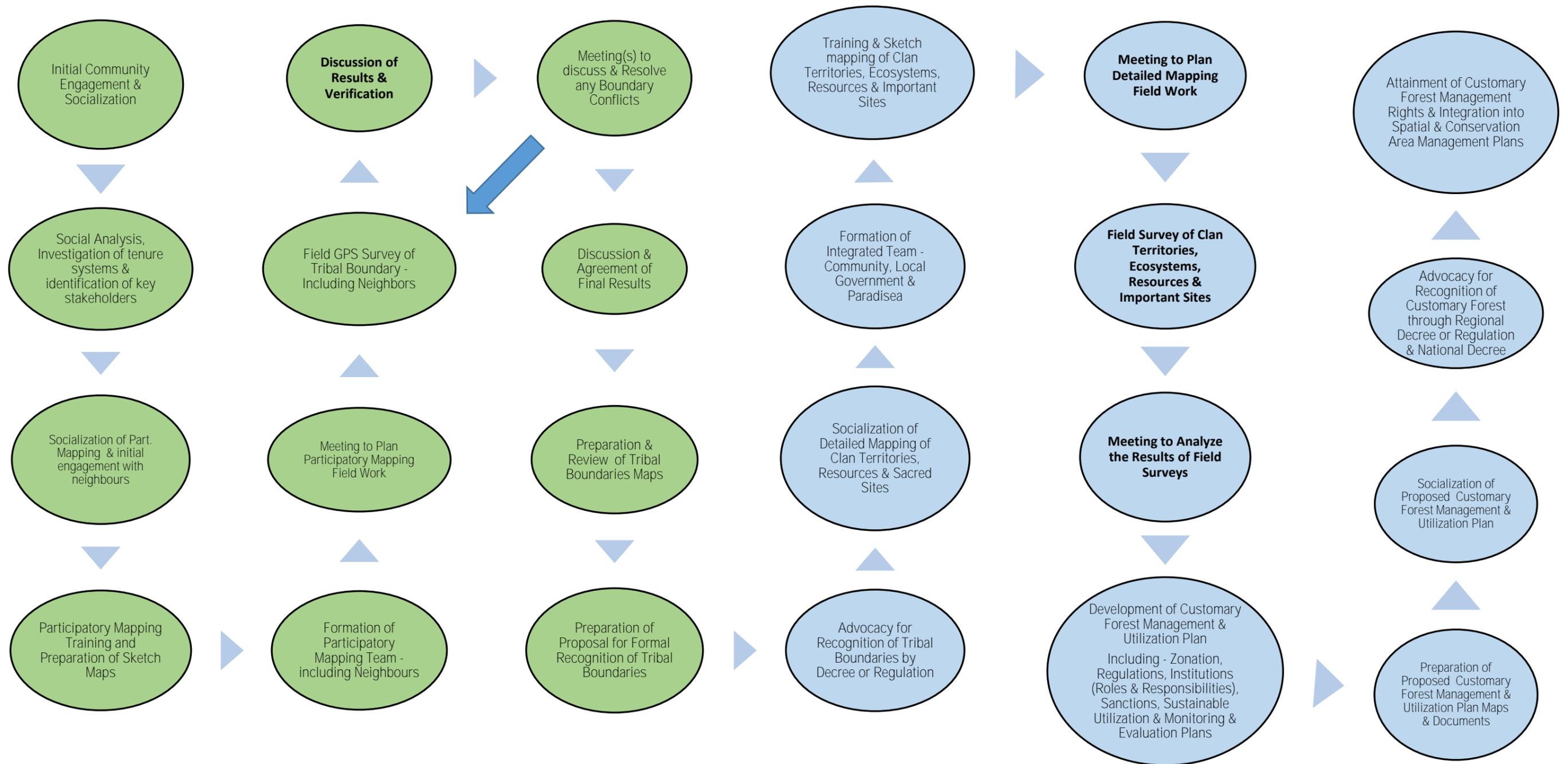
**Table 3 – Proposed Forest Corridors linking the Arfak and Tamberau Nature Reserves**

	Corridor Name	Area (ha)	Altitude (metres)	Aprox. Area of Corridor Mapped	Location	Main Ethnic Groups
1	Minyambouw – Catubouw	+/- 83,091 ha	200 – 2,625	8% Ground Survey	Pegunungan Arfak Regency Manokwari Regency	Hatam Moile Soughb
2	Mubrani – Kebar	+/- 10,101 ha	125 – 1,275	60% Indicative	Tamberau Regency	Mpur
3	Senopi – Miyah	+/- 38,858 ha	325 - 1,675	80% Indicative	Tamberau Regency Teluk Bintuni District	Miyah Irires
	Total	+/- 132,051 ha				

The following diagrams depict the steps involved in the processes of participatory mapping and legal recognition and designation of customary territories and forests.

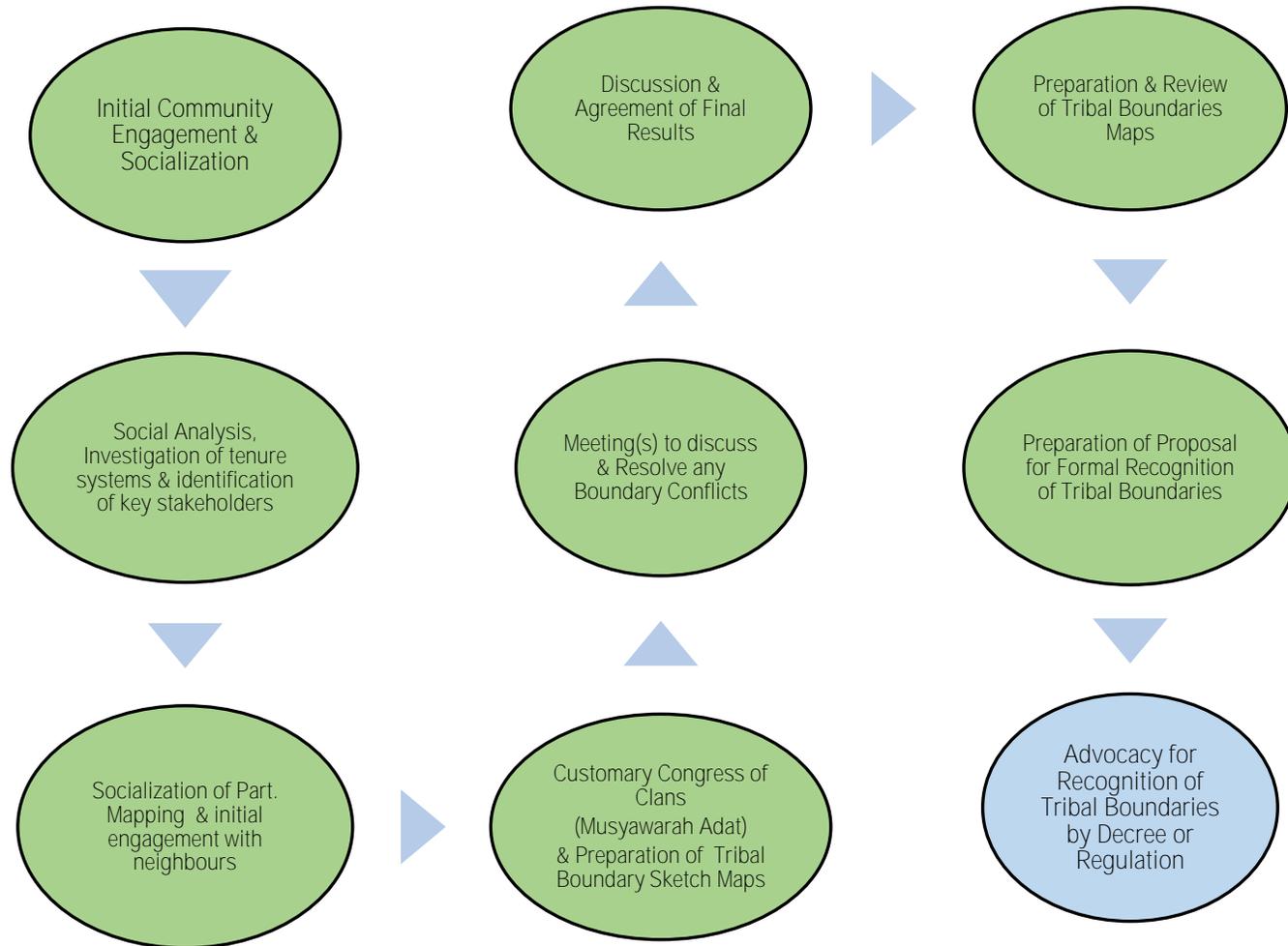
- Diagram 2 depicts the ideal process based upon JKPP’s guidelines for participatory mapping of customary territories, which has been applied by Paradisea in the Kwau and Indabri areas;
- Diagram 3 depicts the truncated process which has been applied by Paradisea in the Mpur, Miyah and Irires areas, whereby many of the steps in the JKPP methodology have been skipped as the communities requested that Customary Congresses be brought forward to help them resolve internal social conflicts and kick start the mapping process. In this case Paradisea will have to modify the methodology to incorporate the steps which have been by-passed;
- Diagram 4 depicts the steps involved in securing legal recognition of customary territories according to existing legal frameworks and guidelines produced by various national government agencies since the 2013 constitutional court decision.

**DIAGRAM 2 - KEY STEPS TOWARDS RECOGNITIONS OF CUSTOMARY LAND RIGHTS AND REALIZATION OF CUSTOMARY FOREST MANAGEMENT RIGHTS**



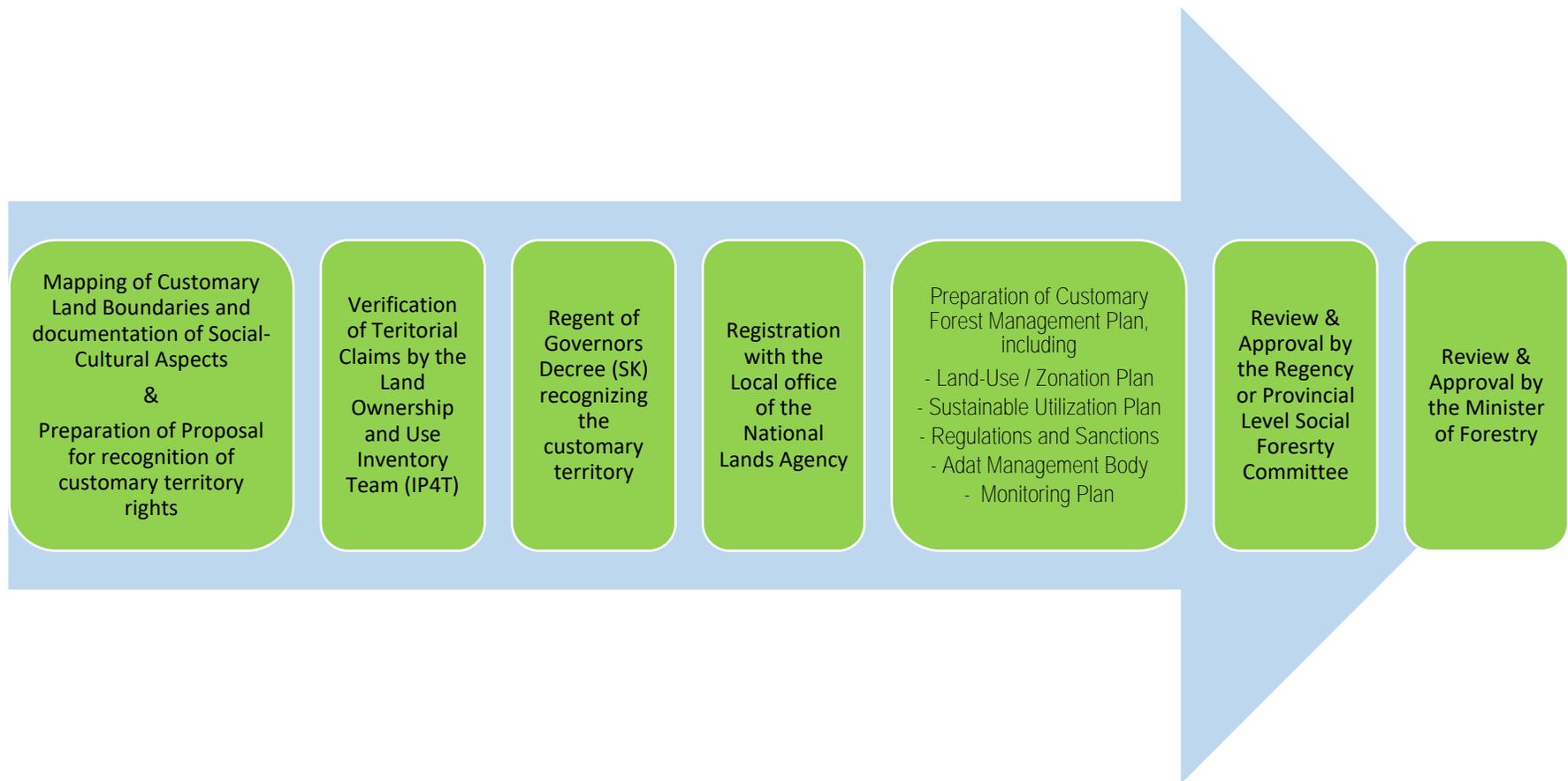
**DIAGRAM 3**

**PROCESS OF CUSTOMARY (TRIBAL) LAND TENURE MAPPING AND ADVOCACY FOR RECOGNITION IN MPUR, MIYAH AND IRERES AREAS**



## DIAGRAM 4 - STEPS TOWARDS THE LEGAL RECOGNITION OF CUSTOMARY FOREST RIGHTS

Based on: Minister of Environment and Forestry Regulation No. 32 (2015) & Minister of Lands and Spatial Planning Regulation No. 10 (2016)



### 3. Evaluation Findings

#### Box 11 - Key Evaluation Criteria

The key criteria according to which the evaluation has been framed include:

- 1 **Relevance** - the extent to which the project conforms to the needs and priorities of the target groups, as well as in relation to national development priorities.
- 2 **Effectiveness** - the extent to which the purpose has been achieved, and whether this can be expected to happen on the basis of the outputs of the project.
- 3 **Efficiency** - how the results stand in relation to the effort expended. Comparing inputs with outputs, how economically inputs are converted to outputs. Whether the same results could have been achieved in another way. To what degree do the outputs achieved derive from efficient use of financial, human and material resources.
- 4 **Impact** - the changes, positive and negative, planned and unforeseen of the project, seen in relation to target groups and others who are affected.
- 5 **Sustainability** - an assessment of the extent to which the positive effects of the project will still continue after external assistance has been concluded.

#### 3.1 Relevance

*To what extent does the project conform to the needs and priorities of the target groups, as well as in relation to national development priorities.*

In response to the question of relevance the evaluators find that this project is highly relevant to both the needs of the target communities and the local, provincial, national and international level concerns relating to sustainable development goals, including:

- The protection of Indonesia's vast forests, abundant biodiversity and vital ecological services, including water supply and mitigation of soil erosion, landslides and greenhouse gas emissions;
- The protection and recognition of the rights of Indonesia's indigenous peoples, including their rights to land and resources, self-determination, self-governance and participation in the national and international economy, as encapsulated in the United Nations Declaration of the Rights of Indigenous Peoples (to which Indonesia became a signatory in 2007) and President Widodo's commitments to the empowerment of indigenous and rural communities, as enunciated in the Nawacita declaration (see Box 12);
- Implementation of Constitutional Court Ruling no. 35 (2012) and the national social forestry program;
- Promoting green economic development based on sustainable utilization of natural resources; and
- Promoting good governance through promoting inclusive policy development and the implementation of existing laws relating to indigenous rights, sustainable economic development and social and environmental impact management.

As such the RFN-Paradisea project helps to address the key aspects of Indigenous peoples empowerment and sustainable local development (as depicted in diagram 5), albeit with a need to strengthen the approach in certain areas, such as economic development through sustainable utilization of natural resources.

## **Box 12 - PRESIDENT WIDODO'S NAWACITA COMMITMENTS TO VILLAGE & INDIGENOUS EMPOWERMENT**

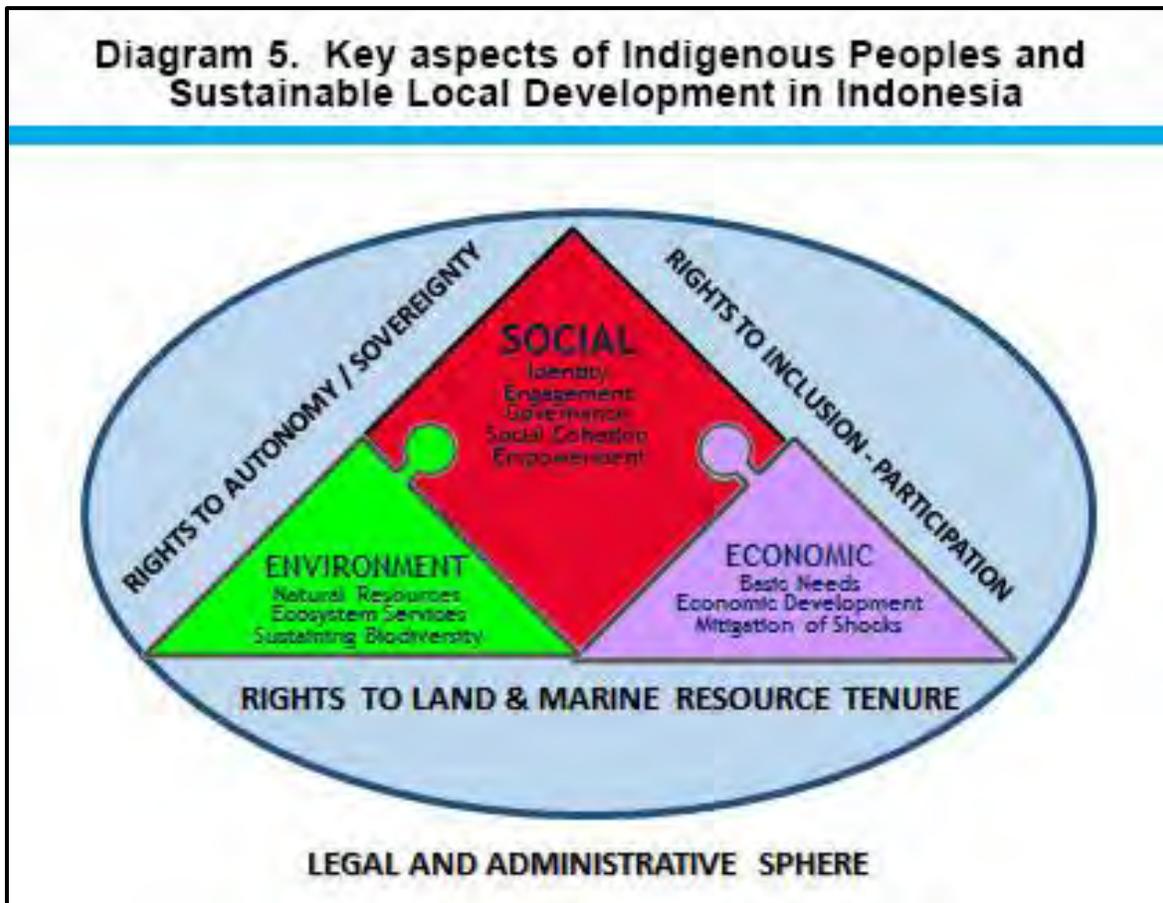
We dedicate ourselves to village empowerment. Within our policy of village empowerment we will emphasize 8 key priorities:

- a. We will safeguard the implementation of the Village Law (2014) systematically, consistently and sustainably through facilitation, supervision and assistance;
- b. We will ensure that the various policy instruments for the implementation of the Village Law are in accordance with the substance, spirit and intent of the Village Law;
- c. We will prepare and implement new policies and regulations in order to free up villages enclosed within forests and plantations;
- d. We will ensure nationwide redistribution of resources, including through the allocation of village development funds from national and regional budgets as well as the distribution of land to villages, is implemented effectively;
- e. We will prepare and implement new policies and regulations regarding share-holding between government, investors and villages in the management of natural resources;
- f. We will prepare and implement new policies and regulations access and the rights of villages to manage natural resources at a local scale (including mining, forestry, plantations, fisheries, etc.) for the people's prosperity;
- g. We are committed to sustainable village capacity development and support;
- h. We are committed to implementing rural development investment programs (such as forestry, plantations, livestock, fisheries, community-based agro-industries, etc.), based on models which involve villages and their residents as shareholders.

We are committed to the protection and advancement of the rights of indigenous (*adat*) communities, which will be emphasized through 6 main priorities:

- a. We will review and harmonize all regulations and laws relating to the recognition, respect, protection and advancement of the rights of indigenous peoples, especially relating to their rights to natural resources, as has already been mandated by the Peoples Representative Council Ruling (TAP MPR RI No. IX/MPR/2001) regarding agrarian reform and natural resource management and in line with legal norms as established through constitutional court ruling No. 35, 2012;
- b. We are committed to continuing the legislative process for the draft law on the recognition and protection of the rights of indigenous peoples which is currently in the final stages of parliamentary review, until it has been passed into law, including revisions proposed by the Regional Representative Council, the Alliance of Indigenous Peoples of the Archipelago and various other components of civil society;
- c. We will ensure that legislative processes relating to the management of land and natural resources in general, such as the draft law on lands, etc., proceeds in accordance with the norms of recognition of indigenous rights as has been mandated through constitutional court ruling No. 35, 2012;
- d. We are committed to advancing an initiative for the drafting of a law relating to the resolution of agrarian conflict which have arisen as a result of the undermining by various sectoral laws of the rights of indigenous peoples;
- e. We will form an independent commission especially mandated by the President to work intensively to prepare the various policies and institutions that will organize matters relating to the recognition, respect, protection and advancement of the rights of indigenous peoples in the future;
- f. We are committed to ensuring that the implementation of the Village Law (2014) can proceed, especially in relation to preparing provincial, regency and municipal governments to operationalize the recognition of the rights of indigenous communities to establish *adat* villages.

The project’s advocacy for improved spatial planning processes and compliance with spatial plans and social and environmental impact management laws and regulations is also highly relevant to the current development challenges in West Papua. The drive to open up and develop the remote interior regions of West Papua is resulting in very poorly planned infrastructure projects, which often disregard the provincial and regency level spatial plans and Environmental and Social Impact Assessment (ESIA or AMDAL) requirements. Furthermore, the spatial plans developed by the provincial and district governments over recent years have lacked adequate public participation and sought to open up large areas for the development of plantations, settlements and infrastructure. As such Paradisea’s advocacy on these issues is considered very important.



Source: Adapted from the World Bank Sustainable Development Pyramid

Furthermore, the project contributes to the strengthening of Indonesian and Papuan civil society, which is crucial to supporting Indonesia through its transition from 40 years of authoritarian dictatorship towards a stable, prosperous and decentralized democracy. In particular Papuan civil society has undergone an overall decline since the advent of special autonomy in 2001, as many experienced civil society activists have been drawn into adat and party politics as well as employment as staff or consultants on directly implemented bilateral and multi-lateral aid projects. As such Paradisea’s recent recruitment of a number of fresh graduates, whilst presenting Paradisea with a number of internal capacity challenges, also represents a valuable investment in the regeneration of Papuan civil society.

## **Management of Social Change**

A key weakness of the project design is insufficient attention to the needs of indigenous women, both in terms of sustainable economic development (most of Paradisea's cocoa and coffee development activities inadvertently focus on men), and to ensure their customary rights to land and resources are not downgraded as a result of the process of mapping, documenting and legally formalizing customary land and resource tenure systems. As discussed in the introductory section of the Arfak and Tamberau people appear to be undergoing a process of transition from a highly egalitarian small band or tribal society with many matrilineal and matriarchal elements still in evidence in some areas, towards more hierarchal and patriarchal societies. The mapping of customary territories and formalization of hitherto largely nebulous social institutions is likely to fuel this process of social change and could well contribute to the marginalization of women. There is also a need to ensure that the formalization of customary rights to land, forests and resources does not result in the empowerment of clan leaders to dispose of clan land and resources at the expense of other clan members or other community members or groups who have customary user rights (usufructory rights or *hak pakai*) but not formal ownership rights.

Similarly there is a need to strengthen youth engagement so as to mitigate the potential for intergenerational conflict, migration of indigenous youths to urban centers and the erosion of TEK. Furthermore, through strengthened engagement with indigenous youths Paradisea could instill concern for sustainable environmental management in the future generation of customary leaders.

## **Facilitation Support for Participatory Village Development Planning and Projects**

In order to make the project even more relevant to the needs of the participating communities and the national development priorities RFN and Paradisea should consider expanding their scope to include providing facilitation support for planning and utilization of the Village Funds (Dana Desa), which were introduced as part of the 2014 Village law. This scheme is intended to empower rural communities through the allocation of a considerable pool of money (approximately 800 million rupiah in 2016 and set to rise to around 1 billion rupiah in 2017) to each administrative village throughout Indonesia. This fund is intended to be used on village infrastructure development, economic development, social and administration based on plans developed by the communities themselves. However, in West Papua there are currently no facilitators support communities to plan and implement programs, and in practice the fund is either distributed between community members or managed by the regency government, and largely spent on infrastructure program. For example in Tamberau Regency in 2016 the government has used the funds to employ non-local contractors to construct 5 basic houses in each village, which does not represent an effective contribution to goals of community empowerment and self-reliance. Paradisea's existing relationships with communities in Pegunungan Arfak, Tamberau and Manokwari Regencies, and the participatory processes they have already established means they are well placed to assist the government and communities with maximizing the benefits that could be achieved through this program, by working with community leaders and recruiting and training village facilitators to strengthen participatory planning and the implementation of village development and empowerment programs. At the same time they could support their own goals by promoting sustainable economic development approaches, such as agroforestry, ecotourism, micro-enterprise development and sustainable utilization of natural resources.

## 3.2 Effectiveness

***To what extent has the purpose been achieved, and can this be expected to happen on the basis of the outputs of the project?***

Essentially the overall project goal is to protect large swathes of the most biologically and ecologically significant areas of the Bird's Head Montane Ecoregion through the empowerment of indigenous communities to sustainably manage forests in Arfak Mountains, North Tamberau and South Tamberau Strict Nature Reserves and three proposed connecting forest corridors, including through:

- 1) **Strengthening Sustainable Livelihoods:** Improving local livelihoods through training and promotion of small holder cocoa and coffee propagation, production, pest management, processing and marketing (as well as ecotourism in the first year of project implementation);
- 2) **Securing Customary Territory and Resource Rights:** Establishing clear boundaries of the tribes and clans whose customary territories overlap with the project's three target corridors and adjacent areas of the Arfak Mountains, North Tamberau and South Tamberau Nature Reserves;
- 3) **Building Customary Institutions:** Building consensus and institutional capacity within and between tribes and clans regarding the boundaries of tribal and clan territories and the rules, roles and responsibilities relating to forest management in these areas, revival of TEK and customary resource management systems;
- 4) **Promoting Good Governance:** Achieving formal government recognition and protection of the tribal and clan territories mapped in each of the projects target corridors, including through advocacy to accommodate community territories with spatial planning and monitoring in the field;
- 5) **Promoting Conservation Area Management:** Promoting the expansion of the area of protected areas network and strengthening management capacity through changing the status of the Arfak Mountains, North Tamberau and South Tamberau Nature Reserves to national parks, so as allow for zonation based upon customary land-uses, incorporation of the three proposed connecting forest corridors, and potentially other biologically and ecologically important areas into the new park, and the promotion of collaborative management involving indigenous forest dwelling communities, local government and other key stakeholders;
- 6) **Environmental Awareness Raising:** Furthermore the project promotes environmental awareness raising across all of the four work streams, through dialog with communities during participatory mapping, other meetings and clan / tribal congresses, World Environment Day drawing competitions for village children and engaging with government and CSOs on spatial planning, forest management and indigenous rights issues.

Measuring the effectiveness of such natural resource conservation, sustainable economic development, indigenous empowerment and supporting policy reform approaches presents some difficulty, particularly as they provide few directly measurable outcomes in the short-term; because the issue of indigenous rights and empowerment in Indonesia is currently such a highly contested area where multiple actors from the community to the national level are vying for advantage; and because there is no clear baseline against which the extent to which the project has contributed to the mitigation of environmental impacts from infrastructure development and land-use change can be measured.

Furthermore, the project logframe lacks indicators or clear means of verification relating to outputs, let alone outcomes or impacts. As such our approach to the measurement of the project's effectiveness

depends heavily upon qualitative observations based upon the past experience of the evaluators working on or evaluating similar projects over the past 25 years. This includes linking observable project outputs and results up to present with likely medium-term outcomes and long-term impacts, as well as examining Paradisea's performance in terms of project management.

### **1. Outcomes and Impact indicators**

Whilst outcomes and impacts are difficult to objectively assess for the reasons outlined above, and there is ongoing, though as yet relatively minor, encroachment including road and settlement construction, small-scale mining and logging, and illegal trade in wildlife, as well as potential threats of expanding agriculture and plantations, it is fair to say that the project has contributed directly towards the achievement in conserving forests and natural resources in the three nature reserves forest and the three proposed connecting forest corridors. These efforts have also contributed protecting the water catchment areas supplying fresh water to Manokwari Town and Manokwari, Manokwari Selatan, Pegunungan Arfak, Tambrauw and parts of Bintuni Bay regencies, which provide water for approximately 400,000 people around half of whom are women. Without the interventions of Paradisea in collaboration with RFN, other local civil society organizations and local communities the rate of encroachment, deforestation and degradation in these vital water catchments and havens for biodiversity could be considerably worse.

#### **Major Achievements to Date**

The major achievements of the RFN-Paradisea project up until the end of October 2016 include:

##### **Strengthening Sustainable Livelihoods**

1. Assisting indigenous farmers to establish cocoa and coffee agroforestry systems adapted to local social-ecological conditions. However, the level of adoption is still very low and the production, market linkages and direct economic benefits remain weak, whereas these crops remain vulnerable to pest infestations and market price shocks, so there is a risk that the advances made to date may evaporate in the future;

##### **Securing Customary Territory & Resource Rights**

2. Assisting indigenous forest-dependent communities to secure legal access to their own land, forests and resources, including mapping 365,474 hectares of customary territory;
3. Supporting the fulfilment of legal compliance of customary territories living in and around the three proposed connecting forest corridors by processing legal documents such as local regulation (perda) and Head of District regulation;
4. Contributing to the nation-wide movement to map customary territories. Paradisea's contribution is roughly equivalent to 4% of the total area of 8.6 million hectares<sup>18</sup> which have been mapped and registered with the Customary Lands Registration Agency (BRWA), though the maps produced by Paradisea are yet to be lodged with the BRWA;

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<sup>18</sup> According to Abdon Nababan, secretary general of AMAN, customary land maps covering a total area of 8.6 million hectares throughout Indonesia had been registered with the BRWA by October 2016. The extent of territory covered by customary land maps produced in Papua and West Papua Provinces to date remains unclear as most of these maps have not yet been registered with the BRWA.

### **Building Customary Institutions**

5. Increasing the customary community awareness on the importance of their customary forest areas, especially to the younger generation in order to mitigate potential deforestation, degradation and depletion of resources in the future;
6. Contributing to the documentation of indigenous culture and revival of TEK systems;
7. Facilitating dialog through meetings, informal discussions and customary congresses (musyawarah adat) to help resolve conflicts and build consensus;

### **Promoting Good Governance**

8. Contributing to strategic linkages between customary communities, local government and NGOs to support the adat communities and conservation areas;
9. Helped to initiate the commitment and efforts to develop a regulation for Tambrauw Regency to become a conservation regency;
10. Paradisea in its role as leader of the West Papuan NGO coalition on spatial planning has successfully advocated for area of forests that was to have its status downgraded from Protection or limited production forest to conversion forest or other use areas from 2,051,004 ha to 750,174 ha, thereby directly contributing to the protection of 1.3 million hectares of forest throughout West Papua, including around 500,000 hectares in areas adjacent to the three nature reserves including in the proposed forest corridors;
11. At the end of October 2016 the provincial government asked Paradisea to join the Provincial Committee on Social Forestry programs, which is tasked with implementing the nationwide social forestry program, including customary forests (hutan adat). This represents a major break through and greatly increases the probability of achieving the goal of having the customary forest rights of indigenous communities legally recognized;

### **Promoting Conservation Area Management**

12. Initiated moves towards expanding the area and changing the status of the Arfak, North Tambrauw and South Tambrauw SNRs to a major national park covering over a million hectares;
13. Established an MoU and commenced collaborating with UNIPA to prepare a proposal for the establishment of a national park;
14. Commenced work on the development of a proposal and supporting academic study to support the establishment of the proposed national park;

### **Awareness Raising and Civil Society Capacity Building**

15. Paradisea has raised the profile of indigenous rights and sustainable forest management through advocacy and media campaigns at the provincial level;
16. They have raised awareness amongst participating indigenous communities regarding the importance of protecting their forests, including with children and youths;
17. They've contributed to the regeneration of civil society in West Papua through recruiting and training recent university graduates;
18. Paradisea has gained trust by NGOs who work in West Papua province as data managers and received good comments related to their performance from local governments, NGOs, academia and most villagers.

## **Output 1 - Sustainable Livelihoods**

To date Paradisea has only managed to motivate a small handful of indigenous farmers to adopt cocoa and coffee cultivation. On face value this appears to be a quite modest achievement, but it is worth noting that Arfak and Tambrau people are known to be quite resistant to adopting new crops and technologies, that the serious crop losses caused by the cocoa pod borer (CPB) and price fluctuations in the international coffee market as well as the relatively easy availability of money from government handouts since 2001 has led to widespread abandonment of cocoa and coffee production throughout West Papua. Furthermore, unlike many other government and donor-funded agricultural development projects, Paradisea has been able to achieve this outcome without recourse to the payment of cash incentives. Even more remarkable is the fact that the cocoa gardens visited in the Mubrani area had been established by farmers based on local preferences towards multi-species agroforestry systems, which provide a well-balanced agro-ecosystem and habitat for native fauna. To date these cocoa agroforests show no signs of infestation by CPB, and farmers reported a high degree of satisfaction with the economic returns. Similarly the coffee plantations visited in the Indabri area had been established according local preferences, though the harvests to date have been quite small as the trees have not yet reached maturity. Paradisea should further promote diversification of cocoa and coffee agroforestry systems, including the planting of trees such as soursop, which attract ants, which are one of the major natural predators of CPB.

As such there are positive indications that these farmers will continue to produce cocoa and coffee in the future and may transfer their interest and skills to other community members. On the other hand these crops remain vulnerable to the CPB pest and market price fluctuations, so there is a risk that these interventions may prove unsuccessful in the longer term. On this basis it is highly recommended that Paradisea and RFN consider promoting a much more diversified approach to sustainable economic development in the project's target corridors, including nutmeg, fruit trees, peanuts, legumes and various highland vegetable crops, as well as exploring options for supporting ecotourism activities (see the recommendation section for more detail).

Other issues include poor post-harvest processing and storage (for example the coffee beans bought by one of the evaluators from growers in Indabri village was of very poor quality as it had been partially eaten by pests after harvest), packaging and marketing. However, at this point in time the major focus should be on increasing production,

The project also intends to provide support for marketing of cocoa and coffee, but up until the present the volumes of cocoa and coffee produced are insufficient to support exporting to other provinces or internationally.. During the final evaluation workshops Paradisea staff enquired about the possibility of linking into international markets, but in the opinion of the evaluators the volumes of cocoa ever likely to be produced will be insufficient to support direct shipment to major cocoa buying centres in Sulawesi, let alone exports. As such it is recommended that cocoa production feed into existing networks of buyers. On the other hand there is a small but growing market for locally produced boutique coffee in the coffee shops of Manokwari, including one run by another RFN grantee, Bentara foundation. So this may present opportunities for stabilizing coffee prices for Paradisea supported farmers.

Durint 2013 ecotourism development activities were included in the workplan, though this was dropped from subsequent work plans. There is very clear evidence that the support Paradisea provided for the community-based birdwatching ecotourism enterprise in Kwau Village, (including during the previous RFN-Paradisea project between 2008-2012 and up until the present) has had a highly beneficial effect,

both in terms of generating income for the local community and in raising community awareness regarding the conservation of forests. Of particular interest is the benefit sharing arrangements, including rotating cooks, guides and porters, ensuring that guests visit areas owned by different clans, as well as making annual payments to the clans whose territory is used and contributions church funds. Further effort to strengthen the management of this enterprise as a model for other communities, as well as further development including cooking training for village women, promotional support and possibly supporting the planning and fundraising efforts to build a kaki seribu style house on stilts high in the forest canopy.

Whilst the birdwatching activities in Kwau and Syoubri Villages in the Mokwam Valley are the most widely known to date, a number of other community-based ecotourism enterprises have begun to develop including along the Arfak coast, in the Kebar Valley, and in Siakwa and Fef villages in the Miyah area, including but not limited to those listed in table 4. Furthermore, other opportunities for ecotourism activities, such as white water rafting on the Kamundan River in the Kebar-Miyah area, sea turtle watching on the Mubrani-Kaironi marine wildlife sanctuary in the Mubrani area, caving in the Lina and Longmot mountains to the south and south-east of the South Tambrau SNR, as well as mountain trekking and camping.

**Table 4 - Ecotourism guides operating in the Arfak-Tambrau area**

Name	Location	Main Attractions	Contact Details
Hans Mandacan	Kwau Village, Mokwam Valley, Manokwari Regency	Montane Bird Watching	
Seth Wonggor	Syoubri Village, Mokwam Valley, Manokwari Regency	Montane Bird Watching	
Yunus Sayori	Warmawai Village, Arfak coast, Manokwari Regency	Lowland birdwatching, tree kangaroos and other mammals snorkeling,	081343316087
Julius Mandacan	Mupi Gunung, Arfak Coast, Manokwari Regency	Lowland and Montane Bird Watching	
Elia Kambu	Tuanwouwi Forest near Manokwari Town	Lowland birdwatching – including the rare Vulturine parrot	
Pak Maker	Senopi Village, Kebar Valley, Tambrau Regency	Bird watching in the Bukit Aiwatar and mineral springs Hot Springs	
Paul Warere	Siakwa Village, Miyah Area, Tambrau Regency		0823-99620395
Nico Nauw	Fef Village and the Ases Valley, Miyah area, Tambrau Regency		
Anis Sundowi & Pak Betwel	Syuan Valley, near Sausapor, Tambrau Regency		

Many of these guides / ecotourism operators have received assistance from Mr Charles Roring, a Manokwari-based ecotourism operator and social entrepreneur. When interviewed Mr Roring stated that he felt frustrated that because he operates alone he could not have as great an impact on increasing community incomes from ecotourism and promoting forest protection. As such it is recommended that Paradisea build a strategic alliance with Mr Roring, and even consider funding some of his work on ecotourism development in the Arfak and Tambrau mountains. Furthermore, due to the frequency of his visits to remote areas and his networks with local guides, Mr Roring has a wealth of information on

the biodiversity and environmental issues in the Bird's Head, which could prove highly useful in terms of making more informed spatial planning decisions, monitoring environmental issues in the field, promoting good environmental governance and planning for the management of the proposed national park.

Furthermore, the 2<sup>nd</sup> International Conference on Biodiversity and Ecotourism is planned to be held in Manokwari in 2018, and as this also coincides with the declaration of West Papua as a 'Conservation Province' as well as the elections of a new governor (elections are to be held in February 2017), this represents an excellent opportunity for Paradisea to promote ecotourism, nature conservation, indigenous rights and the establishment of the Arfak-Tambrau National Park.

### **Output 2 – Securing Customary Territory in the three proposed connecting forest corridors**

Up until the end of October 2016 Paradisea has succeeded in completing participatory tribal territory boundary maps covering an area of 365,474 hectares of customary territory in six areas including:

- Ground surveyed tribal boundary maps covering the customary territory of 9 villages in the Kwau Indabri area, covering an area of 7,293 ha including estimated 8.5% of the Menyambouw-Catabouw Corridor as well a small area extending into the Arfak Mountains Nature Reserve (see map 16);
- Indicative tribal boundary maps (based on sketches overlaid on satellite images) of the territory of Ugyehek and Dirie villages, which covers an area of 5,401 ha including estimated 6.5% of the Menyambouw-Catabouw Corridor (see map 19);
- Indicative tribal boundary maps (based on sketches overlaid on satellite images) of the territory of 14 Miyah Clans, covering an area of 99,004 ha, including an estimated 90% of the Miyah Corridor as well as extensive areas of the North and South Tambrau Nature Reserves and adjacent protection and production forests (see map 17);
- Indicative tribal boundary maps (based on sketches overlaid on satellite images) of the territory of the Ireres tribe, which covers an area of 201,617 ha, including around 5% of the of the Miyah Corridor and a huge swathe of South Tambrau SNR as well as parts of the limestone mountain ranges to the south (see map 18);
- Indicative tribal boundary maps (based on sketches overlaid on satellite images) of the territory of 4 Mpur clans in the Mubrani area, covering an area of 49,819 ha, including approximately 80% of the Mubrani-Kebar Corridor as well as extensive areas of the North and South Tambrau Nature Reserves and adjacent protection and production forests (see map 15);
- Indicative tribal boundary maps (based on sketches overlaid on satellite images) of the territory of Auri clan in the Kebar area, covering an area of 2,340 ha, including approximately 10% of the Mubrani-Kebar Corrido and adjacent protection and production forests (see map 20);

Furthermore, socialization, identification and training has commenced with other Arfak communities living around the Menyambouw-Catabouw Corridor, and Mpur communities living in the Kebar Valley.

Based upon the participatory mapping and associated work on documentation of cultural and social-ecological aspects, and through a series of community meetings and clan congresses Paradisea has developed customary forest proposals for four customary territories including:

- 4 villages in the Indabri area
- 5 villages in the Kwau area
- 14 clans in the Miyah area
- 4 clans in the Mubrani area

**Table 5 - Customary Territories Mapped by Paradisea up to October 2016**

	Location /	Extent of Area Mapped (ha)	Estimated Area & % of Corridor Mapped	Map Type / Methodology
1	Menyambouw – Catubouw Corridor	83,091	12,460 ha 15%	
	Indabri and Kwau Areas including 9 Villages - Indabri, Ninsimoi, Umpug, Handuk Pugowut, Kwau, Minggre, Maibri and Duabey	7,293	7,060 ha (8.5%)	Ground surveyed tribal boundary maps (GPS tracking)
	Ugyuhek and Dirie villages	5,401	5,401 ha (6.5%)	Indicative map of tribal boundary - based on sketches overlaid on satellite images
2	Mubrani – Kebar Corridor	10,101	9,080 ha 90%	
	Mubrani Area – territory of 4 clans - Manim, Manimbu, Makambak and Kasi	49,819	8,080 ha (80%)	Indicative map of tribal boundary - based on sketches overlaid on satellite images
	East Kebar Area – territory of the Auri clan	2,340	1,000 ha 10%	Indicative map of tribal boundary - based on sketches overlaid on satellite images
3	Senopi – Miyah Corridor	38,858	37,000 ha 95%	
	Miyah District- territory of 14 Miyah Clans	99,004	35,000 ha 90%	Indicative map of tribal boundary - based on sketches overlaid on satellite images
	Ireris Tribal Territory	201,617	2,000 ha 5%	Indicative map of tribal boundary - based on sketches overlaid on satellite images

Based on this data we can conclude that Paradisea has made considerable progress towards their goals of mapping customary territories in and around the three proposed connecting forest corridors, and the maps developed to date have been deemed sufficient for the purpose of commencing the process of lobbying the governments of Pegunungan Arfak, Manokwari and Tambrau Regencies to formally recognize the territorial rights of these communities by decree or local regulations.

***It is highly important to note that*** in order to realize the greater goal of achieving formal recognition of customary forest rights (*Hak hutan adat*) the MoEF will almost certainly require much more detailed mapping as the basis for management planning, such as including clan boundaries, ecosystems, natural resources, important places and customary zonation systems.

As such Paradisea clearly still has a huge amount of participatory mapping work to do including:

- To complete of tribal boundary mapping of the remaining areas of the three target corridors, including an estimated 5% of the Senopi-Miyah Corridor, 10% of the Mubrani-Kebar Corridor, and 85% of the Menyambouw-Catabouw Corridor;
- To conduct mapping in other areas not included within the original target corridors (as per output 5 of the 2016 and 2017 work plans);
- To conduct ground-based GPS surveys of those areas for which only indicative maps (ie. based on sketches overlaid on satellite images) have been developed to date;
- To develop more detailed maps showing clan boundaries, ecosystems, natural resources, important places and customary zonation systems.

Furthermore, the vast extent of many of these territories and the rugged terrain

However, it is highly important to note that at the outset of the project in 2013 Paradisea's team had virtually no experience in participatory mapping, and since that time they have developed considerable skills and accrued valuable experience which should enable them to complete mapping of the remaining areas much faster.

In the opinion of the evaluators Paradisea's work on participatory mapping has also been reasonably effective in terms of building common concern for securing land and forest tenure and rendering the boundaries of tribal territories of the six areas outlined above legally recognizable, which represents a major step forward towards the goal of recognition of their customary rights to land and the management of the forests and resources found therein.

Furthermore, Paradisea's has made a major contribution to the nation-wide program of customary territory mapping, representing an approximate 5% increase in the total area of customary land maps held by the BRWA database as of August 2015, and an even greater percentage of the total area of customary territories mapped in West Papua province to date. Even if the goal of achieving formal recognition of customary forest rights from the MoEF cannot be achieved within the project timeframe, recognition of customary territorial rights at the regency and provincial level should be achievable, which provides a solid basis for further legal action in the constitutional court if necessary.

On the down side, the communities visited do not have copies of the maps developed to date. Paradisea needs to ensure that community members have access to the maps they have developed to date, and should work towards producing more detailed maps, which can be printed in large format and displayed in central locations in the villages to promote a greater sense of ownership and as a constant reminder of the need to protect their forests and defend their customary rights. Perhaps the most effective location for displaying maps is near the entrance of churches, as this would strengthen cognitive connections between the idea of conserving customary lands and forests and religious values, as well as serving to protect them from potential vandalism.

The involvement of women in the participatory mapping process has been very limited, and it remains unclear if engagement of the younger generations has been adequate. Paradisea needs to be careful to ensure that they do not contribute to the real or perceived marginalization of women, particularly in communities who may be in the process of transition from matrilineal to patrilineal inheritance systems, or the marginalization of youths, which may lead to inter-generational conflict.

Paradisea should also consider involving children in participatory mapping activities, such as sketch mapping activities, could also enrich the data collected by providing the perspective of children as well as

raising the awareness of future generations of community leaders regarding the importance of protecting forests and natural resources. Paradisea could also facilitate local facilitators who have experienced in doing mapping to train other local facilitators in new areas to accelerate the process and make it more efficient and effective.

### **Output 3 – Strengthening Customary Institutions**

Highland Papuan communities are well-known for the high level of social competitiveness, with most men competing for the status of ‘Big man’ and endemic conflicts over land and resources, including inter-generational pay-back cycles. The Arfak and Tambrauw people are no exception, and if anything their small clan-based social structure, relatively weak conflict resolution mechanisms and on-going concern over male witchcraft makes it difficult to build and maintain robust and inclusive community institutions. On the other hand they are known as fierce defenders of their customary territorial rights (known as Igya ser hanjop or standing to defend the boundaries in the Hatam language) and their existing systems of land and forest zonation (including settlement and garden areas, limited use zones and sacred areas) loans itself well to the sustainable natural resource utilization and conservation goals being promoted by Paradisea. There are a number of indications that Paradisea has had a positive effect in terms of helping communities to find common ground, strengthen capacity for dialog on matters of mutual concern, and resolve conflicts relating to land, forest and resource tenure.

For example, throughout the period from 2013 to 2015 Paradisea’s work on community engagement, empowerment and participatory mapping was often delayed due to social and political conflicts, including long running social and territorial conflict in the Miyah area, political conflict over the boundaries of Tambrauw and Manokwari Regencies in the Mubrani-Kebar Corridor, and the legacy of the tumultuous events following the death of Paradisea’s former executive director in Mokwam and Syoubri villages in the Menyambouw-Catabouw corridor. During 2015-2016 both the Miyah and Mubrani communities requested that the participatory mapping process be sped up by convening customary clan congresses to help resolve territorial conflicts and develop indicative (sketch maps) of tribal territory boundaries, whereas in the Mokwam-Syoubri area community leaders have welcomed the return of Paradisea to commence participatory mapping and customary institution building activities. Customary congresses (Musywarah adat) have not yet been held in the Kwau and Indabri areas or Ugyehék and Dirie villages in the Menyambouw-Catabouw Corridor, but institutional capacity building activities have proceeded through a series of more limited meetings and the communities have recently requested that customary congresses be held in the near future. The fact that Paradisea has been gradually able to turn these situations around and help communities to manage these conflicts, if not entirely resolve them, demonstrates that Paradisea has had a positive effect in terms of building customary institutions and capacity for dialog and conflict resolution.

This provides evidence of the effectiveness of Paradisea’s approach to building the capacity of customary institutions through regular engagement, formal and informal engagement and the use of participatory mapping as a tool for promoting dialog and reconciliation, as well as their ability to adapt the participatory mapping methodology in response to opportunities as they arise.

### **Documentation of Cultural and Social-Ecological Aspects**

Paradisea’s work has also contributed to the documentation of customary land tenure and natural resource management systems as well as other aspects of indigenous Arfak and Tambrauw cultures and

the revival of TEK systems, which has been documented in various project reports and the customary forest proposals developed in mid-2016. However, in many respects the identification and analysis of socio-cultural aspects contained within these reports and proposals remains relatively superficial and generalized. On the other hand, discussions with several Paradisea personnel indicated that they have developed a reasonably deep understanding of the complexities of the Arfak and Tambrauw cultures, but have not as yet been able to convey this depth of knowledge through written reports or documentaries. It is also important to note that none of Paradisea's staff have any formal training in anthropology or sociology, so it is recommended that opportunities to build their knowledge and skills in these areas be a priority, either through participating in training courses and/or workshops, or through recruiting consultants who can assist with the documentation of socio-cultural aspects whilst transferring their skills to Paradisea personnel.

In particular the evaluators recommend that Paradisea consult with the Yogyakarta based INSIST Foundation to learn from their work on participatory mapping and community organizing, and in particular with INSIST associate Paskalis Laksono (who is also a lecturer in anthropology at the Gadjadara University), who coordinated a research project on the customary natural resource management systems of the Arfak people in 2000-2001 and amongst communities in Bintuni Bay in 1999-2000.

### **Audio-Visual Documentation and Awareness Raising Materials**

Paradisea in collaboration with MnuKwar Productions (another Manokwari-based NGO specializing in the use of audio-visual media for community awareness raising) has also developed two short documentary films, as well as video documentation of some of their other activities, which explore some aspects of the Arfak and Tambrauw cultures and customary natural resource management systems. According to Paradisea personnel these have been reasonably effective tools for generating dialog and raising awareness amongst participating communities. However, the evaluators believe that much greater use of audio-visual materials for promoting dialog and awareness raising, including the use of AV materials developed in other parts of Papua (such as *Mama Malind su hilang*, *Di belakang taman Eden* and many others) and other regions of Indonesia, Papua New Guinea (such as the Joe Leahy's Neighbors / Black Harvest series of films on development and social conflict) and Vanuatu (such as the films produced by the Wan Smolbag theatre company on a range of social and environmental issues). These types of AV materials also have the potential to draw a much larger audience, including women, youths and children, into discussions about conservation, development and social change issues than is usually the case in less entertaining village meetings. The evaluators have provided copies of a number of relevant audio-visual materials including those outlined above (most with Indonesian sub-titles), and recommends that Paradisea develop discussion notes and trial the use of these media for promoting dialog.

Paradisea should also consider trialling the use of participatory media development approaches, such as 'Photo Voices' or 'Self-directed video documentary' approaches, whereby communities are empowered to develop their own communications materials and in the process reflect upon matters of concern to them. MnuKwar productions has experience with these methodologies and could be contracted to assist with developing them as adjuncts to Paradisea's program. RFN and Paradisea should also consider providing training for staff interested in developing their skills in participatory audio-visual documentary making techniques, either with MnuKwar Productions, the Centre for Community Development's Studio Audio-Visual (SAV-PUSKAT) in Yogyakarta or other similar institutions.

### **Jambi Study Tour**

The study tour which Paradisea organized in 2013, to learn about the work of RFN affiliate WARSI on the establishment of Customary Forests in Jambi province, which involved both customary community leaders and representatives of the Tambrauw Forestry Service and the West Papua Centre for Natural Resources Conservation in Manokwari also appears to have had a positive impact. For example the local community leaders reported that this experience had opened their eyes to the potential destruction of forests and impacts on communities if development was not properly managed and communities were not organized to face the challenges and protect their lands and forests. Furthermore, according to Paradisea project reports the Tambrauw Regency Forestry Service responded to this experience by allocating part of their 2014 budget for the socialization of a regulation on customary forests, which in turn has contributed to efforts to develop regulations on the recognition and protection of indigenous rights and the designation of Tambrauw as a conservation regency. As such the evaluators recommend that at least 1 study tour to look at customary forest management and sustainable development issues be organized for each of the remaining project years. The highest priority should be a study tour to Jayapura and Jayawijaya Regencies in Papua Province to look at the successful participatory mapping and customary community empowerment efforts being supported by government and civil society organizations. Other study tours could include visits to Mimika, Merauke and Boven Digul in Papua, Nabire and Paniai, and to Raja Ampat to look at ecotourism and homestays. And possibly to Alor (NTT), Kalimantan or Sumatra.

More details on other potential study tours is provided in the section on recommendations.

#### **Output 4 - Good Governance and Environmental Management**

There are a number of clear indications that Paradisea's work on promoting good environmental governance and management has been reasonably effective in a variety of different ways.

The effectiveness of Paradisea's work on spatial planning monitoring and advocacy is demonstrated by the fact that they have been appointed as the leader of the West Papuan NGO coalition on spatial planning and the repository for spatial data for other NGOs in West Papua. Furthermore, in their role as the leading advocate for spatial planning and monitoring of compliance with the spatial plan Paradisea has succeeded in reducing the proposed area to be downgraded from protection forest (hutan lindung) and limited production forest (hutan produksi terbatas) to conversion forests (hutan produksi-konversi) or other use areas (Areal penggunaan lain) according to the 2013 spatial plan from a total area of 2 million hectares down to 700,000 hectares, thereby directly contributing to the protection of 1.3 million hectares of forest throughout West Papua. This includes an area of approximately 500,000 hectares of protection forests in the proposed forest corridors and other areas adjacent to the three nature reserves

Paradisea has also contributed to building strategic linkages between customary communities, local government and NGOs to support the customary communities and conservation areas, and they also helped to initiate the commitment and efforts to develop a regulation for Tambrauw Regency to become a conservation regency.

At the end of October 2016 the provincial government asked Paradisea to join the Provincial Committee on Social Forestry programs, which is tasked with implementing the nationwide social forestry program in West Papua, including the establishment of customary forests (hutan adat). This represents a major breakthrough which significantly increases the likelihood that RFN and Paradisea will be able to attain their goals of establishing customary forests and integrating customary land and forest zonation systems into the management plan for a new million hectare national park by 2020.

Paradisea's work in relation to lobbying the government to recognize the customary land and forest rights of the four communities has resulted in a verbal commitment from the government of Pegunungan Arfak Regency to develop a decree or regulation to recognize the customary rights of communities in the Indabri area. The government of Tambrau Regency has also given in principle approval for the recognition of the customary forest rights of the Mpur and Miyah communities, but on the proviso that adequate management plans be prepared. The response from the government of Manokwari Regency has been more muted, with the proposal being passed on to the Provincial forestry service for their consideration.

Paradisea was also one of the initiators behind efforts to have Tambrau Regency declared a Conservation Regency<sup>19</sup> and played a key role in the efforts by local NGOs to analyse and advocate for greater accommodation of the rights of indigenous communities in key provincial and regency level regulations relating to the recognition and protection of indigenous peoples rights and the commitment to establish West Papua as a Conservation Province.

On the other hand, whilst the government of West Papua Province has made a formal commitment to become a 'conservation province' and protect the rights of indigenous Papuans through local regulations, and the government of Tambrau Regency has made a similar commitment to become a conservation regency, their current spatial plans (RTRW) and medium-term development plans (RPJMD) still do not reflect these commitments. For example the government of Tambrau is currently planning to build four towns on the boundaries of the North and South Tambrau SNRs, including an Administrative capital at Fef, commercial capital at Sausapor, agropolitan centre in the Kebar Valley (focusing on cattle ranching and large-scale agriculture) and a container port at Samparmon Village just west of the Jamursba Meidi turtle nesting beach. Additionally they are planning to build a road to connect the proposed port at Samparmon to the Kebar Agropolitan centre, which would traverse the very heart of the North Tambrau SNR over a distance of approximately 60 km. Similarly the government of Pegunungan Arfak Regency is currently constructing roads which pass through the edge of the Arfak Mountains SNR and have already caused considerable landslides. As such it is clear that a great deal of work still needs to be done to turn the government commitments on conservation and the protection of indigenous rights from rhetoric into concrete action.

In particular Paradisea should work closely with relevant provincial and regency level government agencies local and international civil society partners and UNDP (who are currently planning to implement an indigenous empowerment program in Pegunungan Arfak Regency) to advocate for:

- Improved public consultation processes relating to spatial planning and other government policies that will impact indigenous communities and the environment;
- Improved public consultation processes (ie. which conform with the principle of Free, Prior and Informed Consent, as contained in the UNDRIP, though not yet mandated in Indonesian law) by private sector entities seeking to develop enterprises that will impact indigenous communities and the environment;
- The establishment of a Regional Spatial Planning Monitoring Coordination Committee (Badan Koordinasi Pemantauan Ruang Daerah – BKPRD), a multi-stakeholder body involving key government agencies and civil society organizations in the monitoring of the implementation of spatial plans and

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<sup>19</sup> Samdhana Institute and Conservation International have also played a role in the declaration of Tambrau as a conservation regency.

compliance environmental and social impact assessment and mitigation laws, and other environmental laws;

- The establishment of provincial and regency level spatial data management systems (Sistim Informasi Tata Ruang – SIMTARU), which are intended to increase community access to spatial data and transparency of spatial planning process (Several SIMTARUs have been established in Papua Province, which could provide a replicable model for governments in West Papua).

#### **Output 5 - Securing Customary Territory outside the three proposed connecting forest corridors**

This output was only included in Paradisea’s logframe in 2016, in response to the realization that the original focus on the three corridors was too restrictive and that other areas outside these corridors that had not been identified as part of the original project design were potentially either biologically or ecologically important, or could represent sources of threats on the 3 SNRs. To date Paradisea has conducted initial identification of some of the areas where work on participatory mapping and securing customary land and forest rights is required, and commenced socialization and stakeholder engagement activities in several areas, including amongst Meyah communities living in the hills between the Prafi plains and the South Tamberau SNR.

It remains too early to evaluate the effectiveness of Paradisea’s work in relation to this output, though the observations included under output 2 also generally relevant to the scaling up of Paradisea’s work on participatory mapping and securing customary land and forest rights to include areas outside the 3 corridors. The evaluators also advise that Paradisea needs to consider working with communities along the Arfak Coast, the North Coast of Tamberau and in villages of Testega and Iranmeba to the south-east of the South Tamberau SNR.

However, considering that Paradisea’s human and financial resources as well as their logistical and administrative capacity are already quite stretched, expansion of their existing target areas will require much greater cooperation and coordination with other organizations, including:

- UNIPA (who already have a modest program in the Jamursba Meidi and Wermon turtle nesting sanctuaries on the north coast of Tamberau Regency). It may be possible to establish a graduate volunteer program in collaboration with UNIPA to scale up the extent and impact of Paradisea’s work;
- Regency level government agencies, who should be increasingly involved in Paradisea’s participatory mapping work in the future, especially as it is a legal requirement that government teams verify the boundaries of customary territories before they can be recognized by a decree by the regency head or a local regulation / by-law;
- Other conservation NGOs, such as Conservation International, who are currently in the process of establishing a terrestrial conservation program in West Papua Province (with a very high probability they will be working in the Arfak Mountains).

#### **Output 6 - Conservation Area Management / Proposed Establishment of a National Park**

Paradisea’s efforts to advocate for the Arfak Mountains, North Tamberau and South Tamberau SNRs and the proposed connecting forest corridors to be established as a major national park covering over 1 million hectares of the Bird’s Head Montane Ecoregion is still in its early stages, only having emerged in their work plan as 2 minor activities in 2015, including a preliminary academic analysis and government perceptions survey (see activities 4.3 and 4.8 in 2015 logframe). In the 2016 logframe this element of the project was elevated to a separate output with a work stream consisting of 4 proposed activities,

As of October 2016 Paradisea had signed an MoU with University of Papua's Centre for Biodiversity Studies (PSKH-UNIPA) to collaborate on conducting various studies and the development of a proposal for the establishment of the proposed national park. During October 2016 personnel from the PSKH-UNIPA had conducted secondary data analyses and commenced field surveys to support the development of an academic paper on the formation of the national park.

Paradisea personnel had also begun discussing various options and strategies to support the establishment of the proposed national park or parks, including options to advocate for 1, 2 or 3 national parks, and options for expanding the boundaries of the park(s) to incorporate important sites for biodiversity and ecological functions which currently lie outside the boundaries of the Arfak Mountains, North Tamberau and South Tamberau SNRs. The options identified to date are summarized in [table ??](#).

As of October 2016 it is still too early to gauge whether or not these efforts have been effective, though responses from government, civil society and community level stakeholders indicate that awareness of Paradisea's plans in relation to the establishment of a national park is still very low. Respondents from the Provincial Forestry Service and the West Papua Centre for Natural Resource Conservation also questioned whether efforts to achieve formal recognition of customary forest rights, which in theory involves their exclusion from the national forest estate, and to establish a national park incorporating these areas as customary utilization zones, were incompatible. In the opinion of the evaluators customary forests and national parks need not necessarily be mutually exclusive, but further study is required to clarify this and determine the best approach to accommodating both types of forest designation.

The goal of establishing a million plus hectare national park is extremely ambitious, and will clearly require support from other organizations including the regency and provincial level forestry services, West Papuan Centre for Natural Resource Conservation (BKSDA), and other relevant government agencies as well as the Governor of West Papua and the regents of Tamberau, Pegunungan Arfak, Manokwari, Manokwari Selatan, Teluk Bintuni and Maybrat Regencies, across whose respective jurisdictions the proposed park extends. It will probably also necessitate the building of a coalition with major international conservation NGOs, such as CII and WWF, who have the existing networks and financial resources to enable them to conduct effective lobbying at the regency, provincial and national levels. On the positive side, the recent declarations of West Papua as a conservation province and Tamberau as a conservation regency provide an opportunity to advance the national park agenda.

Furthermore, Paradisea needs to begin communicating their intention to establish a national park to the customary communities with whom they've been working, and if possible obtain their input and buy in to this proposal at the earliest feasible moment is almost certain to result in conflict between Paradisea and at least some of the participating communities, who will feel that they have been misled regarding the intentions behind participatory mapping activities. This is a sensitive matter and both the positive and negative elements must be explained to the communities before obtaining their consent.

Paradisea staff suggested that RFN invite members of the Norwegian Royal Family, Prime Minister and or Ambassador to visit the project area to support the promotion of the establishment of a national park for the World and Indonesia.

**Table 6 - Options for Management of the Arfak and Tamberau Conservation Areas**

Option	Benefits / Advantages	Disadvantages
Option 1 - Establishment of a single large national park covering over 1 million hectares including the existing Pegunungan Arfak, North Tamberau and South Tamberau SNRs and the proposed connecting forest corridors	<ul style="list-style-type: none"> <li>➤ The change of status to national park would allow for zonation, which would accommodate sustainable utilization of natural resources by customary communities within the park;</li> <li>➤ Funding would be provided for a single national park management authority, possibly with branch offices in the various regency capitals;</li> <li>➤</li> </ul>	<ul style="list-style-type: none"> <li>➤ This option would require achieving support from the governments of Tamberau, Pegunungan Arfak, Manokwari, Manokwari Selatan, Teluk Bintuni and Maybrat Regencies and West Papua Province.</li> <li>➤ A single national park authority not be able to effectively manage such a vast national park.</li> </ul>
Option 2 - Establishment of 2 national parks (eastern and western parks) based on the former boundaries of Manokwari and Sorong regencies, and including the proposed connecting forest corridors.	<ul style="list-style-type: none"> <li>➤ The change of status to national park would allow for zonation, which would accommodate sustainable utilization of natural resources by customary communities within the park;</li> <li>➤ This option would be politically more expedient than option 1, as it would avoid the ongoing political conflict between those regencies which were formerly part of Sorong Regency and those which were formerly part of Manokwari, and the ongoing efforts to split the area into 2 provinces.</li> </ul>	<ul style="list-style-type: none"> <li>➤ This option would still require achieving support from the governments of Tamberau and Maybrat Regencies for the western park, and Pegunungan Arfak, Manokwari, Manokwari Selatan and Teluk Bintuni Regencies for the eastern park, as well as West Papua Province.</li> <li>➤</li> </ul>
Option 3 - Establishment of 3 national parks based on the 3 existing SNRs and the proposed and the proposed connecting forest corridors.	<ul style="list-style-type: none"> <li>➤ The change of status to national park would allow for zonation, which would accommodate sustainable utilization of natural resources by customary communities within the park;</li> <li>➤ This option would be politically the most expedient as it represents the least deviation from the status quo.</li> </ul>	<ul style="list-style-type: none"> <li>➤ This option would still require support from various regency level governments, though not consensus between all of them.</li> </ul>
Option 4 - Expansion of the current area of the South Tamberau park to include the limestone karst belt including the Lina, Longmot and Merdey Mountains to the south and south-east	<ul style="list-style-type: none"> <li>➤ This would incorporate limestone karst areas which have high levels of biodiversity and endemism (particularly bats, cave fauna and flora adapted to growing on limestone) which are currently very poorly <b>represented within West Papua's network of conservation areas;</b></li> <li>➤ It would also cover the two deepest caves in Indonesia, (<i>Lomes Longmot</i> – 360 metres and <i>Lomes lomo Besar</i> - 315 metres). These and other caves could potentially be developed as ecotourism destinations to generate community income and park visitor fees.</li> <li>➤ It would protect these hydrologically sensitive area from potential limestone mining and logging activities, from which the sensitive ecology may never fully recover;</li> </ul>	<ul style="list-style-type: none"> <li>➤ This option would require engagement and participatory mapping activities with Soughb and Moskona communities living in Testega, Iranmeba, Isim and Merdey Villages, and Ireres people living in Astiti and Senopi Villages, to achieve their buy-in / support and develop zonation based on customary land-uses.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ This area currently almost entirely unpopulated, though it falls within the territory of communities from Soughb and Moskona communities living in Testega, Iranmeba, Isim and Merdey Villages, and Ireres people living in Astiti and Senopi Villages. It could help to protect their territory from unsustainable natural resource utilization.</li> </ul>	
Option 5 - Expansion of the proposed area of the national park(s) to include the Jamursba Meidi, Wermon and Mubrani-Kaironi marine turtle nesting beaches and adjacent forest areas North Tamberau	<ul style="list-style-type: none"> <li>➤ This would help to protect three of the World most important nesting sites for leatherback turtles as well as green, hawksbill and olive-ridley turtles including hinterland areas which are currently threatened by logging and forest conversion;</li> <li>➤ It would incorporate areas of lowland and littoral (beach) forest into the park, which are currently under-represented in West Papua's network of conservation areas and are amongst the most threatened by logging, forest conversion and mining;</li> <li>➤ It could provide protection of these important sites from the proposed development of a container port on the north coast of Tamberau Regency.</li> <li>➤ It could raise the profile of the national park and provide additional potential ecotourism activities within the park.</li> </ul>	<ul style="list-style-type: none"> <li>➤ This option would require support from the Ministry of Marine Affairs and Fisheries, who currently have authority for management of the Jamursba Meidi and Mubrani-Kaironi Marine Wildlife Sanctuaries.</li> <li>➤ The government of Tamberau Regency may be reticent to support this option as it would reduce the already limited area of production and conversion forests in Tamberau Regency;</li> <li>➤ It would require engagement and participatory mapping activities with Karon communities living in Saubeba, Warmandi, Wau and Waibem villages along the north coast. Some of these communities have had conflict with WWF in the past over turtle conservation programs;</li> <li>➤ It would also require buy-in / support from Mpur communities living in Mubrani and Amberbaken districts.</li> </ul>
Option 6 - Management of the existing Pegunungan Arfak, North Tamberau and South Tamberau SNRs and surrounding Protection Forests (Hutan Lindung) through Conservation Forest Management Units (CFMU / KPHK)	<ul style="list-style-type: none"> <li>➤ This is by far the simplest option to pursue, as it aligns with the Ministry of forestry's existing plans for the establishment of 5 CFMUs in West Papua.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Funding for CFMUs will only be provided for a few years, after which they are expected to be self-funding. It is not clear how these proposed CFMUs would generate sufficient revenues to support even basic operational costs, let alone field management activities;</li> <li>➤ Continued status as SNRs does not allow for zonation and sustainable utilization of natural resources by customary communities (unless the current review of the 1990 law on Natural Resource Management results in allowance for zonation and sustainable resource utilization with SNRs).</li> </ul>

## **Awareness Raising on Environmental and Indigenous Rights Issues**

Paradisea has implemented a number of activities intended to raise awareness regarding environmental and indigenous rights issues, including:

- In 2014 and 2015 Paradisea also organized drawing competitions for Arfak and Tamberau children in relation to World Environment day;
- Paradisea has developed two short documentaries, which explore some aspects of the Arfak and Tamberau cultures and customary natural resource management systems. According to Paradisea personnel these have been reasonably effective tools for generating dialog and raising awareness amongst participating communities;
- Promoting dialog on environmental and customary rights issues amongst indigenous communities through meetings and participatory mapping activities;
- Promoting provincial level dialog on environmental and customary rights issues through meetings, workshops and media reports.

Whilst these activities have had a positive impact, overall concern for the environment and indigenous rights remains fairly low, and Paradisea's work on awareness raising needs to be strengthened.

At the community level it remains unclear to what extent mutual understanding has been established regarding the goals the participatory mapping activities between Paradisea and participating communities. In the Kwau area, where ecotourism is already providing a significant supplement to local incomes, communities appeared to have a clear understanding of the importance of protecting the surrounding forests as the habitat for native fauna which attracts tourists. However, in the Mubrani-Kebar and Senopi-Miyah corridors, where cash income is less readily available and roads have only recently opened up access to the rest of the province, it is quite likely that community leaders are more interested in the possibility of securing the right to sell or lease land and/or resources to outsiders for short term economic gain, rather than the conservation and sustainable development goals espoused by Paradisea.

Paradisea should strengthen their engagement with children, including environmental awareness raising activities in schools and mapping activities with children. Children can have a different perception on their environment than adults, but to date they have not been included in participatory mapping activities. Mapping could be used to understand how children perceive their environment and to raise the awareness of future generations of customary leaders regarding the importance of protecting their forests and other resources.

Paradisea should also consider supporting much more ambitious awareness raising campaigns, including the development of awareness raising media (audio-visual, posters, comics, etc.), working with local government to support the International Conference on Biodiversity and Ecotourism in 2017, and working with other local CSOs, government and entrepreneurs to have 2017 declared the Year of West Papuan Nature Conservation and Ecotourism.

### 3.3 Efficiency

*How do the results stand in relation to the effort expended?*

*Comparing inputs with outputs, how economically have inputs been converted to outputs?*

*Could the same results have been achieved in another way?*

*To what degree do the outputs achieved derive from efficient use of resources?*

The efficiency of the project was assessed based on the monetary value of the project investment compared to potential impact and benefits, as well as project management including the financial system.

#### **Comparison between project cost and coverage areas of forest protection and the potential benefits to the inhabitants of the target corridors and surrounding regencies**

In the period 2013- 2016 the total value of the RFN-Paradisea contract was IDR 10 billion or USD 765,403. Despite the ongoing threats of mining, plantations, and the development of new regencies, roads and other infrastructure, we believe that the project is on track to achieve the desired results and it is reasonable to claim that the project has directly contributed to the protection of forest areas in the three corridors with a total area of 125,243 hectares. The direct beneficiaries include an estimated 7,000 indigenous peoples from the Hatam, Mpur, Ileres and Miyah tribal groups, whose customary rights to land and forests have been strengthened, although not yet fully secured. It is hard to put a monetary value on the rights and livelihoods of indigenous peoples, or the biodiversity found in these forests, but clearly this represents a significant outcome to which many people throughout the World would attach a high premium.

Moreover, considering that the greater project area includes the upper watershed of the major rivers which provide water to the people of Manokwari town (136,000 people in 2010) and around 300,000 other people living in Manokwari, Manokwari Selatan, Pegunungan Arfak, Tambrau, Maybrat and Teluk Bintuni Regencies, it is also reasonable to claim that over the projects indirect beneficiaries include over 400,000 people.

Paradisea's work on spatial planning advocacy has also resulted in the prevention of the downgrading of an area of 1,386,706 hectares of forest throughout West Papua province, including over 1 million hectares of forest which was to be made available for conversion. Presuming an average value of 160 tonnes of CO<sub>2</sub> emissions per hectare of dryland rainforest in Papua, this is equivalent to 160 million metric tonnes of avoided emission, at a cost of IDR 65, or less than US\$0.5 per metric tonne. Whilst it is difficult to say with any certainty to if and when this forest may have been converted, or to what extent Paradisea's advocacy was responsible for this outcome, it appears that based upon these avoided CO<sub>2</sub> emission alone this project represents a very efficient investment.

Additionally, RFN's investment in West Papuan civil society capacity building is difficult to attach a monetary value to, but would appear to be an investment which will continue to deliver returns over many decades. Paradisea's work has also been supported by many other stakeholders such as NGOs, local governments, academia and *adat* community members and their work has contributed to overall improvements in environmental governance and respect for human rights.

As such we believe that Paradisea's work is producing good value for money and that the comparison of the total expenditures to the results, indicates that the RFN investment is efficient.

## **Financial System**

Paradisea's financial management system is reasonably well developed and efficient. Standard operating procedures (SOPs) have been developed for accounting and procurement and all budget advances are based upon Terms of Reference (ToRs) developed for each activity and reviewed by the executive director and finance manager. External audits are conducted by a registered auditor annually, and the auditor's recommendation are followed up. Moreover, there is a system whereby each staff member who has travelled to the field is required to produce activity and financial reports before their salary can be disbursed. RFN's staff have also provided good suggestion to improve the financial system. The evaluator's request for financial reports, the SOP or other questions were responded to immediately, and most of the staff feel that Paradisea's financial section services are good in ensuring that field activities able to run smoothly.

All these good aspects of financial system support efficiency of project implementation. One aspect which requires improvement is the need to have an SOP on how to prevent, identify and follow up on fraud and corruption. Paradisea also needs to develop a standard list of costs associated with meals and other meeting costs, in town and in the field, costs of resource person, and what they are required to provide, transportation and other frequent costs. Such a list of standard prices would simplify budget planning, tracking and the preparation of ToRs for each activity, and thereby increase efficiency and transparency.

Financial management is more than keeping accounting records. It is an essential part of organizational management and cannot be seen as a separate task to be left to finance staff or the treasurer. Financial management involves planning, organizing, controlling and monitoring financial resources in order to achieve organizational objectives.

Whilst Paradisea's executive director is doing a reasonable job of planning budgets and monitoring expenditures, he is clearly stretched by the overall burden of managing the financial, administrative, technical and staff mentoring aspects of project management, and moreover, he has had no training in budget management and tracking to date. As such it is advised that he receive such training, and also that an office manager be appointed to relieve him of some of the administrative burdens and free up more of his time to support management of the projects technical, staff mentoring and external relationship building aspects.

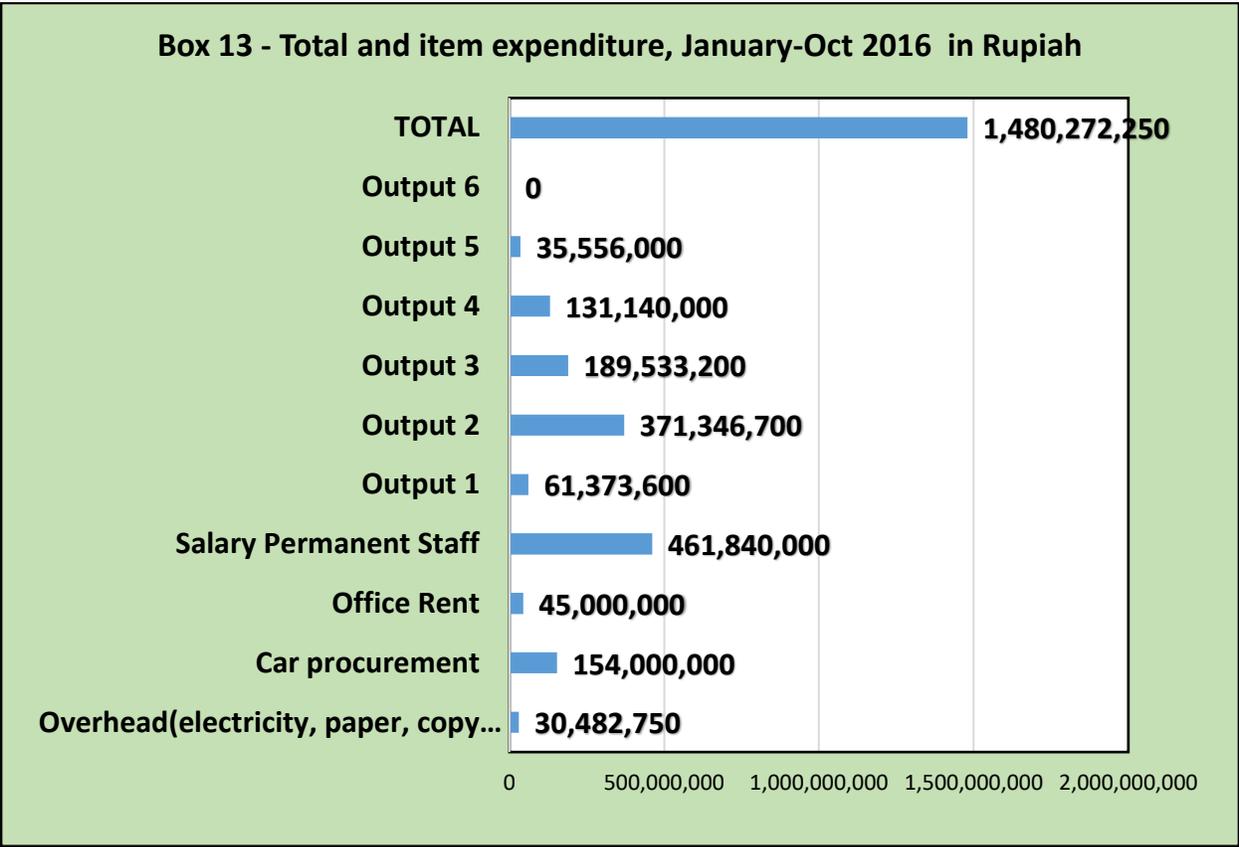
Paradisea staff have health insurance through the State Social Security Agency (BPJS) and also by the organization. One issue raised by staff is that the health insurance cover does not differentiate between single staff and those with a family. There is also a request that cost associated with childbirth can be covered by the office. Many other organizations in Papua have staff health insurance cover through Allianz insurance, which includes coverage for family members, childbirth and reading glasses. As such Paradisea should consider upgrading their staff health insurance through Allianz Insurance.

### **Use of financial resources**

Paradisea's financial resources have mainly been used to support the objectives of the program, with relatively little spent on administration, overheads and other expenses. The largest spending areas are activities of the outputs 1-6 amounted of IDR 788,949 million (53,3%) and the salary of permanent staff IDR 461,840 million (31,2%), Expenditures of overhead IDR 30,482,750 (2,05%) office rent (3,2%) are relatively low. This distribution of financial resources represents value for money

The single largest capital expenditure has been the procurement of a 4WD car during the 2016 financial year, which is the only car owned by Paradisea. Bearing into mind travel cost to the field areas are expensive, buying a car is sensible and will support efficiency. Over the coming year vehicle maintenance (motorbikes and 4WD car) costs to account for a rising percentage of project cost, due to increasing frequency of field visits and the very poor condition of the roads, which will necessitate frequent replacement of tyres, damage to suspension and other parts.

Office rental costs are also one of the highest recurrent costs, and staff complained that moving office on a near annual basis was also time consuming, disruptive and expensive. If office rental costs could be consolidated, and sufficient additional funding be found through donations or other fund raising activities, Paradisea could procure a permanent office which would significantly reduce recurrent costs and provide a more stable base for operations, potentially including as a base for other fund raising and commercially oriented activities. This could significantly reduce their dependence on donor funding and raise their long term sustainability.



Source: YPM, 2016. TVA, Statement of Comprehensive Income (Budget Analysis), January to 10 October, 2016

Over the four-year period from January 2013 to the end of October 2016, Paradisea has spent a total of IDR 10,380,909,237. Given the achievements realized (as described in preceding section on effectiveness), which have contributed towards Indonesia’s efforts to reduce impact of deforestation and climate change, strengthened the rights and protect the livelihoods of some of Indonesia’s most marginalized indigenous communities and helped to strengthen good governance and West Papuan civil society, this represents value for money (VFM) for the Norwegian tax-payer.

**Table 7 - RFN-Paradisea Project Budget Analysis 2013-2016**

KETERANGAN	2013		2014		2015		7-Nov-16	
	Budget	Expense	Budget	Expenses	Budget	Expenses	Budget	Expense
INFRASTRUCTURE	76,500,000	90,463,000	109,065,000	56,692,411	66,930,000	54,659,100	48,000,000	35,907,455
MAINTENANCE			30,800,000	24,350,000	50,000,000	41,712,300	222,711,000	181,117,000
RENT			45,000,000	30,000,000	95,000,000	95,000,000	45,000,000	45,000,000
SALARY	624,000,000	572,440,000	786,000,000	781,750,000	828,000,000	752,000,000	697,000,000	587,887,450
SOCIAL COST	147,457,600	101,698,700	147,826,400	139,556,700	163,607,200	135,075,200	157,161,280	98,403,150
ADMINISTRATION	230,150,000	257,774,636	58,950,000	19,381,466	57,998,000	71,500,472	66,192,320	54,600,000
ACTIVITY 1	240,599,995	201,132,700	142,100,000	177,250,000	108,800,000	141,739,200	241,750,000	261,373,600
ACTIVITY 2	342,142,405	243,098,000	235,400,000	281,746,000	569,337,800	509,499,200	612,800,000	371,346,700
ACTIVITY3	477,400,000	760,534,381	306,900,000	364,000,000	274,800,000	318,036,000	281,910,000	189,533,200
ACTIVITY 4	29,250,000	38,816,000	637,958,600	711,077,016	536,527,000	638,626,800	405,853,920	331,140,000
ACTIVITY 5			33,815,000	33,250,000			284,455,000	235,556,000
ACTIVITY 6			42,238,000	46,185,400			337,166,480	300,000,000
<b>TOTAL</b>	<b>2,167,500,000</b>	<b>2,265,957,417</b>	<b>2,576,053,000</b>	<b>2,665,238,993</b>	<b>2,751,000,000</b>	<b>2,757,848,272</b>	<b>3,400,000,000</b>	<b>2,691,864,555</b>

1. The tendency of annual expenditure is over spent around 6 to 98 million
2. The tendency of the salary and social cost is less than it was budgeted, administration cost is up and down.

### **3.4 Project design, management and implementation**

#### ***Quality of the formal project documents***

The formal project documents are simple but sufficient. RFN has sought to keep reporting requirements to a minimum, and has not been overly concerned with tracking the numbers of project beneficiaries, which is often a problem for projects in Papua where population densities are low and therefore the project delivery cost per beneficiary is usually very high. The project documents explain the risks and challenges to project implementation very well, such as development of new districts, mining licenses and other threats. In addition, there are gender and stakeholder analysis questions.

There is room for improvement in the stakeholder analyses, especially given that the project's success is highly dependent upon the buy-in and support from a very wide range of stakeholders from Provincial and regency level governments, NGOs and IPOs, communities and others, across five different regencies. As such there needs to be a different stakeholder analysis developed for each of the concerned regencies. Equally important is to map which stakeholders need to be lobbied, in what ways and by whom at the national, provincial and regency levels. This level of analysis would result in a more detailed advocacy strategy for each district, provincial and national level including how to network with other national and international NGOs and who are the members of President Jokowi's social team. This analysis would also lead to how to package the information for the different stakeholders. One strategy is to lobby not only head of district but also his/her spouse because experience indicates that they can influence decisions.

The project logframe is rudimentary, as it does not clearly elucidate the projects goals or clearly demonstrate how different activities will contribute to the achievement of those goals. It also lacks clear output indicators or means of verification, making it difficult to track progress towards the achievement of the goals. As such it reads more like a list of loosely linked activities rather than a standard logframe. Furthermore, as the project has progressed over the past 4 years the logframe has become convoluted with two new outputs added and a number of very similar activities switching from one output to another over time. This simple approach to program planning was probably appropriate at the outset of the project, when Paradisea's experience and capacity to plan project activities was still quite limited, and when the small size of their team meant that it was relatively easy plan activities on the run. But now that Paradisea is reaching a higher level of organizational capacity and maturity we believe it is high time they were pushed to strengthen their capacity to develop more robust project plans and well laid out logframes. This will not only strengthen their program planning but will also increase their capacity to access funding from other donors with less flexible approaches to engagement with local NGOs.

#### ***Networking and Lobbying Capacity of the team***

Paradisea's capacity for networking and lobbying needs to improve so that they become more strategic. At district level they have had some success with Tambrau and Pegunungan Arfak districts, but not so much in Manokwari district and they have not been particularly effective to date in terms of building partnerships with government agencies for delivery of development assistance to communities.

They also have to increase their lobbying capacity at the national level, both through building partnerships through organizations such as AMAN, HuMA and CII, as well as in their own right (For example Sumatra-based NGO coalition WARSI has developed capacity to lobby national level government agencies in their own right).

## Management and Staffing

Paradisea's team consists of 22 staff and 1 volunteer, including 10 female staff. They include a range of different ethnicities, mostly Papuans and Malukuans, but also others, most of whom were born and raised in Papua. One staff member is from the Hatam tribe (one of the project's target communities). Paradisea's director stated that he would like to recruit more people from the target ethnic groups, but that most suitably skilled people from the Arfak and Tamberau peoples were nowadays employed in government or parliament.

No.	Name	Gender	Position
1.	Esau Nur Young	M	Executive Director – Paradisea Foundation
2.	Norvita	F	Finance Manager
3.	Agustin Manuputty	F	Personnel Manager
4.	Helma Wonsiwor	F	Administrator
5.	Francine Hematang	M	Coordinator Data Analysis and Advocacy
6.	Fourly Latul	M	Policy / Legal Drafting Coordinator
7.	Hengky Yesapadanya	M	Program Manager – Arfak-Tamberau
8.	Pasifilionira (Yani) Sawaki	F	Indigenous Peoples & Economic Policy Staff
9.	Jefry Resubun	M	Data Management
10.	Andrin Sirandan	M	Advocacy Staff
11.	Daniel Mandacan	M	Arfak (Minyambouw-Catabouw) Corridor Coordinator
12.	Dwi Astuti Rumakat	F	Field Staff – Arfak (Minyambouw-Catabouw) Corridor
13.	Nerius (Damas) Sai	M	Coordinator – Mubrani-Kebar Corridor
14.	Ayu Wulandari	F	Field Staff – Mubrani-Kebar Corridor
15.	Ratna Nofiati	F	Coordinator - Miyah-Senopi Corridor
16.	Jaqualine Kafiar	F	Field Staff – Miyah-Senopi Corridor
17.	Sulfianto Alias	M	Coordinator – Bintuni REDD+ Program
18.	Abdullah Hindom	M	Field Staff – Bintuni REDD+ Program
19.	Reiny Suruan	F	Coordinator – Fakfak REDD+ Program
20.	Stefani Pedai	F	Field Staff – Fakfak REDD+ Program
21.	Obed Kosai	M	Volunteer
22.	Robby Masoka	M	Driver
23.	Kanen Kosai	M	Office Assistant

Overall the Paradisea team is very young and inexperienced, only a few have any previous work experience prior to joining the paradise team, and around half of them have joined the team in the last 2 years. On the other hand they are highly enthusiastic and eager to learn. This is part of a deliberate strategy to mentor a new generation of West Papuan civil society activists, but the implication is that most team members are learning on the job and the more senior staff have to spend time training and

mentoring their junior counterparts. As a result of their inexperience progress was slow over the first couple of years of project implementation as they struggled with a very steep learning curve as well as social and political conflicts in each of their target areas. But since 2015 they have gained considerable momentum as their experience and skills have increased and they've managed to overcome most of the earlier social and political conflicts. Targeted training and opportunities for exchanges or internships with other organizations working on similar issues in other parts of Papua or other provinces would be highly beneficial in terms of developing their capacity and refreshing their enthusiasm.

The executive director, Esau Yaung, is the most senior team member, who has worked with Paradisea since graduating from the University of Papua's faculty of Forestry in 2007, and has served as Paradisea's director since the untimely death of the former director in late 2012. He is highly committed to fulfilling Paradisea's mission, has good leadership skills and is sensitive to the staff's needs. When other staff were questioned regarding Esau's leadership skills most responded that he was a very good leader (ie. 4 on a scale of 1-5) whereas only two responded that he was a good leader (ie. 3 on a scale of 1-5). The key area where room for improvement was identified related to making decisions and not changing them too often, and not to ask staff to assist others activities in other areas. From observation in the office, most staff listen to him, he has a convivial attitude towards the staff, and he checks almost all the TORs and budgets personally and tries to suggest areas where staff could make improvements.

Areas that he can enhance is to delegate more tasks to the staff. More importantly, he needs to allocate more time to lobby key decision makers for recognition of customary territory and forest rights. He should spend time discussing with other stakeholders and developing partnerships or on how to get public support. He has the capacity to work with the local and national governments, though he realizes that he needs to temper his idealism and find it within himself to compromise on certain issues in the interests of achieving the greater goals of Paradisea and the RFN project.

### ***Monitoring, Evaluation and Learning***

Monitoring and evaluation does occur but is largely consultative and is not systematically structured. The project logframe is fairly rudimentary, as it does not clearly elucidate the projects goals or clearly demonstrate how different activities will contribute to the achievement of those goals, and over the years some activities have moved between different outputs. It also lacks clear output indicators or means of verification, making it difficult to use as a tool for tracking progress towards the achievement of the goals.

RFN staff such as Geir Erichscrud and Ramadani Torheim visit the office and the field sites several times a year and hold discussions with staff regarding the issues they have encountered. The Paradisea staff are given some suggestions to improve the financial management and the approach to project implementation. RFN advisor Oyvind Sandbukt reviews all reports and provides detailed feedback, and also visits the office for about 3 days every 3 months to conduct discussions, review progress and provide advice on the way forward. In many respects the flexible and consultative approach to monitoring, evaluation and learning is a positive thing, as it helps team members to feel that they are in partnership with RFN rather than being constantly monitored for progress, and because it allows for flexibility in program implementation. But there is probably a need for a balance between informal MEL and a more structured approach which allows the team to track their own progress towards goals.

In one instance a staff person went to the field for monitoring and spent money. The director found out there were in fact no activities implemented. Finally, the staff person admitted that the money was used for personal purposes and was fired.

Learning as part of monitoring and evaluation can be improved. For example nobody asked a question about why in Arfak corridor there is less conflict? A big meeting was not held but an agreement, not only outside the boundary but also inside boundary, can be reached? What lessons can we learn from each site? There is a need for internal staff to reflect on what works well and what does not work well. It would be good to have a MEL staff who can record progress and monitor the field on a regular basis as well as to document lessons learned (and unlearned) including smart practices. Paradisea should also consider developing participatory MEL methods to gain feedback from participating community members. For example they could use “photo voices” or ask participating community members to record brief statements or stories (on mobile phone video cameras) regarding the successes, challenges, hopes or concerns they have in relation to participation in the Paradisea program. These recordings could be viewed by staff and other project participants to gain a better understanding of what community members are thinking about the project and how it might be made more responsive to their aspirations and concerns. They could also be sorted and compiled to create audio-visual awareness raising materials to be played back to participating community members and audiences of other stakeholders.

### ***Issues from the staff***

Below are issues raised by the staff that are important to address:

- The log frame needs to be revised according to progress achieved and issues arising in each of the target areas;
- The product results/successes need to be distributed to a wider audience via email, printed media and social media
- Develop a schedule for informal meetings between managers and Paradisea board, bearing into mind they can contribute to strengthen Paradisea results.
- Better communication with local governments and NGOs
- Learning from local and national NGOs on their mapping results and share their follow ups
- Shared learning among staff at different working areas
- Revise TOR to a friendly use format
- A better delegation of tasks
- Better management for report and data
- Better management for Paradisea library for public and some books need to be returned
- Paradisea needs to differentiate amount of health assistance for single and married staff
- Capacity building to staff related to customary forest, income generating alternatives for communities and learning English
- Rotating staff or maybe staff can learn about the other areas of Paradisea work( staff from Arfak can go to other corridor areas and vice versa) and provide their opinions
- Cost for vehicle service needs to be taken into consideration
- Providing various experts which can improve quality of work.

### **Government and Civil Society Perceptions of Paradisea**

Stakeholder perceptions do matter and it is a useful way to measure the quality of their interactions and the effectiveness of their work. The overwhelming majority of the representatives of NGOs and IPOs interviewed expressed a highly positive attitude towards Paradisea and the work they are currently undertaking. Paradisea’s leadership was generally considered to be approachable and open to discussion and collaboration with other organizations, which apparently was not the case in the past.

According to NGOs, they hope Paradisea can continue to improve by communicating more clearly about their work and their project goals, and by openly sharing the maps and other data that they have produced.

The NGOs are aware that Paradisea works in Miyah, Kebar, Mubrani and Arfak, but they did not know the objectives of their work, or what lessons have been learned.

NGOs and IPOs were also highly appreciative regarding the leadership they have played on spatial planning issues and good environmental governance, as well as their advocacy on indigenous rights issues. Some NGO representatives expressed doubts as to whether Paradisea has the capacity to achieve the ambitious goals of securing indigenous rights to customary forests and establishing a million hectare national park, but this should probably be viewed as

Most of the government stakeholders interviewed also had a positive view of Paradisea, though many were also unclear about the details and goals of their projects. A few expressed that they felt that Paradisea's director was at times overly argumentative, uncompromising on matters relating to community participation in public policy making, and that Paradisea's advocacy on spatial planning issues was largely based on the percentage of forest protected rather than an informed analysis of the need to find a balance between the conservation of natural resources and ecological services and the need to open up remote areas for economic development and service delivery. This criticism may have some merit, and Paradisea should strive to strengthen their knowledge base and skills relating to analyzing the biodiversity and ecological services values associated with different types of ecosystems, and identifying reasonable trade-offs to accommodate the infrastructure, service delivery and economic development needs. On the other hand these criticisms also reflect the effectiveness of Paradisea's advocacy on spatial planning and the depth of conviction relating to indigenous rights issues and public participation in governance and environmental management.

For his part, Paradisea's director admitted that he finds it difficult to modulate his activist passions, although he realizes that the project's goals require him to build bridges with a wide range of stakeholders and be more compromising on issues of lesser concern and find it within himself to put aside whatever personal feelings he may harbor in the interests of realizing Paradisea's ambitious goals.

### **3.5 Sustainability**

Paradisea's work on participatory mapping and indigenous rights advocacy represents an important contribution to sustainable development and natural resource management in West Papua. As is the case in many other pluralistic nations, centralized management of nature reserves and natural resources in Indonesia has proved untenable, as the state lacks the wherewithal to manage reserves and enforce legislation, whereas the effective extinguishment of customary land and resource rights disincentivizes communities from managing their land and resources sustainably. As such the recognition and protection of customary rights is a vital pre-requisite, because indigenous communities can only be effectively engaged in sustainable natural resource management once they are aware of and feel confident that their rights to land, forests and other resources are properly safeguarded. It is critically important that people feel strongly confident that their rights are secured, and are not simply being given with one hand and then taken away with another, and to ensure that the restoration of rights is shared by all members of the communities, and does not translate into a situation where these rights are captured by tribal leaders and/or political elites, who are likely to sell access to land and resources for their personal gain and to the detriment of the broader community and future generations. Therefore Paradisea needs to continue their advocacy to ensure that regency and provincial level legislation includes measures to safeguard the communal and individual rights of all community members and prevent elite capture. They also need to ensure that all members of the affected communities, including women, youths, children and other marginalized people, are engaged in the process and made aware of their rights and to facilitate dialog

within communities to strengthen the level of accountability of customary leaders to the entire community.

Furthermore, securing customary tenure alone will not automatically result in sustainable natural resource management as the erosion of TEK systems and the breakdown of social structures, leadership and resource management systems as well as ecological change, including deforestation, infrastructure development and climate change, means that customary resource management systems may no longer be entirely adequate to ensure sustainable management in changing social-ecological and environmental circumstances. As such efforts are required to raise awareness regarding these processes of change and the important ecological and economic functions of forests and natural resources, and to facilitate communities to identify, revitalize and adapt TEK and customary management systems and to changing social-ecological and economic circumstances. Paradisea has built a strong foundation in terms of building relationships with communities and facilitating limited discussions, community meetings and customary congresses, through which they have commenced the process of awareness raising and dialog regarding indigenous rights and sustainable management of forests and resources based on customary systems. However, clearly much greater effort will be required over coming years to ensure that these initial discussions are translated into viable customary resource management systems that are adequately adapted to contemporary circumstances.

Additionally the burgeoning need for access to cash income creates a risk that land and natural resources may be rapidly depleted in order to meet short term economic needs. As such Paradisea's work on mixed cocoa and coffee agroforestry systems represents an important element of efforts to ensure sustainable economic development by providing economic alternatives to the sale of land or resources. These efforts need to be strengthened, so as to increase the economic benefits to communities, and diversified, so as to reduce dependency on one or a few commodities and reduce vulnerability to pests, market fluctuations or other potential shocks.

Paradisea's advocacy work in relation to spatial planning, the declaration of Tambrau as a conservation regency and West Papua as a conservation province, and the establishment of a million hectare national park are also important contributions to forest protection and ensuring the ongoing sustainability of ecosystem functions at the regional scale, including protecting watersheds, maintaining biodiversity and mitigating GHG emissions. These efforts require further strengthening including to ensure that the regency and provincial level governments are informed and convinced of the economic values associated with forests, natural resources and ecosystem services and make planning decisions which are informed by sound scientific analysis of the long-term social, economic and ecological costs, benefits and trade-offs. As such there is a need to strengthen Paradisea's internal capacity to conduct such analyses and to engage government agencies in informed dialog. Also the efforts to establish a national park covering the heart of the Bird's Head needs to be accompanied by very strong advocacy regarding the need to ensure that government are willing to recognize the pre-existing rights of indigenous communities and allow them to play a leading role in collaborative management of the park based on customary resource management systems.

Overall the RFN-Paradisea collaboration has significant potential to help ensure the protection of forest ecosystems and improve the livelihoods of current and future generations of people living in the project area and the broader society of the Bird's Head region, though much greater effort and further resources, including capacity building for the Paradisea team and strengthened engagement, dialog and alliance building within and between indigenous communities, and local, provincial and national level CSOs, IPOs and government agencies are required to translate their work to date into concrete long-term outcomes.

## 4. Conclusions and Recommendations

*The evaluators realize that the following suite of recommendations will be beyond the current capacity of RFN and Paradisea. However, they are presented herein as a suite of options which we recommend that RFN and Paradisea consider as part of their forward planning for the period 2017-2020, including which they can and/or need to implement themselves, and which they might propose to other organizations, such as local government agencies, UNIPA, other local NGOs, and international organizations such as UNDP and Conservation International Indonesia.*

### 4.1 The RFN - Paradisea Partnership

The RFN – Paradisea partnership is effective and mutually beneficial. RFN is assisting a local NGO to improve their capacity and that of West Papuan civil society more generally, as well as promoting good environmental governance and indigenous empowerment in one of the World’s hotspots of biological and cultural diversity. Paradisea is doing cutting edge work on indigenous empowerment and rainforest conservation, including helping some of Indonesia’s most marginalized people to face the challenges of modernity and globalization, and simultaneously helping to protect some of Indonesia’s most pristine and high conservation value forests. This represents a significant contribution to RFN’s organizational goals.

From its founding in 1998 through until 2012, Paradisea was only having a minimal impact working with a handful of birdwatching guides in the Mokwam Valley and conducting preliminary studies in the Kebar Valley. Through the financial, technical and motivational support provided by RFN since 2013, in combination with the passion and commitment of their own team, Paradisea has risen to the numerous challenge of implementing a highly ambitious project involving a high degree of cultural complexity in an ambiguous and rapidly evolving political climate. They’ve managed to scale up their impact and expand their focus area to cover much of the heart of the Bird’s Head Montane Ecoregion. In the process they have gained the respect of many government agencies, other NGOs and IPOs as well as academia.

The effectiveness of RFN support is based upon their flexibility, responsiveness and their willingness to minimize the administrative burden placed upon their partner. RFN representatives Ramadani Torheim and Geir Erichsrud visit Paradisea several times each year to review progress, discuss the findings of monitoring and evaluation activities and provide other technical and planning support. RFN have also hired a consultant, Oyvind Sandbukt, with a background in anthropology, who visits Paradisea for around 3 days every 3 months, review the reports, provides feedback and supports planning of further activities.

Feedback and recommendations from Paradisea staff regarding the support received from RFN include:

- The support received from RFN’s project consultant has been highly helpful. Considering that Paradisea is now managing 2 RFN funded projects, the visits should be extended to 5 days duration;
- RFN personnel should attempt to visit all field sites as regularly as possible and discuss their findings and ensure follow up;
- RFN can support linking the project products (coffee and cocoa) to international markets ;
- It is hoped that the workshop by RFN should not only located in the office
- The current office is in a strategic location and effort should be made to minimize the need to move office. If possible RFN’s support to secure a permanent office would help to considerably reduce operational costs in the long-term, improve their sustainability and more sustainable provide a stable

base for operations including a base for mentoring other civil society organizations and activists as well as potential income generating activities.

- RFN can provide information on scholarships and short courses to improve English or other skills
- RFN support is required to strengthen the capacity of staff and the organization, through training opportunities and opportunities to visit other successful NGOs in Java and other parts of Indonesia;
- Staff salaries are low and should be increased;
- Staff benefits including better health insurance and paid maternity leave should be funded;
- RFN should invite the Norwegian Royal Family, the Prime Minister and/or the Ambassador to visit the project areas to increase the profile of their work and support efforts to establish a national park in the Arfak and Tamberau.

## **4.2 Project Design – Relevance and Goals**

The project design is highly relevant to the needs of the target communities and the current development agenda in West Papua and Indonesia. However, there are some key weaknesses in the project design, particularly in relation to sustainable economic development and participatory planning for sustainable village development, as addressed in points 4.11 and 4.14 below.

The projects goals are highly ambitious. On one level this is a good thing, as the project mentality and need for safe / achievable goals has meant that few other organizations working in Papua or throughout Indonesia who are striving to realize the goal of the recognition of customary forests (*Hutan adat*). In fact to our knowledge there are currently no other organizations in West Papua who are pursuing either full recognition of customary forest rights, or expanding the network of conservation areas, whereas YALI is the only other organization we know of with such an ambitious program in Papua Province. As such the project design encourages the Paradisea team to strive to achieve what others are afraid to attempt.

On the other hand there is a strong possibility that at least some of the goals will not be achievable by the end of the project period in 2020. For example it may not be possible to achieve legal recognition of customary forests, as the MoEF has to date demonstrated a strong resistance to anything more than token recognition of customary forest rights. Similarly it may not be possible to achieve the goal of merging the Arfak Mountains, North Tamberau and South Tamberau SNRs and proposed connecting forest corridors into a million plus hectare national park in the heart of the Bird's Head highlands, as this will involve effective lobbying and consensus building with a large group of stakeholders whose interests may be difficult to align. Even the achievement of Paradisea's participatory mapping goals will require a very intensive level of activity over the next four years, and is likely to be affected by a wide range of possible speed humps, such as conflicts within communities, and difficulties involved in getting representatives of key regency level government agencies to engage with the process, as required by law, in order to legally verify customary territory maps.

However, we believe that the ambitious program goals should be maintained and even augmented with several additional goals, but with the understanding that Paradisea may not be able to achieve all of the projects goals by 2020 for a variety of reasons, which lie beyond reasonable expectations of their ability to control.

### 4.3 Project Design – Logframe

The project logframe is rudimentary, as it does not clearly elucidate the projects goals or clearly demonstrate how different activities will contribute to the achievement of those goals. It also lacks clear output indicators or means of verification, making it difficult to track progress towards the achievement of the goals. As such it reads more like a list of loosely linked activities rather than a standard logframe. Furthermore, as the project has progressed over the past 4 years the logframe has become convoluted with two new outputs added and a number of very similar activities switching from one output to another over time. This simple approach to program planning was probably appropriate at the outset of the project, when Paradisea’s experience and capacity to plan project activities was still quite limited, and when the small size of their team meant that it was relatively easy plan activities on the run. But now that Paradisea is reaching a higher level of organizational capacity and maturity we believe it is high time they were pushed to strengthen their capacity to develop more robust project plans and well laid out logframes. This will not only strengthen their program planning but will also increase their capacity to access funding from other donors with less flexible approaches to engagement with local NGOs.

RFN’s willingness to allow Paradisea to modify their approach and deviate from their annual workplans as opportunities and issues arise allows for innovation and responsiveness. This is highly important in the context of this project, where there are numerous cultural and political complexities and contingencies. As such the project logframe should continue to viewed as a planning tool rather than a binding contract laying out the activities which must be implemented.

As the current project has reached the mid-point it is a good time to overhaul the structure of the workplan / logframe including:

- The outputs should be redefined to more clearly convey the goals of the project;
- Stronger linkages should be made between the activities and how they will contribute to each of the project outputs and the overall goal;
- Objectively verifiable indicators and means of verification should be included to support more effective monitoring and evaluation;
- An additional column could be included to clarify why certain activities were not implemented as originally planned;
- Outputs 2 and 5 should be combined as they are essentially the same set of activities being implemented in different areas;
- Each major target area (the three original corridors and any additional areas outside the corridors which have been included in the project over the past year) should be allocated a clearer name to aid in understanding where different activities are to be implemented. This could also be supported by clearer maps depicting the different project work areas;
- Attention to the empowerment of and the mitigation of negative impacts on women, youth and marginalized community members should be strengthened, either through the inclusion of a separate output or as a cross-cutting theme incorporated into all outputs;
- Environmental awareness raising activities should also be incorporated either as separate output or as a cross-cutting theme incorporated into all outputs.

#### 4.4 Network and Alliance Building

In order to achieve the project's ambitious goals Paradisea will need to build effective alliances with a wide range of strategic partners, and at times play a behind the scenes role, allowing others to take credit for activities initiated and supported by Paradisea. Paradisea is already playing a leading role in the NGO Alliance for Spatial Planning in West Papua, and has collaborated directly or indirectly with a number of other local NGOs such as Mnukwar Productions, Bentara, Samdhana Institute and Aka Wuon in Tamberau Regency. Paradisea has also been collaborating with Jakarta-based indigenous rights advocacy organization HuMA (The Association for Community & Ecology-Based Law Reform), who are providing advice on the legal aspects of indigenous territorial and forest rights, and they recently signed an MoU with the UNIPA Centre for Biodiversity Studies, with whom they are collaborating on the development of a proposal for the creation of the proposed Arfak-Tamberau National Park. At the end of October 2016 Paradisea was also invited to join the Provincial Committee on Social Forestry Programs. However most of the representatives of NGO or provincial government agencies (including several members of Paradisea's own board of directors) that were consulted in the course of the evaluation had very limited knowledge of the details of Paradisea's work.

##### ***Paradisea needs to strengthen its network, particularly with strategic partners including:***

- **Paradisea Board of Directors** includes high level civil servants in the Provincial Forestry Service, the Agricultural and Plantations Service and the Provincial Agricultural Extensions Service, whereas the former director of Paradisea, Mr Peter Pelamonia expressed an interest in supporting the work of Paradisea and his extensive knowledge of cocoa and agroforestry systems could prove an asset in strengthening their work on agroforestry. These networks are currently under-utilized and Paradisea should seek to strengthen engagement with them to gain support for key activities and to support efforts to advocate for customary forest rights and the creation of a national park. Paradisea should plan to hold regular informal meetings, such as coffee mornings, approximately every three months, to strengthen networks with their directors, raise awareness about Paradisea's work and seek additional material and/or moral support;
- In order to achieve their goals of sustainable economic development, recognition of indigenous rights, improved environmental governance and the establishment of a national park Paradisea will need to build much more effective relationships with key ***Provincial government agencies and government agencies in Tamberau, Pegunungan Arfak, Manokwari and Manokwari Selatan Regencies*** including the forestry service, development planning agency, environmental protection agency, agriculture and plantations services, the lands agencies, the West Papuan Centre for Natural Resource Conservation, as well as the incoming governor and vice-governor (to be elected in February 2017), the Regency heads and their key legal and development policy advisors.
- Additionally Paradisea will need to build networks with ***key government agencies in Teluk Bintuni and Maybrat Regencies*** in order to gain their support for the proposed national park.
- Paradisea also needs to strengthen strategic relationships with ***key customary representative institutions*** including the Lembaga Adat West Papua, Dewan Adat Papua and Dewan Adat Daerah and the Papuan Peoples' Council (MRP), whilst also remaining mindful of the limitations and politics involved in each of these organizations;
- ***Conservation International Indonesia*** – CII has been working in West Papua for over a decade, with their current focus on marine conservation in the Raja Ampat Islands and along the Kaimana coast

as well as a blue carbon program in the Kaimana Mangroves. They are currently in the process of expanding their West Papua Program to include a marine program in Fakfak as well as a terrestrial program. The precise focus of their terrestrial program remains unclear, but is likely to include activities in the Arfak Mountains and possibly also the North Tamberau Mountains. Whilst local NGOs often find it problematic to engage with major international conservation NGOs we believe it is highly important to build a strong partnership with CII including in order to:

- Gain their support for the establishment of a national park, particularly for high level lobbying in Jakarta;
  - Influence the development of the Special Autonomy Regulations on the Conservation Province;
  - Gain their support for advocacy on improved spatial planning and good environmental governance;
  - Ensure that the approaches pursued by Paradisea and CII in the Arfak and Tamberau Mountains are complimentary rather than conflicting.
- **WWF** also has an office in Sorong and has been working on Spatial Planning, the Conservation Province and marine programs – engagement with WWF may also prove a useful part of the strategy for advocacy for the establishment of a national park and improved environmental governance;
  - **UNDP** is about to commence a program in Pegunungan Arfak Regency. UNDP is the leading multi-lateral organization working on indigenous rights and empowerment including assistance to the government of Papua to facilitate development Adat Justice systems and strengthening Adat councils and training and support for indigenous Papuan women entrepreneurs and national level activities including a regional consultation on indigenous women’s access to land and resources and support for the recent national inquiry into indigenous people’s rights to forest land, including a special study on the situation of indigenous women. Collaboration with UNDP is highly likely to support achievement of the projects goals.
  - Reporters and other representatives of local **print and electronic media organizations** (Radio, newspapers and local television networks – see more below);
  - **Religious organizations**, particularly the Catholic Churches Sekretariat for Justice and Peace (SKP) and key representatives of the GPKAI church in the Arfak Mountains.

#### 4.5 Communications and Public Outreach Strategy

Very few of the stakeholders consulted had a clear idea of the work Paradisea doing, particularly their goal of establishing a national park. Paradisea was able to show 14 newspaper articles relating to their work, predominantly from a single provincial newspaper (Media Papua) and mostly centred around the issue of the spatial plan in February-March 2014, but also several on forest conservation and customary territorial rights from 2016. Paradisea also has a Facebook page, but this is not updated regularly and has little information about their work or key issues. Paradisea needs to develop a clear communications strategy to improve awareness about their work and the key issues and maximize the pressure they can exert on public policy makers. This should include:

- A stakeholder analysis should be implemented to identify key stakeholders from the Provincial Level government and each of the Regency level government (Primarily Tamberau, Pegunungan Arfak, and Manokwari, but also Manokwari Selatan, Teluk Bintuni, Maybrat) and determine which agencies and

individuals Paradisea needs to engage with and what kind of awareness materials are needed in order to achieve its project goals;

- Development of clear messages regarding project activities and goals to be conveyed to government officials, other civil society organizations and participating communities;
- Identify potential partners including other civil society organizations, government agencies and journalists / media representatives and who can assist with communications campaigns through joint funding and/or technical expertise;
- The wives of decision makers can be invited through Family Welfare Groups (PKK) to visit field sites to understand the social situation and why forests are important for sustainable livelihoods, which they can then convey to their husbands;
- Strengthen use of mass media, particularly radio, which has the greatest outreach to rural communities, and print media, which has good outreach in urban areas, but also local television and possibly poster / billboard campaigns;
- Build a network of environmentally concerned journalists, including field visits to project sites and regular meetings / coffee morning to update journalists on key issues and developments;
- Development of appropriate communications media such as posters, comic books, audio-visual materials, etc.
- Strengthen use of social media including the Paradisea Facebook page, website and encouraging staff to post more relevant information and links on their own facebook pages;
- Encourage staff and partners to write opinion pieces and blogs on relevant issues;
- Text message blasts may also be a useful means of conveying information to a large number of people;
- Recruit a communications and awareness raising specialist, or assign an existing staff member to manage communications and awareness raising campaigns;
- Improve documentation of media coverage, including monitoring of all local newspapers and compilation of all relevant articles including sources and dates.

#### **4.6 Communications Media and Methods**

Paradisea in collaboration with M nukwar Productions has also developed two documentary films, as well as video documentation of some of their other activities, which explore some aspects of the Arfak and Tambrau cultures and customary natural resource management systems. According to Paradisea personnel these have been reasonably effective tools for generating dialog and raising awareness amongst participating communities. However, the evaluators believe that much greater use of audio-visual materials for promoting dialog and awareness raising, including the use of AV materials developed in other parts of Papua (such as Mama Malind su hilang, Di belakang taman Eden and many others) and other regions of Indonesia, Papua New Guinea (such as the Joe Leahy's Neighbours / Black Harvest series of films on development and social conflict) and Vanuatu (such as the films produced by the Wan Smolbag theatre company on a range of social and environmental issues). These types of AV materials also have the potential to draw a much larger audience, including women, youths and children, into discussions about conservation, development and social change issues than is usually the case in less entertaining village meetings. The evaluators have provided copies of a number of relevant audio-visual materials including those outlined above (most with Indonesian sub-titles), and recommends that Paradisea develop discussion notes and trial the use of these media for promoting dialog.

Paradisea should also consider trialling the use of participatory media development approaches, such as 'Photo Voices' or 'Self-directed video documentary' approaches, whereby communities are empowered to develop their own communications materials and in the process reflect upon matters of concern to them. Mnuikwar productions has experience with these methodologies and could be contracted to assist with developing them as adjuncts to Paradisea's program. RFN and Paradisea should also consider providing training for staff interested in developing their skills in participatory audio-visual documentary making techniques, either with Mnuikwar Productions, the Centre for Community Development's Studio Audio-Visual (SAV-PUSKAT) in Yogyakarta or other similar institutions.

#### **4.7 Study tours**

Most Arfak and Tamberau people have extremely limited knowledge of the World beyond the cities of Manokwari and Sorong and as such their ideas regarding the emerging threats to their livelihoods and well-being as well as the options available for meeting and overcoming these challenges are very limited. Well planned study tours can be effective means for promoting cross-learning and knowledge transfer, as well as building networks between participants and host. This impact is maximized if the study tour participants are mixed groups of men and women from village communities and local government agencies. They also provide a much greater degree of motivation for participants than most other training approaches, and an incentive to community members to implement their knowledge and skills in the hope that they will be selected to participate in future study tours.

The study tours to Jambi Province in Sumatera, Ransiki in Manokwari Selatan Regency, and Yapen Island in Papua Province appear to have been amongst the most impactful activities undertaken as part of the RFN – Paradisea collaboration to date. Unfortunately only men participated in these study tours, and in future Paradisea should make every effort to ensure that at least 50% of study tour participants are women.

***RFN and Paradisea should conduct at least one study tours to other parts of Papua, and possibly other provinces, during each of the remaining 4 years of project implementation.***

Maximizing the benefits from study tours is highly dependent on good planning, including selection of the right participants, pre- and post-study tour briefings or discussions, and if possible pre-study tour visits to talk with representatives of organizations to be visited to determine what key topics should be covered. Participants in these study tours should include both men and women from a range of communities, regency level government officials from Manokwari, Pegunungan Arfak and Tamberau Regencies, and a video documentary team, to document the experience for later viewing by other community members and government officials. Following each study tour a workshop should be held to assist participants to develop plans regarding how to apply their knowledge back in their own communities, and the documentary video should also be aired for other government officials, community members, and if possible on local television.

Recommended destinations and possible activities which could be undertaken as part of these study tours might include:

- **Jayapura and Jayawijaya Regencies in Papua Province**
  - Meet with the Bupati of Jayapura to learn about his program of participatory village mapping and the establishment of Customary (Adat) Villages;
  - Agroforestry demonstration sites and/or the Cocoa training center near Jayapura;

- WWF field sites in Genyem – to look at cocoa production and direct exporting to Switzerland;
  - Ecotourism / birdwatching enterprise in Genyem, Jayapura;
  - Meetings with local NGOs in Jayapura;
  - Meetings with the provincial and regency level forestry services in Jayapura;
  - Meeting with the Deputy Governor of Papua Province;
  - Meeting with women’s development organizations / small enterprises;
  - Meet with Yayasan Bina Adat Welesi to learn about their successful participatory mapping, micro-savings and coffee production programs in Jayawijaya;
  - Visit Wosilimo Village to learn about their tourism enterprise, including tourist cave and the annual Baliem Valley Festival;
  - Visit the Wolo Valley to learn about their experiences in coffee, citrus, vegetables and other crops;
  - Learn about Dani crop rotation systems, particularly the use of Casuarina and Miracle Trees as soil fertilizing trees;
  - Meet with other indigenous peoples, civil society and church-based organizations working on indigenous empowerment, sustainable development and natural resource management;
  - Collect plant propagules for trailing in the Arfak and Tamberau Mountains.
- **Mimika – Merauke – Boven Digul Study Tour**
    - Meet with the Amungme Customary Representative Institute (LEMASA) and Amungme communities to learn about participatory mapping and community-based forest management activities in the Mimika highlands;
    - Meet with the Kamoro Customary Representative Institute (LEMASKO) and Kamoro communities to learn about participatory mapping and community-based forest management activities in the Mimika lowlands;
    - Meet with Kamoro communities affected by tailings from the Freeport mine to learn about the social and environmental issues they face;
    - Meet with members of the USAID-LESTARI Program and their partners Blue Forest (Mangrove Action Program), WWF and local NGOs to learn about their work on participatory mapping and community-based forest management;
    - Meet with representatives of the Lorentz National Park (Mimika) Management Authority in Mimika to learn about the benefits, drawbacks and challenges involved in management of the park;
    - Meet with representatives of local RFN partner Silva Papua Lestari to learn about their work on participatory mapping, indigenous empowerment and rights advocacy;
    - Meet with representatives of the Wasur National Park Management Authority in Merauke to learn about the benefits, drawbacks and challenges involved in management of the park;
    - Meet with local Malind communities in Merauke to learn about the threats to their livelihoods from the MIFEE project and how they are coping;
    - Meet with local NGOs working on indigenous rights issues in Merauke;
    - Meet with Muyu and Mandobo communities in Boven Digul Regency to learn about the development issues they are facing;
    - Meet with other government officials and civil society organizations – to be identified.

- **Nabire and Paniai**
  - Meet with communities in Nabire to learn about cocoa growing;
  - Meet with local community members to learn about the negative effect of artisanal mining in the Topo area in Nabire;
  - Meet with communities in Monomani (Paniai) to learn about coffee growing;
  - Meet with indigenous ecotourism entrepreneur Maximus Tipagau to learn about his Carstenz trekking ecotourism enterprise;
  - Meet with various government officials and NGOs – to be identified;
  - Other activities to be identified.
- **Sorong, South Sorong and Raja Ampat**
  - Visit customary communities in South Sorong where Samdhana Institute and others have been working on participatory mapping and community-based forest management;
  - Meet with birdwatching guides and other ecotourism entrepreneurs;
  - Meet with representative of the Raja Ampat Homestay association;
  - Meet with representatives of the Regency government, fisheries and marine service and the Public services authority to learn about the co-management and benefit sharing from tourism activities in Raja Ampat;
  - Meet with various government officials and NGOs – to be identified;
  - Other activities to be identified.

Whilst study tours to other parts of Papua and West Papua are probably the most effective and affordable, as these areas can largely be reached by public passenger ferries and land transport, and because the cultural, political and environmental conditions are similar to those found in Arfak and Tambrau, other similar study tours could be organized to areas such as:

- Alor in NTT (to look at ecotourism and sustainable development);
- Kalimantan or Sumatra (to look at deforestation, forest management and indigenous empowerment programs)

Local study tours / exchange visits, for community members and government officials to visit other project target areas in the Arfak – Tambrau area may also be an effective strategy for encouraging knowledge transfer and network building between local communities, and may help to defray the potential for jealousy amongst community members who do not get the opportunity to participate in inter-regional study tours.

#### **4.8 Staff Development / Capacity Building**

Most of Paradisea's team is relatively young, inexperienced and only have limited skills. On the other hand they are highly enthusiastic and keen to learn, and it is also highly positive from the perspective of civil society regeneration. However a significant investment in staff capacity building is required to enable Paradisea to achieve their project goals. This should include:

- Annual staff performance and job satisfaction reviews including the identification of capacity building needs and development of personal development plans;
- Staff exchanges or internships with other organizations working on participatory mapping, indigenous empowerment, collaborative forest management programs and spatial planning advocacy and monitoring, such as:

- YALI Foundation (RFN partner organization working in the Mamberamo-Foja region in northern Papua), particularly to learn collaborative land-use planning methods;
- Silva Lestari Papua (RFN partner organization working in Merauke, Boven Digul, Mappi, Asmat and Yahukimo Regencies in south-eastern Papua)
- KKI WARSI and/or other RFN partner organizations working in Sumatera, Kalimantan and Sulawesi;
- Indigenous rights and environmental law NGOs in Jakarta – such as HuMA, to learn about policy analysis, legal drafting, etc.
- INSIST Network (Yogyakarta)
- Opportunities to attend relevant training courses, workshops or seminars in other parts of Indonesia or internationally;
- Recruit skilled consultants who can help Paradisea implement specific programs whilst transferring their technical skills directly to Paradisea staff
  - Cocoa / Agroforestry Farmer Field School master trainers (suitable consultants can be identified on request);
  - Ecotourism development consultants;
  - Micro-savings and small enterprise development specialists;
  - Anthropology / sociology / gender experts;
  - GIS, spatial planning and strategic environmental assessment experts.

#### **4.9 Staff Wages and Benefits**

The wages and benefits for Paradisea staff are comparatively low and there is a high risk of staff leaving to join other organizations. RFN/Paradisea need to consider improving wages and benefits to ensure retention of staff and minimize loss of knowledge and skills and recruitment and training costs.

#### **4.10 Organizational Capacity Building and Strategic Planning**

In order to ensure the long-term sustainability of RFN's investment in Paradisea organizational capacity development is required, including developing a long term strategy regarding organizational development, possibly including fund raising programs and the development of a commercial arm / consulting branch, which can help reduce dependence on donor funding in the future. To this end RFN and/or Paradisea should consider study tours for Paradisea Management and staff to learn from other civil society organizations that have developed mixed not-for-profit and commercial models. This might include:

- Bina Swadaya (Jakarta) and Dian Desa (Yogyakarta)
- INSIST Network (Yogyakarta) – to learn about their participatory mapping, participatory planning and community organizing approaches and their consulting arm REMDEC;
- Yayasan Inovasi Pemerintahan Daerah (YIPD) / Bogor Agricultural Institute (IPB) – Dr. Budi Prihanto – to learn about Spatial Planning and Strategic Environmental Assessment
- Others to be identified.

Based on lessons learned from other organizations Paradisea should consider developing a forward looking or strategic plan for organization development over the next 10 years.

#### 4.11 Sustainable Economic Development

Whilst program participants reported that they were happy with Paradisea's work on participatory mapping, clearly the generation of cash income is one of the greatest needs of Arfak and Tamberau communities, and needs to be a central element of the program, both in terms of winning hearts and minds, as well as providing economic alternatives to the sale or rental of land and forest resources to outsiders, and/or over dependence on government handouts (such as the special autonomy fund and village fund), which may not be sustainable in the long term.

The work Paradisea has done to date on cocoa and coffee cultivation has had a positive impact on a small number of farmers in several communities, and has resulted in the development of locally appropriate mixed agroforestry systems, and there is potential for these farmers to promote cocoa and coffee cultivation to other farmers over time. However, cocoa remains vulnerable to the cocoa pod borer pest, whereas coffee is vulnerable to market price fluctuations. So there is a risk that the gains made in this area could be undone. In fact one of the farmers from Arfu village in Mubrani who adopted cocoa cultivation as a result of Paradisea's activities reported whilst he had been satisfied with his initial harvests, his cocoa gardens had been wiped out by fire during the el Nino 2015 drought, and that consequently he was weighing up whether or not to re-establish his cocoa gardens.

As such there is clearly a need to increase the economic impacts of the program and to diversify the range of crops produced and other sources of income. Moreover, the new capital of Tamberau Regency is currently being constructed near Fef Village and is likely to be officially opened in late 2017 or early 2018. This will create threats of social and economic marginalization for local Miyah communities, but will also create market opportunities for various agricultural and other commodities. The communities living in the Miyah, Kebar and Mubrani areas are well located to take advantage of these opportunities and support should be provided to assist them to increase production of suitable commodities.

It is strongly recommended that ***Output 1 of the project log-frame be changed to "strengthen community income generation through sustainable enterprises based upon the interests, needs and potential of participating communities."***

This should build upon the outcomes of work to date, including a strong emphasis on multi-species agroforestry systems including cocoa and coffee, but should also include other income generating and management activities and small enterprise development activities including:

- Agroforestry (see below)
- Horticulture – increasing production of vegetables, garlic, chives, pineapples etc. (These are the main crops which can be grown in the high altitude areas of Pegunungan Arfak Regency);
- Ecotourism (see more below);
- Trial the use of casuarina, miracle tree (*Paraserianthes falcataria*), Casuarina and other soil improving plants to reduce fallow cycles (these species are used as part of agroforestry systems in Jayawijaya, Papua Province and may be useful in the Arfak-Tamberau area as well);
- Non-timber forest products – Agarwood (Gaharau), Lawang (Cinnamomum culilwan) and other essential oil producing trees, and other to be identified.
- Training and support for families on management of their household economy and small business development.

- The ILO Get Ahead Training Material have been successfully applied by ILO and UNDP in other parts of Papua, and Paradisea could look at working with UNDP to deliver such training in their target areas.
- In 2004-2006 the Trickle-up West Papua micro-savings program was quite successful amongst highland communities in Jayawijaya Regency, but not as successful amongst Arfak communities. This program should be revisited to see what factors led to the success and failure of the program in different areas.
- Post-harvest processing and packaging, such as fermentation of cocoa beans, processing of coffee beans, production of sweets from nutmeg fruits and other fruits and nuts, etc.
- Market linkages, such as supplying local grown coffee to hotels and cafés run by the Bentara Foundation in Manokwari
- Subsidized market access, such as encouraging the government to provide regular bus and/or truck services to help communities get their products to markets;
- Traditional handicrafts, such as string bags, and products / souvenirs from coconut shells, timber waste, etc. for direct sale to visitors and through hotels and airports.

#### 4.12 Agricultural and Agroforestry Development and Farmer Field Schools

Paradisea should strengthen their support for local farmers to continue developing multi-species agroforestry systems, including but not limited to cocoa and coffee. This should include Nutmeg, and a wide range of other fruit and nut trees and other useful species. A list of potential agroforestry species for Manokwari included as an annexe 11).

The recruitment of a skilled Farmer Field School (FFS) master trainer is highly recommended to train Paradisea personnel, community facilitators (male and female) and interested government extension workers in Farmer Field School approaches to participatory farmer training and empowerment including agro-forestry, improved highland vegetable production, agro-ecological analysis, farmer led research, integrated pest management (particularly for the cocoa pod borer pest) and post-harvest processing techniques. Paradisea has been employing Agus Tarami as their main cocoa trainer. Mr Tarami is probably the most skilled cocoa-agroforestry FFS trainer in West Papua, but as he lives in Ransiki and is employed full-time by the Manokwari Selatan agriculture service the amount of time he commit to supporting Paradisea's activities is limited, whereas Paradisea supported farmers require more intensive support. As such Paradisea should consider contracting other skilled FFS facilitators currently living in Ransiki to provide more intensive extension assistance to farmers, under the guidance of Mr. Tarami, such as:

- **Mrs. Silva Matani** – A skilled cocoa FFS trainer who actually originates from the Mubrani area should be contracted to support cocoa-agroforestry farmers in the Mubrani-Kebar and Miyah areas, whilst also working on gender empowerment, household income management and small-enterprise development;
- **Mr. Abdul Rahim** – Who is a skilled FFS trainer with extensive experience working with Papuan farmers, including Arfak highlanders, and a strong background in cocoa, coffee and vegetable production. Mr. Rahim might be contracted to assist farmers in the Arfak Mountains with coffee and vegetable production and processing skills.

Specific cultural techniques which Paradisea should consider promoting through FFS approaches to assist cocoa farmers with integrated management of the CPB pest include:

- Propagation from old Dutch cocoa varieties which display a higher degree of resistance to CPB due to the thickness of their husks (a few trees of these varieties can still be found in Ransiki and Oransbari);
- Planting cocoa in smaller blocks which are spatially separated to minimize the risk of CPB spreading rapidly between cocoa gardens;
- Promoting balanced agro-ecosystems through the development of multi-species agroforestry systems, including the planting of trees which attract ants (the key natural predator of CPB) such as soursop (*Annona muricata*) and Sweetsop (*Annona squamosa*), kedondong cocok / ambarella (*Spondias dulcis*), horseradish tree (*Moringa oleifera*), sapodilla (*Manilkara zapota*) and others;
- Discouraging the use of pesticides in cocoa gardens, as it disturbs the agro-ecosystem and in the long-term pesticide use favours populations of short life cycle organisms such as CPB over longer life-cycle organisms including ants, spiders and other natural predators of CPB;
- Good cultural techniques including early and frequent harvesting, pruning and shade management, organic fertilizers and cleaning gardens to remove leaf litter (where CPB make their cocoons, and cocoa pod husks (which can harbour CPB larvae);
- Spraying the leaves and fruits of cocoa trees with seaweed and/or fish emulsion, both as a means of fertilizing trees and attracting large numbers of ants (the most effective natural predators of CPB) into cocoa trees.

#### **4.13 Ecotourism Development**

Paradisea's support for ecotourism development over many years has had a significant, albeit localized impact both in terms of generating income for local communities and developing their environmental awareness and concern for conservation of natural resources. Support for ecotourism development was an element of the project in 2013 but was dropped from subsequent annual work plans, though Paradisea continues to provide a low level of support for ecotourism entrepreneurs in the Mokwam Valley.

Whilst the economic impact of ecotourism is likely to be limited to a small number of communities, it can have a locally significant impact on livelihoods and concern for sustainable forest management, whereas the success of ecotourism in Raja Ampat has generated interest in ecotourism amongst provincial and regency level governments. This could be leveraged to generate funding support for ecotourism development as well as to support advocacy for the establishment of the proposed national park. As such, over the coming 4 years Paradisea should also explore options for promoting ecotourism and building the capacity of local ecotourism operators including:

- Survey and needs assessment to update data on existing and potential ecotourism operations in the Arfak and Tambrauw areas and identify their needs for capacity building and training, material support, promotional support needs, etc.;
- Build a strategic alliances with Mr Charles Roring and other ecotourism entrepreneurs working in the Bird's Head region, and consider providing technical and financial support for local ecotourism guides in the Arfak and Tambrauw mountains;
- Organize a workshop to present the results of the ecotourism needs assessment and seek support for from various government agencies and CSOs to help implement various ecotourism development activities;
- Lobby for streamlining of travel permits (so that tourists do not have to travel long distances out of their way to report to police stations and to minimize the leakage of potential ecotourism profits to facilitation payments for organizing travel permits);

- Strengthen existing ecotourism activities in the Mokwam Valley, Kebar Valley, Siakwa, Fef, Warmawai, Mupi Gunung and other locations in and around the Arfak and Tamberau, including:
  - Provide cooking training for local women to provide a more varied menu for guests;
  - Assist ecotourism guides to design and raise funds for traditional style *Kaki Seribu* guest house, raised in the forest canopy and with open fires, which would provide a unique tourism experience;
  - Assist Yunus Sayori in Warmawai to relocate his guest house, which is currently threatened by landslides due to road widening. This could be implemented as a volunteer activity promoted through social media;
  - Provide other training and development opportunities for local ecotourism guides and support staff as identified through the needs assessment
  - Create opportunities for indigenous ecotourism guides and other community members (especially women and children) to present at the International Conference on Biodiversity, Ecotourism and the Creative Economy to be held in Manokwari in 2017 (see below);
- Organize a study tour for ecotourism guides / entrepreneurs to visit successful birdwatching and other ecotourism operations and homestays in the Raja Ampat Islands and meet with representatives of the Raja Ampat homestay association;
- Promote / support the establishment of an Association of West Papuan Ecotourism Guides / Entrepreneurs;
- Provide assistance with promotions, and/or encourage the Tourism Service to play this role;
- Promote ecotourism entrepreneurs to work with local communities on the development of new ecotourism activities, such as
  - White water rafting on the Kamundan River in the Kebar – Miyah – Maybrat area;
  - Caving in the Lina and Longmot Mountains near the south-east of the South Tamberau SNR;
  - Marine turtle watching in the Mubrani-Kaironi, Jamursba-Meidi and Wermon Turtle Beaches;
  - Establishment of new butterfly gardens, particularly around existing ecotourism guest houses.

**Promoting Customary Forest Rights and the establishment of the Arfak-Tamberau National Park through the International Conference on Biodiversity, Ecotourism and the Creative Economy (ICBE)**

Whilst the direct economic benefits of ecotourism remain fairly modest, it over recent years it has become a hot topic with increasing political impact in West Papua and Papua, in part due to the success of ecotourism ventures in Raja Ampat. In 2016 the 1<sup>st</sup> International Conference on Biodiversity, Ecotourism and the Creative Economy (ICBE) was held in Jayapura with support from the Governors Trust Fund for Climate Change. In 2018 the 2<sup>nd</sup> ICBE is planned to be held in Manokwari. As this also coincides with the declaration of West Papua as a ‘Conservation Province’ as well as the elections of a new governor, Paradisea should use this opportunity to promote ecotourism, nature conservation, indigenous rights and the establishment of the Arfak-Tamberau National Park. This could include:

- Supporting the ICBE by joining the organizing committee;
- Assisting local ecotourism guides, as well as women and children to present at the conference on the positive impacts that ecotourism has had on indigenous communities;
- Making a presentation (either by Paradisea personnel, customary community leaders and/or local government representatives) on the participatory mapping and customary forests program and the establishment of the Arfak-Tamberau National Park;
- Arranging post-conference visits to ecotourism activities in the Arfak and Tamberau Mountains;

- Working with other local CSOs, government and entrepreneurs to have 2017 declared the Year of West Papuan Nature Conservation and Ecotourism;
- Arranging other events including press conferences, competitions (drawings, essays, photo voices, self-directed videos, etc.), cultural activities, etc. to be held before, during or after the conference.

#### **4.14 Participatory Planning for Sustainable Village Development**

The 2014 Village law creates opportunities for community empowerment, but the current utilization of the village funds (Dana Kampung) in West Papua is very weak and is arguably even dis-empowering communities and creating ever greater dependency of government handouts in cash or kind. Paradisea's existing relationships with communities in Pegunungan Arfak, Tambrauw and Manokwari Regencies, and the participatory processes they have already established through their work on participatory mapping means they are well placed to assist the government and communities with maximizing the benefits that could be achieved through this program, by working with community leaders and recruiting and training village facilitators to strengthen participatory planning and the implementation of village development and empowerment programs. At the same time they could support their own goals by promoting sustainable economic development approaches, such as agroforestry, ecotourism, micro-enterprise development and sustainable utilization of natural resources, as well as improved delivery of education and health services. This would support the development of sustainable village development and forest management plans. RFN and Paradisea should consider augmenting their existing program with a sustainable village development program, which could involve:

- Recruiting, training and mentoring male and female community members as village sustainable development facilitators to support improve participatory planning and implementation of
- Work with village administrative, customary women and youth leaders and councils to improve the demand for participation and accountability in the use of village development funds
- Explore whether or not the designation of Customary (Adat) Village allowed for under the 2014 Village law will provide any real benefits to Arfak and Tambrauw communities, and if deemed appropriate work with the government and communities to advocate for the designation of adat villages;
- Conduct study tours to learn from the experience of regencies and villages where participatory planning processes and the designation of customary (adat) villages has already been effectively implemented, such as Jayapura Regency in West Papua Province.
- Collaborate with other organizations to improve the health and education of the communities, which may be an entry point for some villages.

#### **4.15 Participatory Mapping – Community Perspectives and Engagement Processes**

In some regions, Paradisea has built good relationships and are trusted, but in some areas people are still confused and suspicious regarding Paradisea's intentions. Awareness raising related to the objectives of the project need to be ongoing activities and involve various groups in the communities, not only the elites or the head of clans. At the moment there are many actors in the field so a stakeholder analysis need to be done.

Mapping is also interesting to understand how children perceive their environment. Mapping can be used to improve how a community manages their resources, where children play and understand the role of nature. In Syakwa, many children have their hunting areas, they know the names of the different fruits

and trees. Thus, a map of the traditional boundaries could also reflect how community manage their natural environment and include the important areas for women and children.

Paradisea needs to ensure that community members have access to the maps they have developed to date, and should work towards producing more detailed maps, which can be printed in large format and displayed in central locations in the villages to promote a greater sense of ownership and as a constant reminder of the importance of protecting their customary territory and forests. Perhaps the most effective location for displaying maps is near the entrance of churches, as this would strengthen cognitive connections between the idea of conserving customary lands and forests and religious values, as well as serving to protect them from potential vandalism.

#### **4.16 Gender, Youth and Management of Social Change**

The project needs to pay greater attention to the engagement and empowerment of indigenous women, both in terms of sustainable economic development (most of Paradisea's cocoa and coffee development activities inadvertently focus on men), and to ensure their customary rights to land and resources are not downgraded as a result of the process of mapping, documenting and legally formalizing customary land and resource tenure systems. As discussed in the introductory section of the Arfak and Tamberau people appear to be undergoing a process of transition from a highly egalitarian small band or tribal society with many matrilineal and matriarchal elements still in evidence in some areas, towards more hierarchal and patriarchal societies. The mapping of customary territories and formalization of hitherto largely nebulous social institutions is likely to fuel this process of social change and could well contribute to the marginalization of women. There is also a need to ensure that the formalization of customary rights to land, forests and resources does not result in the empowerment of clan leaders to dispose of clan land and resources at the expense of other clan members or other community members or groups who have customary user rights (usufructory rights or *hak pakai*) but not formal ownership rights.

Similarly there is a need to strengthen youth engagement so as to mitigate the potential for intergenerational conflict, migration of indigenous youths to urban centers and the erosion of traditional ecological knowledge. Furthermore, through strengthened engagement with indigenous youths Paradisea could instill concern for sustainable environmental management in future generations of customary leaders.

As such RFN and Paradisea should consider engaging a suitable consultant to conduct more in-depth analysis of processes of social change currently occurring and likely to occur in the foreseeable future, identify opportunities for strengthening engagement with women, youth and marginalized community members, and develop strategies to help individuals and communities to adapt to such processes of change and mitigate undesirable outcomes.

#### **4.17 Participatory Mapping, Indigenous Rights and Forest Management Innovation Forum**

Whilst Paradisea's work on participatory mapping, and particularly the fact that they have largely learned how to do participatory mapping in the process of implementing the project, is on some levels very impressive, there are still some major deficiencies in their work. In particular they still need to develop far more detailed maps as the basis for developing plans for the sustainable utilization and management of customary forests and natural resources.

RFN and Paradisea should consider collaborating with Samdhana Institute, JKPP, AMAN, HuMA or other like-minded organizations to conduct a Participatory Mapping, Indigenous Rights and Forest Management

Innovation Forum in Manokwari. Various organizations from West Papua, Papua and other parts of Indonesia who have conducted participatory mapping activities or worked on other aspects of indigenous rights and forest management could be invited to present their work and lessons learned including success and failures. Paradisea can learn various approaches to mapping and improve mapping activities accordingly. This activity would be in response to some NGOs statements that ..... ?????

Invitees should also include representatives of relevant government agencies and other key stakeholders, and should also include a radio or television talk show to convey issues relating to indigenous rights, sustainable development and forest management to a broader audience.

This would provide Paradisea and other organizations an opportunity to showcase their work and promote their goals to local government, whilst also providing opportunities for knowledge exchange and innovation.

#### **4.18 Documentation of Cultural and Social-Ecological Aspects**

Paradisea's has contributed to the documentation of customary land tenure and natural resource management systems as well as other aspects of indigenous Arfak and Tamberau cultures including in the customary forest proposals developed in mid-2016. However, the identification and analysis of socio-cultural aspects remains relatively superficial and generalized. On the other hand, discussions with several Paradisea personnel indicated that they have developed a reasonably deep understanding of the complexities of the Arfak and Tamberau cultures, but have not as yet been able to convey this depth of knowledge through written reports or documentaries. It is also important to note that none of Paradisea's staff have any formal training in anthropology or sociology, so it is recommended that opportunities to build their knowledge and skills in these areas be a priority, either through participating in training courses and/or workshops, or through recruiting consultants who can assist with the documentation of socio-cultural aspects whilst transferring their skills to Paradisea personnel.

In particular the evaluators recommend that Paradisea consult with the Yogyakarta based INSIST Foundation to learn from their work on participatory mapping and community organizing, and in particular with INSIST associate Paskalis Laksono (who is also a lecturer in anthropology at the Gadjah Mada University), who coordinated a research project on the customary natural resource management systems of the Arfak people in 2000-2001 and amongst communities in Bintuni Bay in 1999-2000.

#### **4.19 Advocacy for Territorial and Forest Rights**

RFN and Paradisea's current approach does not seem to be consistent with the existing legal framework and guidelines relating to the recognition and designation of customary territories and customary forests. Whilst there is a degree of inconsistency between the various regulations and guidelines and the regulatory framework is still evolving, our interpretation of MoEF Regulation No. 32 (2015) regarding forest rights and Minister of Lands and Spatial Planning Regulation No. 10 (2016) is that the current process for recognition of customary forests will require fulfilment of the following steps:

1. Mapping of Customary Land Boundaries and documentation of Social-Cultural Aspects and preparation of a proposal for recognition of customary territory rights
2. Verification of customary territorial claim by the Regency or Provincial Land Ownership and Use Inventory Team (IP4T)
3. Regent of Governors Decree (SK) recognizing the customary territory

4. Registration with the Local office of the National Lands Agency
5. Preparation of Customary Forest Management Plan, including:
  - Detailed map and land-Use / zonation Plan;
  - Sustainable utilization plan;
  - Information on customary regulations and sanctions;
  - Information on the customary management body including roles and responsibilities;
  - Monitoring plan;
6. Review & Approval by the Regency or Provincial Level Social Forestry Committee;
7. Review & Approval by the Minister of Forestry.

As such we believe that RFN and Paradisea need to review their strategy to focus first on achieving recognition and designation of their territorial rights through local decrees and/or regulations, before developing customary forest management plans as one of the requirements for having customary forest rights recognized by the ministry of forestry. Even if the ministry of forestry does not support the recognition of customary forest rights, or is only willing to recognize a small percentage of their forest areas as customary forests, then the legal recognition of their territorial rights may be used as the basis for further action in the constitutional court. For example the case of Amatoa Kajang customary community in Bulukumba, South Sulawesi, who are the first customary community in Indonesia to achieve recognition of rights to customary forests, the regency level regulation for did not talk directly about customary forest rights, but rather on **rights to land, areas and natural resources which forests are one of the rights that is protected by the local regulation.**

It is recommended to consult further with HuMA and other organizations who have greater knowledge of the legal requirements relating to the recognition of customary territorial and forest rights to obtain further advice and input towards realigning Paradisea's strategy.

#### **Local Regulations on Customary Forests**

In order to strengthen the commitment of local governments and advance their goal of securing customary forest rights for indigenous Arfak and Tambrau communities, Paradisea should conduct a seminar to discuss the proposed regulations on the recognition of customary territories and forests which could bring together all of the key government and civil society stakeholders from Manokwari, Pegunungan Arfak and Tambrau Regencies and West Papua Province. This seminar might also be held in Jakarta with national stakeholders. In preparation for such a seminar a very strong academic paper and the draft local regulation need to be developed, and this process needs to involve people with an in-depth understanding of the issues and who are respected by the national government especially the Ministry Forestry. The evaluators provided copies of some relevant local regulations on the recognition of customary territorial rights which can be used as a starting point for the development of local regulations. Indonesia lawyers / legal experts specializing on customary rights, such as Yance Arizona or Ricardo Simarmata should be consulted to assist with development of the local regulations.

#### **Valuation of Environmental Goods and Services**

A conservation economist could be hired to put an economic value on natural resources and environmental services derived from the forests of the Arfak and Tambrau mountains, including water, biodiversity, mitigation of soil erosion and landslides, fresh air, carbon sequestration, etc. The project can contact an organization such as Greenomics and ask Mr Elfian or other people to do the calculation. The results of his work can strengthen the argument on why it is more valuable to keep the corridors intact

than to mine or to clear the forest. An economic gain comparison can be conducted that compares the value of a conservation area, mining and an oil palm company and other uses.

Participatory valuation of environmental goods and services may also be a useful approach to raise awareness amongst local communities regarding the true value that they derive from forests, and help them to plan for sustainable utilization of their forests and natural resources.

#### **4.20 Project Management - Financial and Administrative Management**

In general project management is quite good, though there are some weaknesses in financial management and administration. Annual audits have been conducted and Paradisea's management has followed up on the auditors recommendations, including the development of a set of SOPs. However a number of actions are still required to strengthen Paradisea's financial and administrative management, including:

- Training in budget planning and tracking;
- An office manager needs to be appointed to help relieve the administrative burden on the executive director and free him up to mentor staff and build networks with government, civil society.
- Other administrative tools are required, such as a standard price guide to help with budget planning and tracking and standard formats for SOWs.

Office rental costs are also one of the highest recurrent costs, and staff complained that moving office has also been time consuming, disruptive and expensive. If office rental costs could be consolidated, and additional funding be found through donations or fund raising, Paradisea could purchase a permanent office, thereby significantly reducing recurrent costs and proving a more stable base for operations and potentially for fund raising and commercial activities to reduce reliance on donors.

#### **4.21 Data Management**

**Data processing, management and sharing** – It was very difficult for the evaluators to access the reports, maps and other materials developed by Paradisea over the past 4 years, requiring multiple requests to multiple different staff members to access the majority of the data required to complete the evaluation. Furthermore, Paradisea personnel also informed us that a lot of other spatial and social, cultural and ecological data has been collected since about 2008, but much of this had not been properly documented or archived. This clearly indicates that Paradisea has ongoing problems with the data management. Furthermore, as the appointed repository for spatial data for the West Papuan NGO network Paradisea needs to significantly improve their capacity to share data with other organizations, either through direct requests or through an online portal. Furthermore, there is a risk that most of the data currently stored by Paradisea could be lost in the case of a fire or similar catastrophic events.

These are considerable issues for an organization whose work involves so closely related to data production and management and a number of steps need to be considered to overcome these problems, including:

- Advanced training in GIS and data management;
- Development of proper databases and SOPs for the processing, archiving and management of all forms of data held by Paradisea;
- Need to encourage other organizations to lodge their spatial and other relevant data with Paradisea. This will require assuring other organizations that Paradisea will respect their rights as the developers of that data and will not use or otherwise distribute that data without consent;

- Need to establish a back-up repository of all of Paradisea’s data,

Paradisea GIS and data management personnel (possibly together with representatives of the West Papua Provincial Planning Agency and/or forestry service) should also visit the spatial data management units (SIMTARU) recently established in within the Provincial Planning Agency and several Regency level planning agencies in Papua Province to learn about their spatial data management systems and obtain copies of the guidelines and SOPs that have been developed to see what can be applied within Paradisea and the Provincial Government.

#### **4.22 Spatial Planning, Strategic Environmental Assessment and High Conservation Value Forest Assessment**

Whilst Paradisea’s advocacy on spatial planning issues has had a major impact in terms of reducing the area of forests that was to have its status downgraded from Protection or limited production forest to conversion forest or other use areas (from 2,051,004 ha to 750,174 ha), some respondents criticized Paradisea’s advocacy on spatial planning on the grounds that it was largely based on areas of forest protected, but lacked deeper analysis of the actual conservation values associated with different forest areas. In 2015 WWF developed a Strategic Environmental Assessment (SEA or KLHS) for West Papua, which is required by law as the basis for spatial and medium-term development planning, but the development of the SEA did not involve local government or CSOs directly, so their understanding of the SEA process and the likelihood that it’s recommendations will be incorporated into upcoming revisions of the spatial and medium-term development plans is low. As such we recommend that RFN and Paradisea consider supporting training workshops

- Training in Strategic Environmental Assessment (the Foundation for innovation in Regional Governance (YIPD) and the Bogor Agricultural Institute (IPB) could be contracted to deliver such training;
- Training in High Conservation Value (HCV) assessment and Landscape Conservation Planning - Bogor-based company PT. Daemeter could be contracted to deliver such training;
- Training in carbon stock surveys– Matt Warren of the US Forestry Service (USFS), Daniel Mudiarmo of the International Center for Forestry Research (CIFOR) and/or Sartji Taberima (UNIPA) could be contracted to deliver such training. This could also link into more comprehensive field surveys and the development of more accurate vegetation and above and below ground carbon stock maps of peatland areas (relates more to the Bintuni and Fakfak REDD+ Programs).

Conservation International may be planning some training activities in these areas, so RFN-Paradisea should coordinate closely and share resources in this area.

#### **4.23 National Park Proposal**

RFN and Paradisea’s goal of establishing a major new national park incorporating the Arfak Mountains, North and South Tamberau SNRs as well as the 3 proposed connecting corridors and other possible areas around the existing reserves is highly ambitious and will require support from a wide range of stakeholders from regency, provincial and national government agencies, NGOs and IPOs, and customary communities living in and around the proposed national park.

At least six different options relating to the planned national park have been identified to date, each of which has advantages and disadvantages (see table 6).

Some stakeholders expressed doubts regarding whether the designation of customary forest areas and National Parks may be considered incompatible. This should not necessarily be the case, but further investigation and advice from organizations with greater experience in this regard is required, particularly in the context of the current national parliamentary review of the 1990 law on Natural Resource Management and Conservation.

There is also an urgent need to start discussing these plans with the affected communities as soon as possible as this is a sensitive matter and both the positive and negative elements must be explained to the communities before obtaining their free, prior and informed consent.

Paradisea will need support from the central government; the Ministry of Environment and Forestry must be willing to promote this initiative. Equally important is to obtain support from the provincial government through an assessment and dialog regarding the importance of a new national park as part of West Papua's vision as a conservation province. Engagement with major international conservation NGOs with an interest in West Papua, such as Conservation International and WWF will also be necessary, as they have the resources and national level networks that will be required to bring this plan to fruition. RFN and Paradisea should also hold discussions with UNESCO to explore the possibility and benefits of establishing this as a "Man and Biosphere Reserve."

Paradisea staff suggested that RFN should arrange for members of the Norwegian Royal Family, Prime Minister and/or Ambassador visit West Papua as part of the strategy to promote the establishment of the proposed national park. Such a visit could be conducted in conjunction with the 2<sup>nd</sup> International Conference on Biodiversity and Ecotourism in West Ppaua in 2018.

#### **4.24 Renewing and Sustaining West Papua Civil Society / Graduate Volunteer Program**

Most West Papua's civil society organizations were established after the fall of the New Order government, and over time many have waxed and waned, though the overall trend has been a decline in civil society capacity as experienced activists have been drawn into politics, the private sector and employment as staff or consultants with directly implemented aid projects. Paradisea with the support of RFN has made a small but significant contribution to the renewal of West Papuan civil society through recruiting a team almost entirely made up of recent graduates.

A possible way to scale up the outreach and impact of the RFN – Paradisea collaboration is through the establishment of a graduate volunteer program, or even a graduate certificate course in community empowerment and sustainable development, whereby recent graduates could undertake work placements with Paradisea and other local and international NGOs over the course of 12 to 18 months to gain practical experience, whilst also undertaking on-campus training in sustainable development theory and practice.

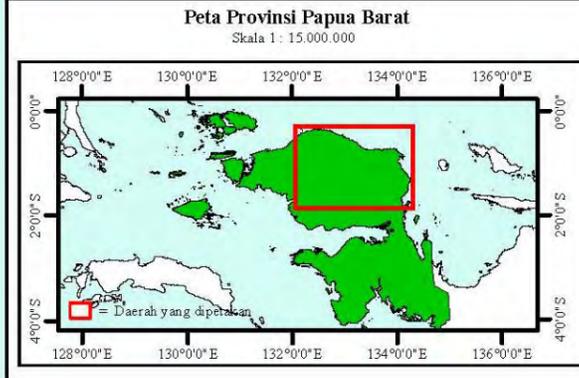
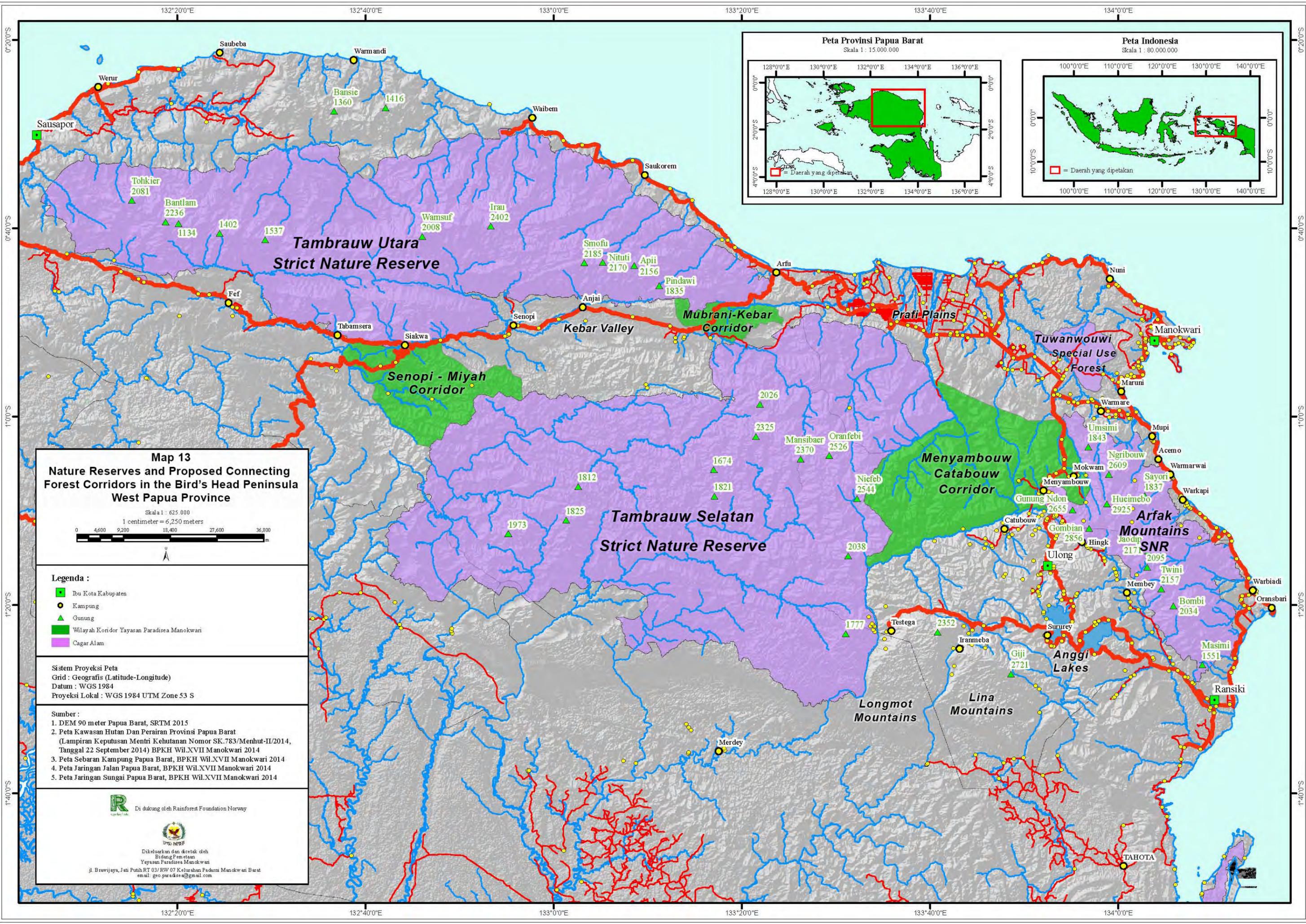
This approach would help to reduce unemployment amongst recent graduates, reconnecting them with village communities, impart knowledge and a humanitarian and environmental ethos amongst West Papua's up and coming generation of leaders, develop basic skills in community empowerment and sustainable development, and a percentage would go on to work in existing NGOs or found new ones. RFN and Paradisea should consider exploring this idea further with UNIPA and other local and international NGOs working in West Papua.

## 5. Key Lessons learned

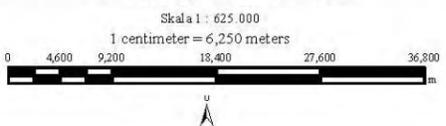
- 1) Having ambitious project goals whilst realizing that these may not be fully achievable, and maintaining a flexible approach to project implementation allows for responsiveness, innovation and excellence. Projects which focus on safe and relatively easily achievable or which have rigid project designs will not result in the best possible outcomes.
- 2) Flexible approaches to participatory mapping, which take advantages of opportunities as they arise rather than following a rigid work plan are required when working with local communities.
- 3) The process for achieving recognition of customary forests remains somewhat ambiguous, and is evolving, as new legislation is still being developed at the national level. However, it appears that the formal recognition of customary territories through regency and/or provincial level decrees and regulations / bylaws and the development of sustainable utilization and management plans will be necessary steps before recognition of customary forest rights can be achieved. Even if customary forest rights are not ultimately recognized by the MoEF, the existence of these documents will provide a solid basis for possible further legal action in the constitutional court.
- 4) The recognition of customary territorial and forest rights will not automatically result in more sustainable utilization and management of natural resources. Other awareness raising, community organizing and sustainable livelihoods interventions are required to ensure the required outcome.
- 5) Far more detailed maps and social-ecological analyses and the development of simple but effective sustainable utilization and management plans are required to support the recognition of customary forest management rights.
- 6) Patience and persistence is required when working to resolve internal social and political conflicts within indigenous communities. Paradisea's approach of maintaining continuous engagement and dialog with communities where internal conflicts made it untenable to immediately push ahead with their participatory mapping agenda has paid off in the long term, with the Mpur communities in Mubrani, Miyah communities in Miyah District and Hatam communities in Mokwam eventually being able to settle their internal conflicts and requesting Paradisea to proceed with customary congresses, participatory mapping and the efforts to secure customary territorial and forest rights.
- 7) Local NGOs can have a major impact on good governance and policy making. This is evident from the revisions to the West Papua spatial plan, Paradisea's role in initiating the government of Tambrau Regency's commitment to become a Conservation Regency, and the engagement of Paradisea in the Provincial Committee on Social Forestry Programs.
- 8) Local people are capable of adapting knowledge to suit local social and environmental conditions and agroforestry systems based on indigenous Papuan preferences and traditional ecological knowledge can help to manage pest problems and raise local incomes and livelihoods whilst providing a well balanced agro-ecosystem which provides habitat for local fauna. The modest successes achieved in this area to date need to be scaled-up and information about these systems needs to be disseminated more widely.
- 9) Investing in civil society renewal should be considered an important goal which supports the sustainability of investments beyond the immediate project period. Greater investment in training, mentoring, exchanges / internships with other similar organizations, and other forms of capacity building is required to strengthen organizational capacity and support the achievement of project goals. Volunteer programs or a graduate certificate program should be considered as a means to scaling up impacts on the strengthening and renewal of West Papuan civil society.
- 10) Inclusion and consideration of the possible unintended impacts on society, gender and youth is crucial. In order to avoid conflict of land boundaries, all land owners and users, including women,

youths, children, marginalized community members and neighbouring groups need to be engaged directly and indirectly throughout the process of discussions, negotiations, mapping and planning. Failures to do so can result in delays and/or conflicts. Careful consideration of the possible negative outcomes need to be considered and strategies must be planned and implemented to mitigate risks.

- 11) Building networks and coalitions with key government agencies, NGOs, IPOs, universities and other key stakeholders is crucial if ambitious goals relating to the recognition of indigenous rights, improved governance and the establishment of a major national park are to be realized. More detailed stakeholder analyses and communication and engagement strategies are required.
- 12) Study tours are an excellent way to promote the transfer of knowledge and skills between communities, build networks and broaden the awareness of isolated communities who otherwise have very few opportunities to experience the world beyond their village or region.
- 13) Provincial and regency level governments can be persuaded regarding the need to protect the environment and the rights of indigenous peoples, so long as effective communication and engagement strategies are developed and implemented.
- 14) Customary communities in West Papua still have a very strong sense of connection and a detailed knowledge of their customary areas and the ecology and biodiversity therein. However there is a role for NGOs or other organization to help communities analyse their existing knowledge more deeply, revive traditional ecological knowledge systems and develop plans regarding how to adapt to changing social-ecological, economic and political circumstances.
- 15) Some of the lessons learned by Paradisea in the early days (1998-2012), such as that the use of paid village motivators will result in jealousy within communities and that ecotourism and butterfly farming do not have a significant impact on livelihoods, need to be reconsidered in the light of changing social-ecological, economic and political circumstances.
- 16) Arfak and Tamberau communities are becoming more aware of the possible negative impacts of development on the environment and their livelihoods. For example, some Arfak communities noted that floods which occurred in 2015 were unprecedented (at least in their lifetime) and the 2015 El Niño drought also raised levels of environmental concern. Paradisea and other organizations need to capitalize on such events through better communications and awareness raising activities.
- 17) Paradisea urgently need to improve communication of its program goals to a wide range of stakeholders. Most importantly they need to communicate with customary communities regarding the proposed establishment of a national park. Failure to do so may result in communities ultimately feeling that they have been deceived and that Paradisea's program was ultimately a means to alienate their territory to form the new park. This was what occurred at the conclusion of the WWF Arfak Mountains ICDP in 1998.
- 18) The experience from participatory mapping in Kwau and Indabri shows that agreements amongst clans regarding the boundaries of their territory can be achieved without convening major clan / tribal congresses. However, clan / tribal congresses may be an important element of the consensus building process, but the timing of such congresses needs to consider local social circumstances and the wishes of the communities themselves.
- 19) The 2014 Village law provides opportunities for the empowerment of indigenous communities through the allowance for village governance based on customary law and the provision of substantial village development funds. However, implementation in West Papua has been very poor to date. There is an opportunity for Paradisea and other NGOs to empower local communities through providing facilitation support for participatory development processes and governance through customary law.



**Map 13**  
**Nature Reserves and Proposed Connecting Forest Corridors in the Bird's Head Peninsula West Papua Province**



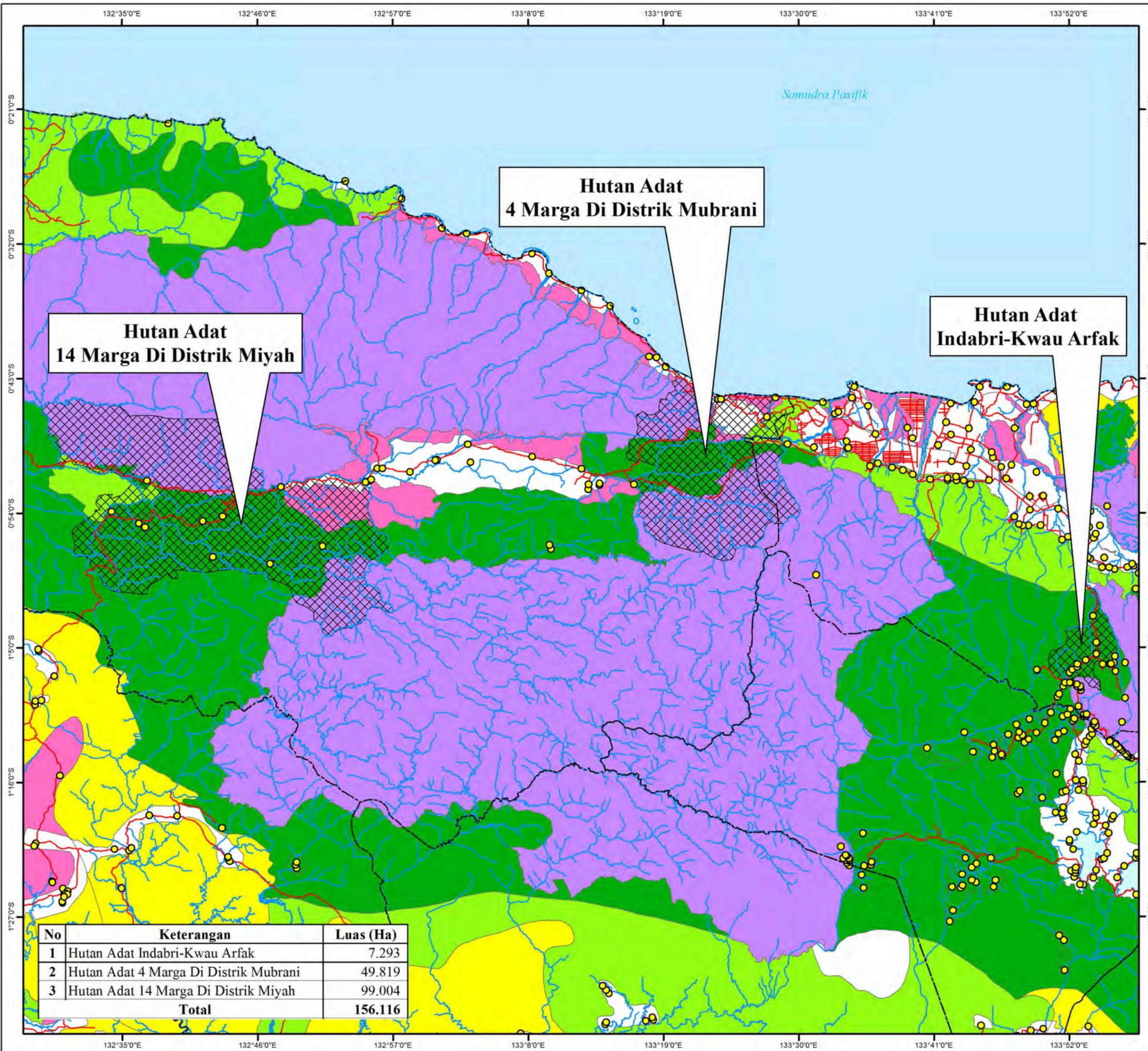
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  - Wilayah Koridor Yayasan Paradisa Manokwari
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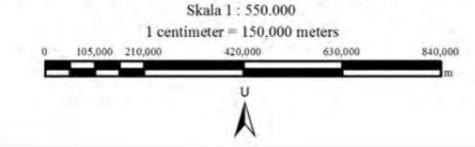
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  3. Peta Sebaran Kampung Papua Barat, BPKH Wil.XVII Manokwari 2014
  4. Peta Jaringan Jalan Papua Barat, BPKH Wil.XVII Manokwari 2014
  5. Peta Jaringan Sungai Papua Barat, BPKH Wil.XVII Manokwari 2014

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**Map 14**  
**Customary Forest Areas in Proposed**  
**Connecting Forest Corridors in the**  
**Bird's Head Peninsula, West Papua**

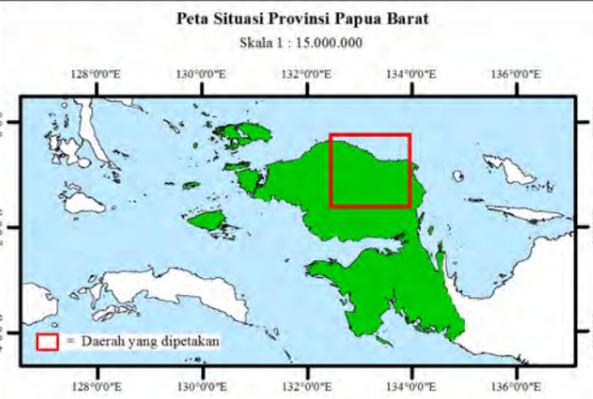


**Legenda :**

- Kampung
- Jalan
- Sungai
- Kawasan Hutan**
- CA
- HL
- HPT
- HP
- HPK
- APL

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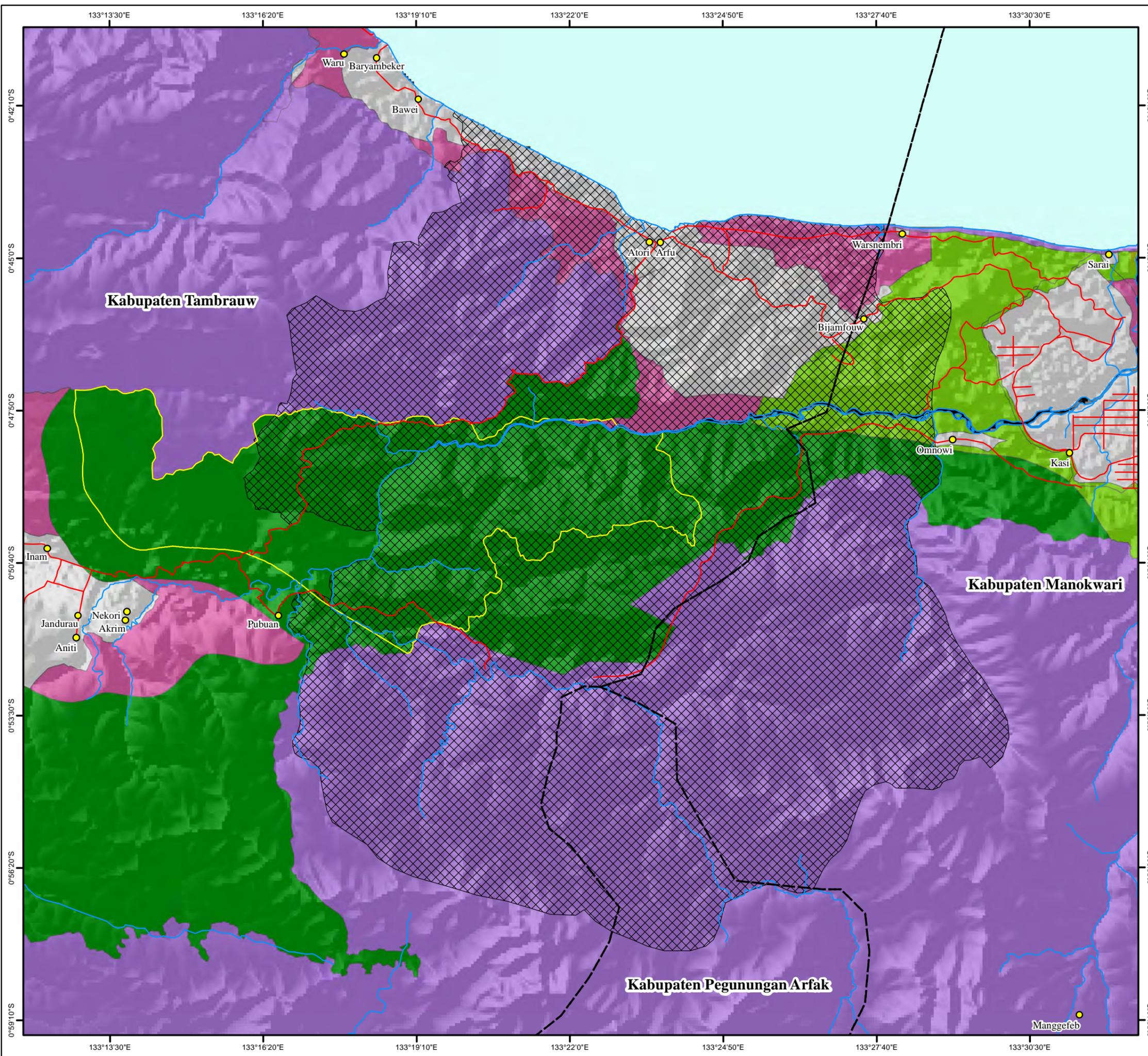
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  3. Peta Sebaran Kampung Papua Barat
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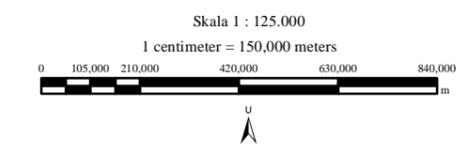
No	Keterangan	Luas (Ha)
1	Hutan Adat Indabri-Kwau Arfak	7.293
2	Hutan Adat 4 Marga Di Distrik Mubrani	49.819
3	Hutan Adat 14 Marga Di Distrik Miyah	99.004
<b>Total</b>		<b>156.116</b>

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# Peta Wilayah Adat 4 Marga di Distrik Mubrani Dan Koridor di dalam Kawasan Hutan

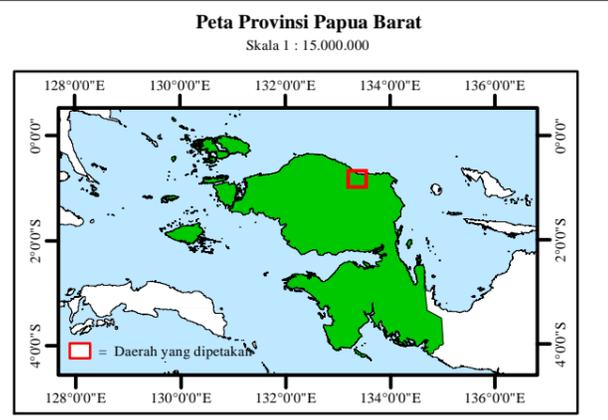


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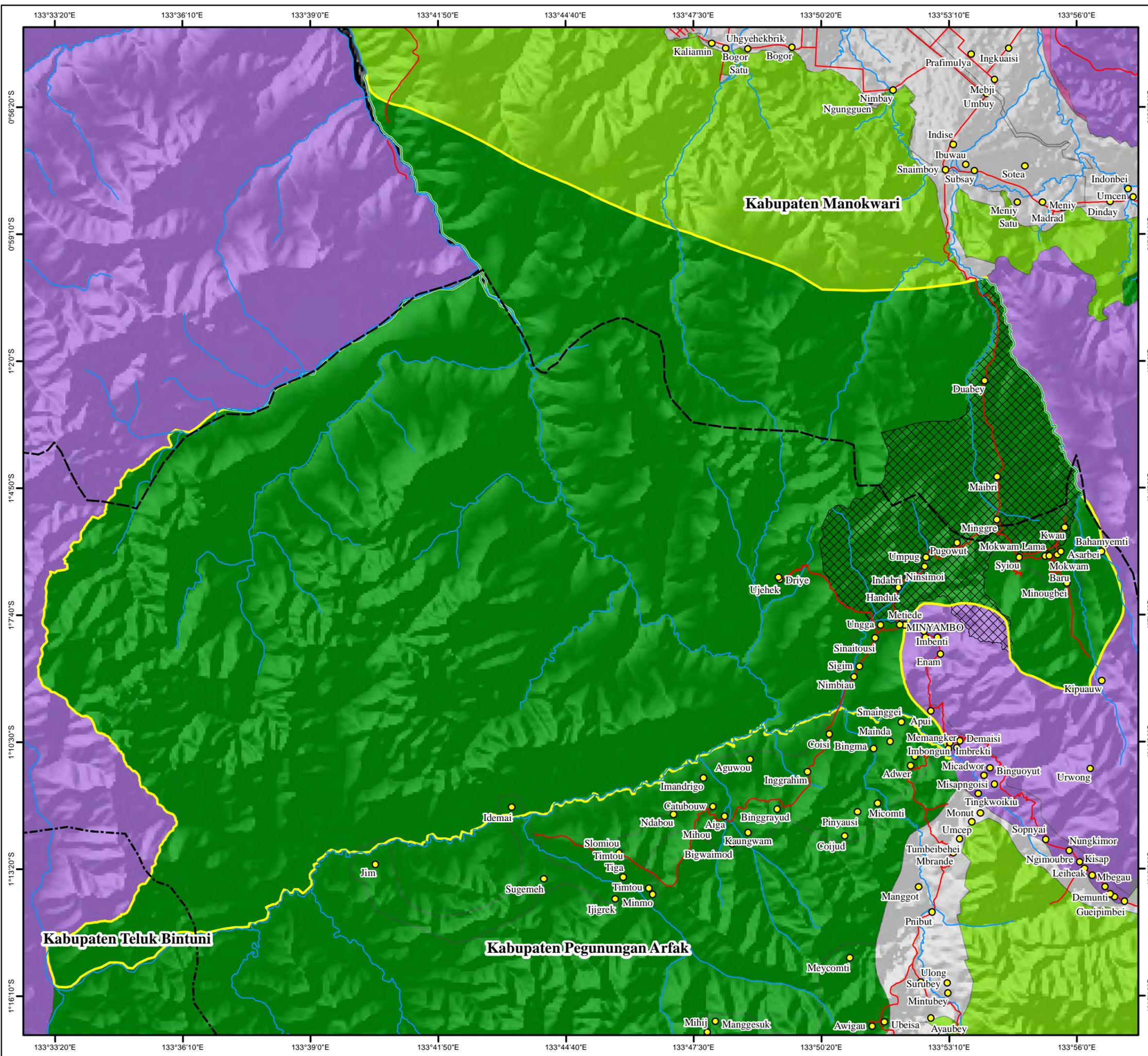
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— Jalan	■ Cagar Alam
— Sungai	■ Hutan Lindung
▨ Wilayah Adat 4 Marga	■ Hutan Produksi Terbatas
▭ Koridor Mubrani - Kebar	■ Hutan Produksi
▭ Wilayah Administrasi Kabupaten	■ Hutan Produksi Konversi
	■ Areal Penggunaan Lain

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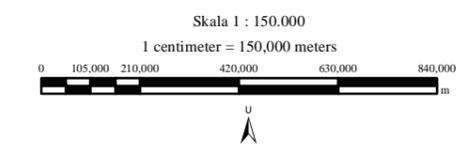
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  3. Peta Batas Administrasi Kabupaten di Papua Barat, BAPPEDA Provinsi Papua Barat tahun 2015
  4. Peta Sebaran Kampung Papua Barat, BPKH Wil.XVII Manokwari 2014
  5. Peta Jaringan Jalan Papua Barat, BPKH Wil.XVII Manokwari 2014
  6. Peta Jaringan Sungai Papua Barat, BPKH Wil.XVII Manokwari 2014



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# Peta Wilayah Adat 9 Kampung Indabri - Kwau Dan Koridor di dalam Kawasan Hutan

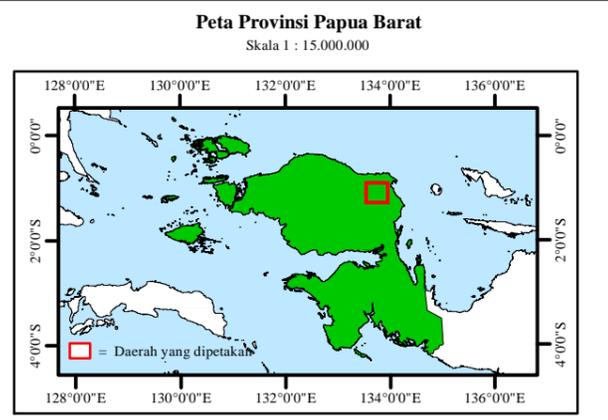


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Jalan	Hutan Lindung
Sungai	Hutan Produksi Terbatas
Wilayah Adat 9 Kampung	Hutan Produksi
Koridor Minyakbouw - Catubouw	Hutan Produksi Konversi
Wilayah Administrasi Kabupaten	Areal Penggunaan Lain

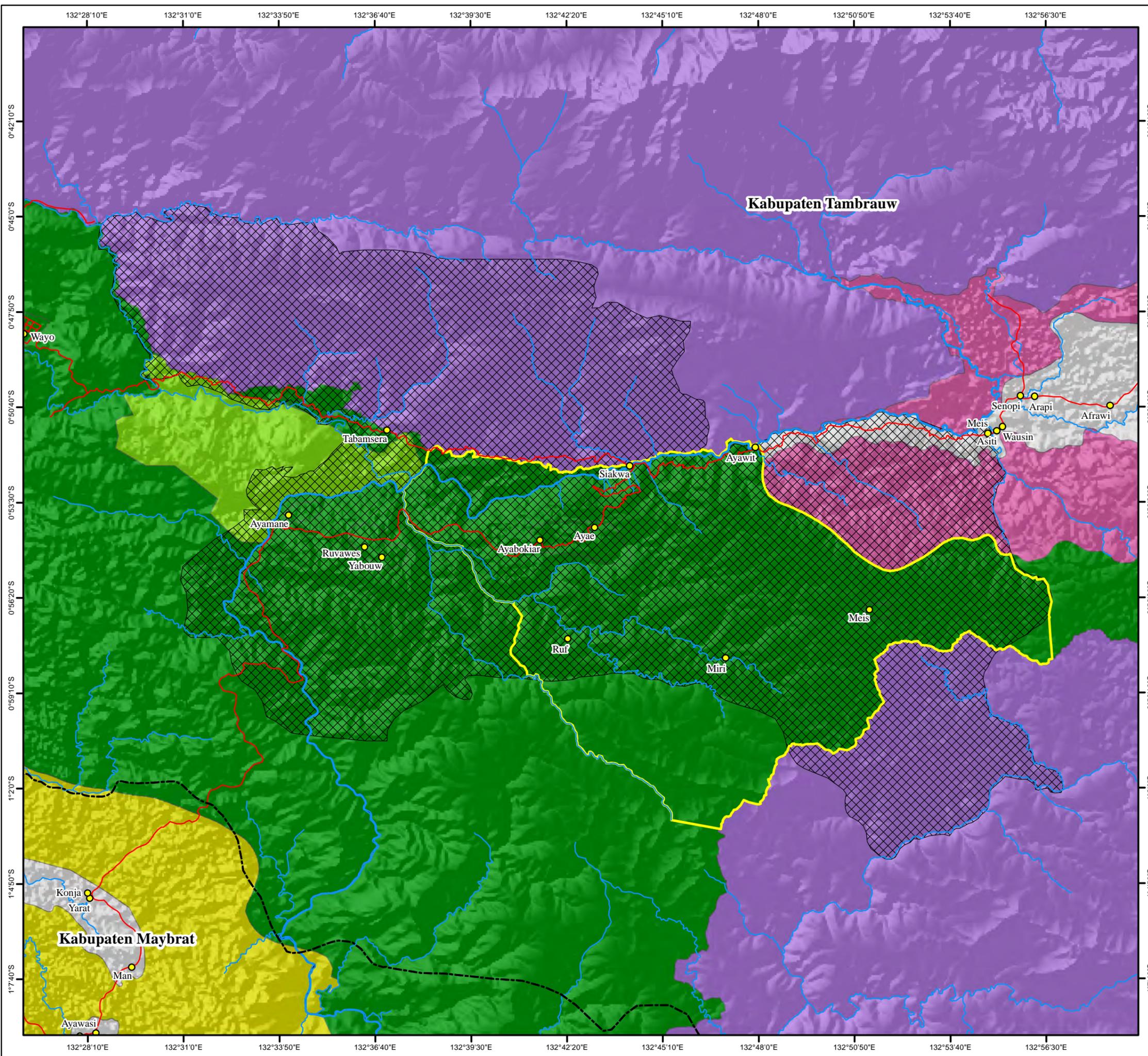
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Datum : WGS 1984  
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- Sumber :
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  3. Peta Batas Administrasi Kabupaten di Papua Barat, BAPPEDA Provinsi Papua Barat tahun 2015
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  6. Peta Jaringan Sungai Papua Barat, BPKH Wil.XVII Manokwari 2014

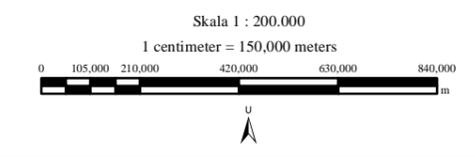


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# Peta Wilayah Adat 14 Marga di Distrik Miyah Dan Koridor di dalam Kawasan Hutan

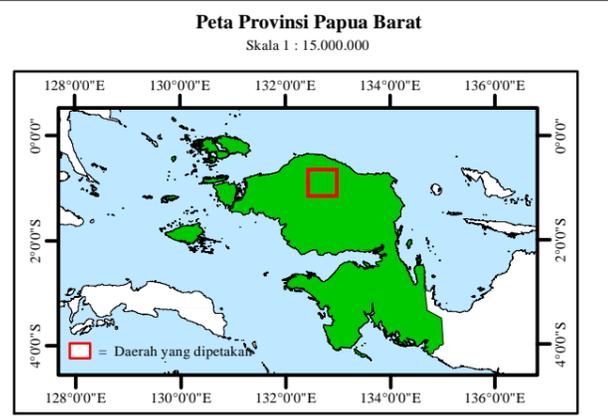


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Wilayah Administrasi Kabupaten	Hutan Produksi Konversi
	Areal Penggunaan Lain

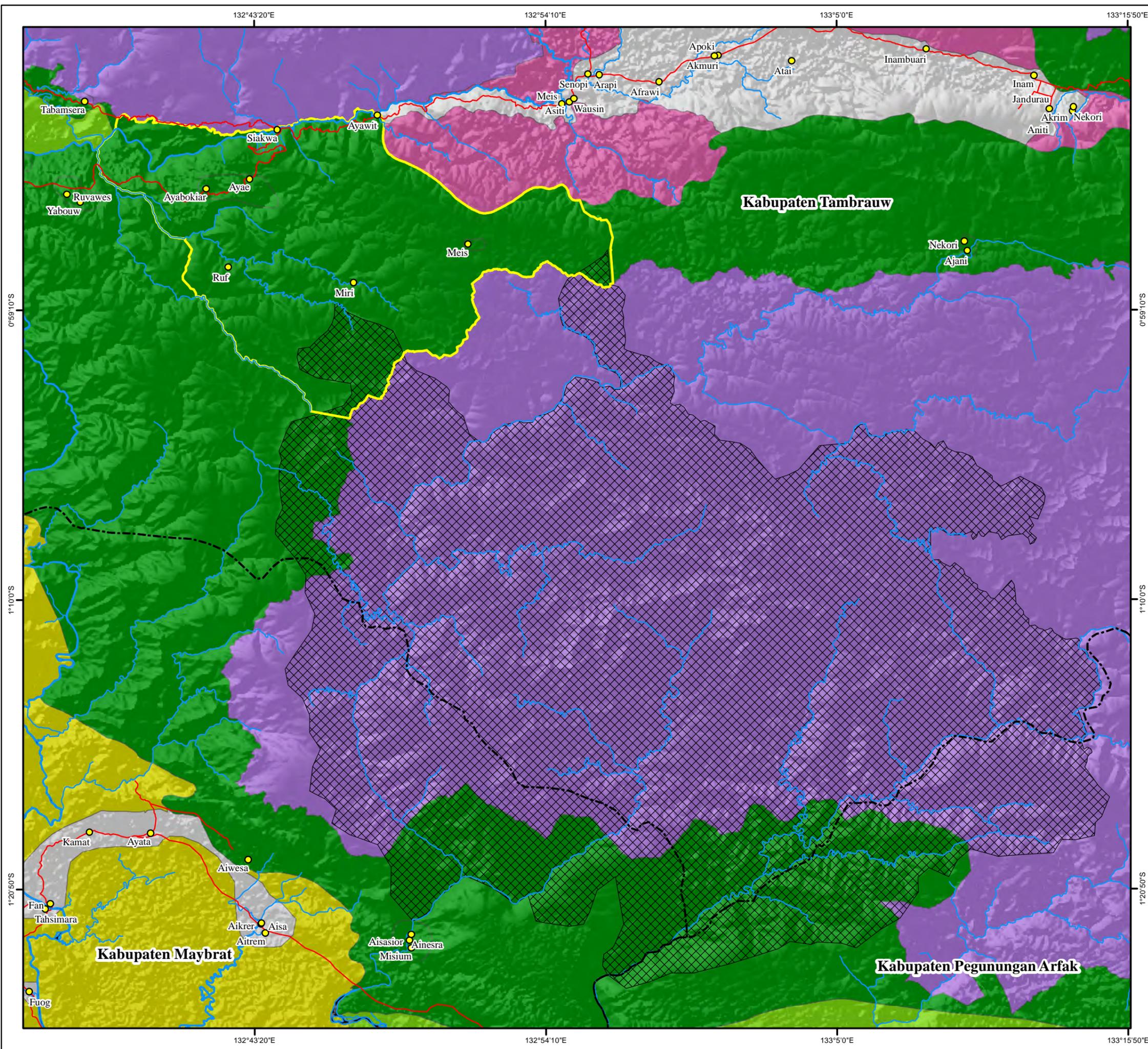
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Proyeksi Lokal : WGS 1984 UTM Zone 53 S

- Sumber :
1. Sketsa Hasil Musdat di Distrik Miyah
  2. Peta Kawasan Hutan Dan Perairan Provinsi Papua Barat (Lampiran Keputusan Menteri Kehutanan Nomor SK.783/Menhut-II/2014, Tanggal 22 September 2014) BPKH Wil.XVII Manokwari 2014
  3. Peta Batas Administrasi Kabupaten di Papua Barat, BAPPEDA Provinsi Papua Barat tahun 2015
  4. Peta Sebaran Kampung Papua Barat, BPKH Wil.XVII Manokwari 2014
  5. Peta Jaringan Jalan Papua Barat, BPKH Wil.XVII Manokwari 2014
  6. Peta Jaringan Sungai Papua Barat, BPKH Wil.XVII Manokwari 2014

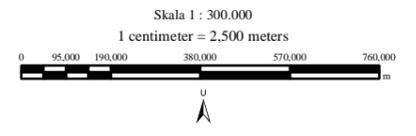


Di dukung oleh Rainforest Foundation Norway

Dikeluarkan dan dicetak oleh  
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email: geo.paradiscea@gmail.com



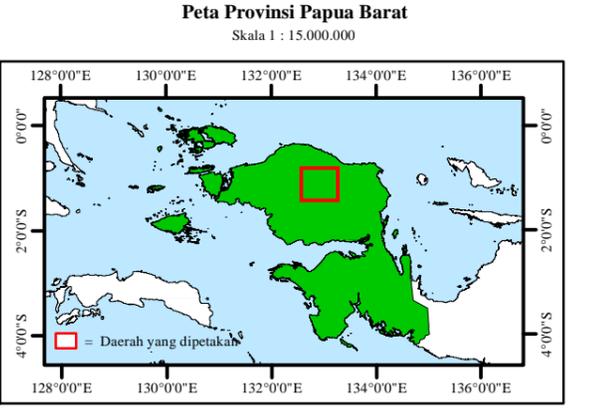
# Peta Wilayah Adat Suku Irees dan Koridor di dalam Kawasan Hutan



- Legend :**
- Kampung
  - Jalan
  - Sungai
  - Wilayah Adat
  - Koridor Senopi - Miyah
  - Wilayah Administrasi Kabupaten
- Fungsi Kawasan Hutan**
- Cagar Alam
  - Hutan Lindung
  - Hutan Produksi Terbatas
  - Hutan Produksi
  - Hutan Produksi Konversi
  - Areal Penggunaan Lain

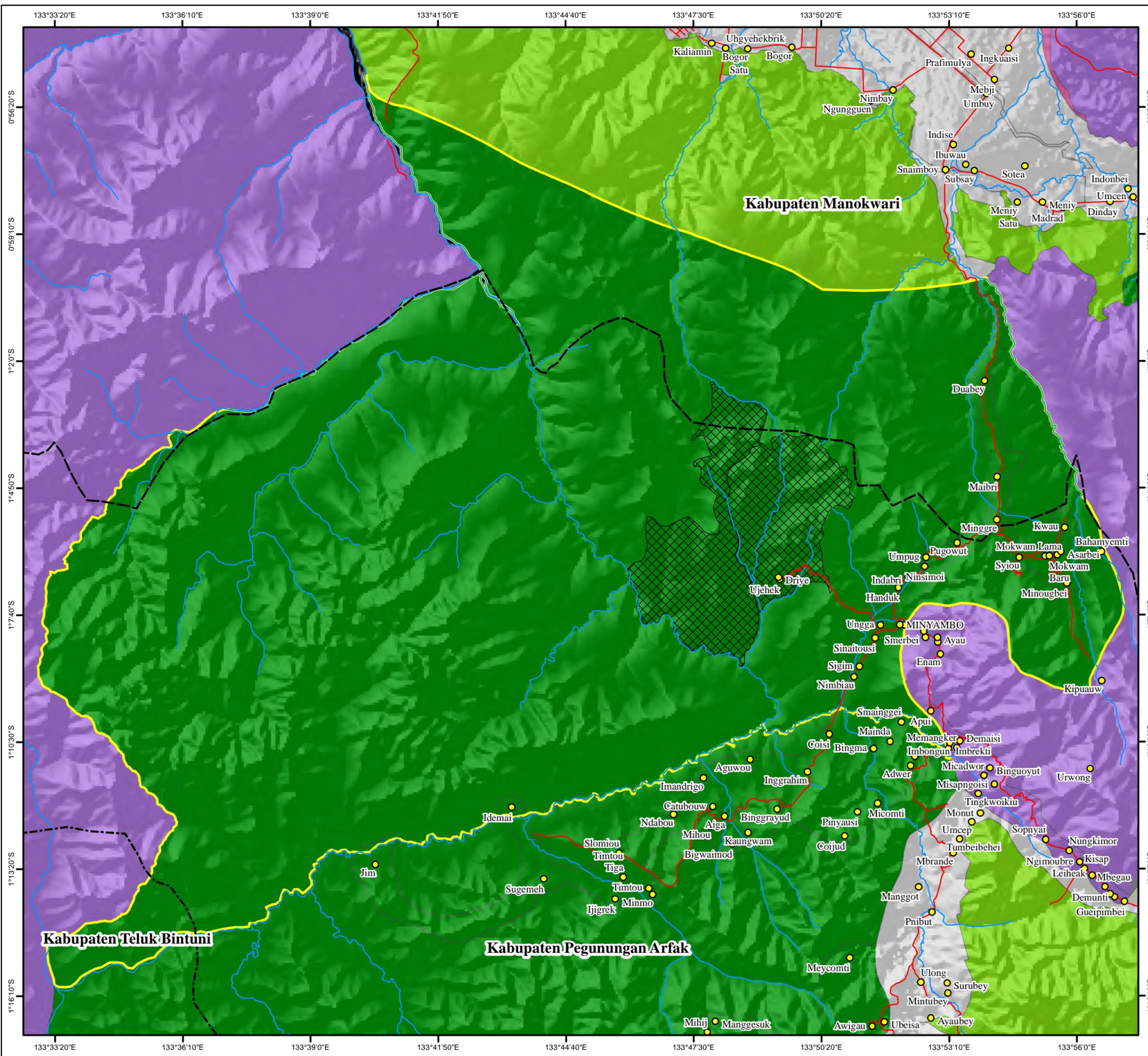
Sistem Proyeksi Peta  
 Grid : Geografis (Latitude-Longitude)  
 Datum : WGS 1984  
 Proyeksi Lokal : WGS 1984 UTM Zone 53 S

- Sumber :
1. Sketsa Hasil Musdat Suku Irees
  2. Peta Kawasan Hutan Dan Perairan Provinsi Papua Barat (Lampiran Keputusan Menteri Kehutanan Nomor SK.783/Menhut-II/2014, Tanggal 22 September 2014) BPKH Wil.XVII Manokwari 2014
  3. Peta Batas Administrasi Kabupaten di Papua Barat, BAPPEDA Provinsi Papua Barat tahun 2015
  4. Peta Sebaran Kampung Papua Barat, BPKH Wil.XVII Manokwari 2014
  5. Peta Jaringan Jalan Papua Barat, BPKH Wil.XVII Manokwari 2014
  6. Peta Jaringan Sungai Papua Barat, BPKH Wil.XVII Manokwari 2014

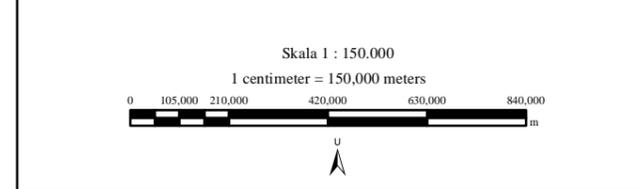


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 email: geo.paradisea@gmail.com



# Peta Wilayah Adat Kampung Dirie, Kampung Ugyuhek Dan Koridor di dalam Kawasan Hutan

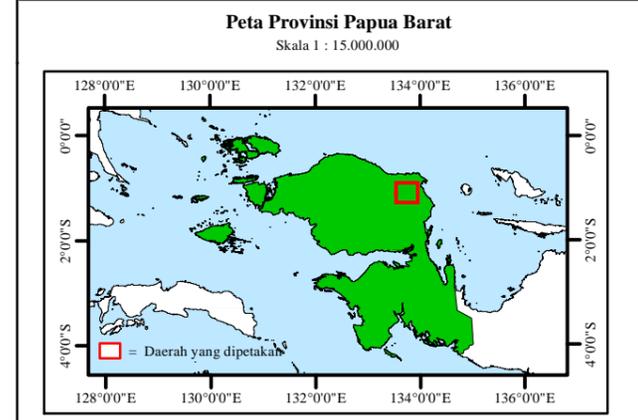


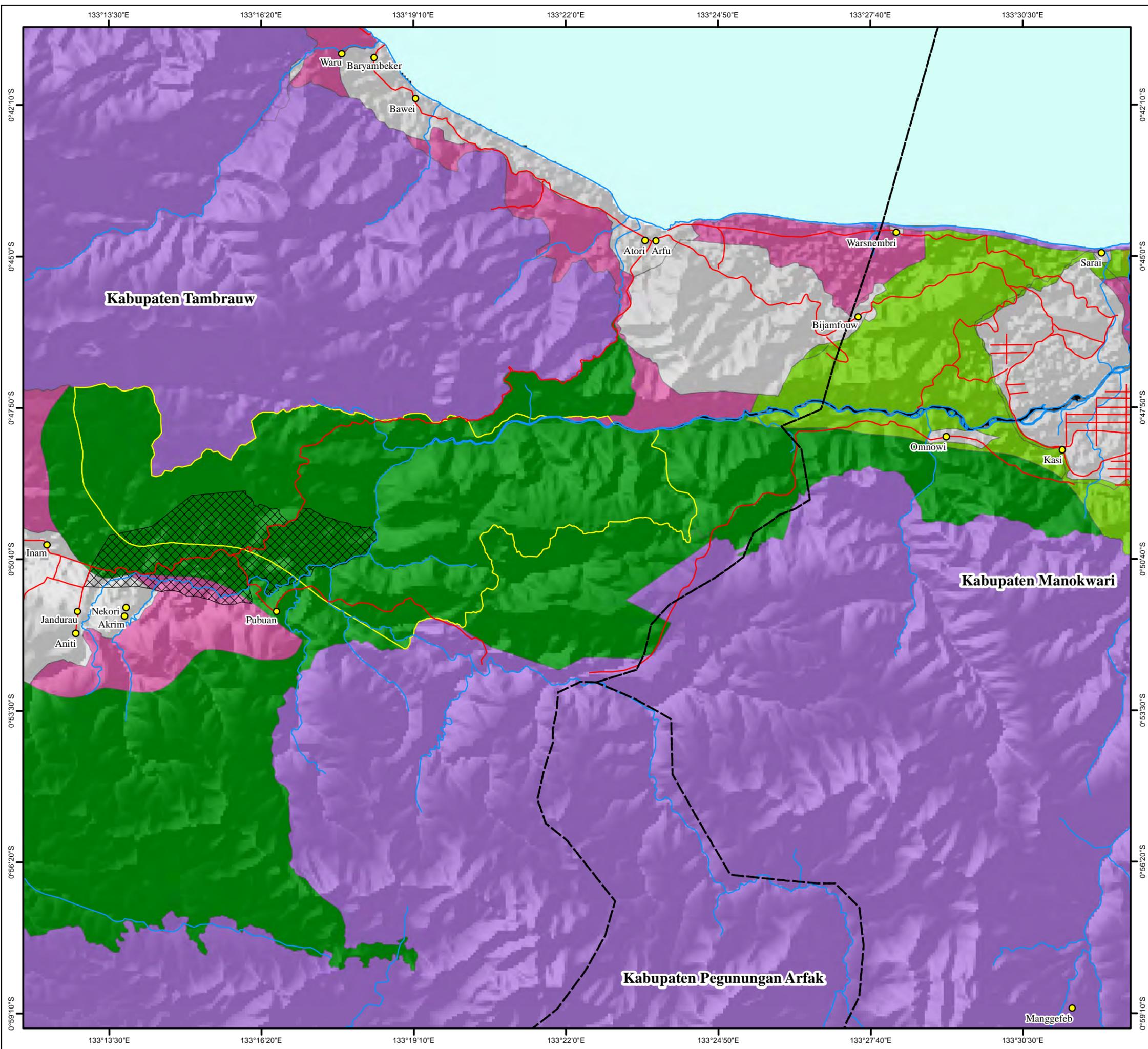
**Legend :**

Kampung	Fungsi Kawasan Hutan
Jalan	Cagar Alam
Sungai	Hutan Lindung
Wilayah Adat	Hutan Produksi Terbatas
Koridor Minyakbouw - Catubouw	Hutan Produksi
Wilayah Administrasi Kabupaten	Hutan Produksi Konversi
	Areal Penggunaan Lain

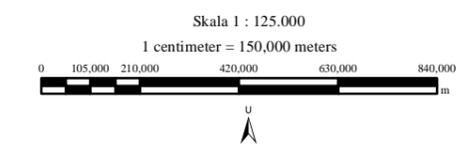
Sistem Proyeksi Peta  
 Grid : Geografis (Latitude-Longitude)  
 Datum : WGS 1984  
 Proyeksi Lokal : WGS 1984 UTM Zone 53 S

- Sumber :
1. Sketsa dari Masyarakat
  2. Peta Kawasan Hutan Dan Perairan Provinsi Papua Barat (Lampiran Keputusan Menteri Kehutanan Nomor SK.783/Menhut-II/2014, Tanggal 22 September 2014) BPKH Wil.XVII Manokwari 2014
  3. Peta Batas Administrasi Kabupaten di Papua Barat, BAPPEDA Provinsi Papua Barat tahun 2015
  4. Peta Sebaran Kampung Papua Barat, BPKH Wil.XVII Manokwari 2014
  5. Peta Jaringan Jalan Papua Barat, BPKH Wil.XVII Manokwari 2014
  6. Peta Jaringan Sungai Papua Barat, BPKH Wil.XVII Manokwari 2014





# Peta Wilayah Adat Marga Auri Dan Koridor di dalam Kawasan Hutan

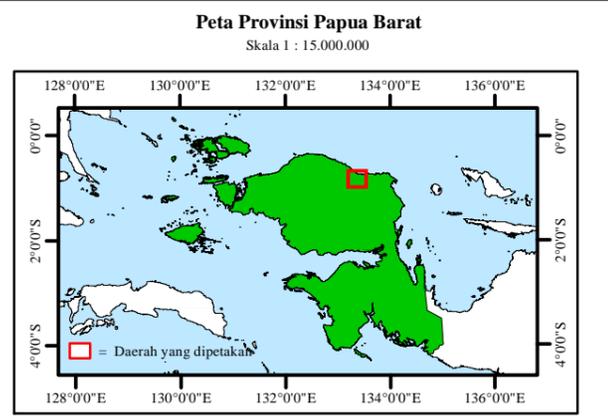


**Legend :**

Kampung	<b>Fungsi Kawasan Hutan</b>
Jalan	Cagar Alam
Sungai	Hutan Lindung
Wilayah Adat Marga Auri	Hutan Produksi Terbatas
Koridor Muabran - Kebar	Hutan Produksi
Wilayah Administrasi Kabupaten	Hutan Produksi Konversi
	Areal Penggunaan Lain

Sistem Proyeksi Peta  
Grid : Geografis (Latitude-Longitude)  
Datum : WGS 1984  
Proyeksi Lokal : WGS 1984 UTM Zone 53 S

- Sumber :
1. Sketsa yang dibuat oleh masyarakat
  2. Peta Kawasan Hutan Dan Perairan Provinsi Papua Barat (Lampiran Keputusan Menteri Kehutanan Nomor SK.783/Menhut-II/2014, Tanggal 22 September 2014) BPKH Wil.XVII Manokwari 2014
  3. Peta Batas Administrasi Kabupaten di Papua Barat, BAPPEDA Provinsi Papua Barat tahun 2015
  4. Peta Sebaran Kampung Papua Barat, BPKH Wil.XVII Manokwari 2014
  5. Peta Jaringan Jalan Papua Barat, BPKH Wil.XVII Manokwari 2014
  6. Peta Jaringan Sungai Papua Barat, BPKH Wil.XVII Manokwari 2014



Di dukung oleh Rainforest Foundation Norway

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## **ANNEX 2**

### **Terms of Reference Evaluation of Yayasan Paradisea Manokwari 2016**

#### **1. Background**

Yayasan Pengembangan Ekonomi Rakyat dan Konservasi Sumber Daya Alam (Paradisea) Manokwari was established by several local environmental enthusiasts in 1999 coming from indigenous communities, religious and civil society groups. The main vision was to continue the protection of the forest and protection of indigenous peoples. The main activities focus on sustainable forest management and supporting the economy for Papua's indigenous tribes.

Rainforest Foundation Norway (RFN) started its partnership with Paradisea initially in 2007 to conduct a study on local communities' interaction with timber company and spatial planning in Tambrau Selatan. The partnership developed further with mapping of the conditions in West Papua for conservation and sustainable resource management in collaboration with indigenous people and the government that went over several years. In 2013, RFN and Paradisea worked further under a new contract which primarily focuses on establishing corridors between three established nature reserves, namely Cagar Alam Arfak, Cagar Alam Tambrau Selatan and Cagar Alam Tambrau Utara. The project formally is entitled as 'The Protection of the forest in the Bird Head region of West Papua through sustainable forest management by the local communities and the government.'

Paradisea and RFN have agreed to evaluate whether the multi year projects between 2013-2015 have achieved the expected results as outlined in the Project Documents and to systematise the lessons learned in order to assure the quality of and improve future activities. This will be the first evaluation of Paradisea's projects commissioned by RFN. This evaluation will be both an organizational review as well an assessment of the project supported by RFN.

#### **2. Evaluation purpose**

The main purpose of the evaluation is to document and learn from past and current activities, processes and achievements of Paradisea's work, and to receive informed recommendations for the next steps/processes. The evaluation has the following objectives:

- To assess the relevance, effectiveness, efficiency, impact and sustainability of the Paradisea's work supported by RFN
- To provide an overview of the strengths, weaknesses, challenges and gaps in project implementation, and recommendations for how weaknesses can be addressed and strengths can be consolidated
- To provide an overview of the strengths and weaknesses of organisational structure and internal management, and recommendations for how challenges can be addressed and strengths can be consolidated

The evaluation should document the significance of the support from RFN to Paradisea. The evaluation is expected to contribute to strengthening Paradisea's works as organization as well as in project implementation.

#### **3. Scope of the evaluation**

In order to produce relevant information for the above mentioned objectives, the project will be assessed based on its own performance criteria (i.e. those specified in the project design documents). The main focus of the evaluation would be on project implementation, outputs and impact during the period of 2013-2015.

The key words to be used assessing the project are to be understood as follows:

- 1 **Relevance** - the extent to which the project conforms to the needs and priorities of the target groups, as well as in relation to national development priorities.
- 2 **Effectiveness** - the extent to which the purpose has been achieved, and whether this can be expected to happen on the basis of the outputs of the project.
- 3 **Efficiency** - how the results stand in relation to the effort expended. Comparing inputs with outputs, how economically inputs are converted to outputs. Whether the same results could have been achieved in another way. To what degree do the outputs achieved derive from efficient use of financial, human and material resources.
- 4 **Impact** - the changes, positive and negative, planned and unforeseen of the project, seen in relation to target groups and others who are affected.
- 5 **Sustainability** - an assessment of the extent to which the positive effects of the project will still continue after external assistance has been concluded.

In addition to assessing the projects, the evaluation will be an organizational review. This should involve an assessment of the strengths and weaknesses of the organizational structure, decision-making structures and structures for following up and implementing decisions.

The evaluation should address, but not limit itself to, the following areas for assessment:

- A. Project design, management and implementation
- B. Organisation and structure
- C. RFN and Paradisea partnership

In particular, the guiding questions below should be paid special attention to, but not be limited to:

- A. Project design, management and implementation

What is the evaluation team's assessment of the quality of the formal project documents and Paradisea capacity to formulate them?

What is the evaluation team's overall assessment of Paradisea's work in connecting the three corridors in between the nature reserves in West Papua?

- How have mapping related activities been conducted and has it been effectively done?
- What is the assessment of the chosen prioritized activities to achieve the project results?
- How has alternative income generation activities contributed to project?
- How effective is Paradisea in strengthening local community's capacity to establish and maintain a customary forest (hutan adat)?
- Are the advocacy strategy (lobby and intervention) with the government applied by Paradisea effective to influence the policy outcomes?
- What is the assessment on Paradisea's strategy on the positions related to land, tenure and natural resources in indigenous territories?

Project management

- How can better resource allocation be done to achieve improved results?
- How are the internal routines for monitoring and evaluation of the project functioning?

To what degree is the gender perspective integrated into project design and implementation?

#### B. Organisation and structure

Is PARADISEA sufficiently staffed to manage the project? To what degree is the staff qualified for their tasks? Is there a plan for competence building in the organization and for attracting new qualified staff as the project grows?

What are the strengths and weaknesses of the organizational structure, decision-making structures and structures and routines for following up and implementing decisions?

What is the evaluation team's assessment of the internal division of tasks and authority in Paradisea?

#### C. Paradisea and RFN cooperation

How is the cooperation and communication between RFN and Paradisea functioning? Is there any room for improvement to strengthen the effect of the partnership, both from an international and national aspect?

### 4. Evaluation methodology

The evaluation will include a combination of a review of Paradisea documentation, field travel, key informant interviews and focus group discussions with Paradisea staff and members.

The methodology to be adopted during the evaluation should include:

- Literature review: project documents, advocacy materials reports and news articles.
- Interviews and discussions with selected Paradisea's management, project team members, supporting NGOs, and direct stakeholders.
- Field visits to meet and discuss with Paradisea, staff and communities involved with the project.
- Presentation of findings: The evaluation team shall facilitate a workshop where the preliminary findings of the evaluation are presented to key persons in Paradisea. This will give Paradisea the opportunity to provide feedback and for the evaluation team to validate findings.
- The writing of a final detailed report with recommendations, including an executive summary, will be done in English. The report will also be translated in Bahasa Indonesia. A detailed required format of the evaluation is as ANNEX 2

**Confidentiality of information:** all documents and data collected from interviews will be treated as confidential and used solely to facilitate analysis. Interviewees will not be quoted in the reports without their permission.

**Dissemination of evaluation results:** The executive summary of this evaluation is to be published in the Norwegian's Agency for Development Cooperation's (NORAD) database. The full evaluation will be submitted to Norad.

### 5. Evaluation team

The evaluation team will consist of two independent evaluators, Robert Hewat and Angel Manembu. The team has thorough experience in matters relating to Papua's contextual setting, policy development, environmental issues and NGOs.

## **6. Division of responsibility and description of the tasks**

The **evaluation team** is responsible for collecting data in Manokwari and in the field. Based on the data, the evaluation team is to draft and finalise the report. The evaluators may divide these tasks among themselves as they wish, as long as it is in line with the terms of the contracts. Robert Hewat is the team leader. The team leader is responsible for handing in the draft and the last version of the report, while Robert Hewat will be responsible to arrange a translating and proof-reading the Bahasa Indonesia version of the report.

**RFN** is responsible for the overall coordination of the evaluation as a process and the follow-up with NORAD as RFN's back-donor for Paradisea's project. RFN is responsible to give support to Paradisea to draft the Terms of Reference and provide the supporting documents and information for the evaluation. RFN is also responsible for the contractual relationship with the evaluators, which includes payment of consultant services. Ramadani Torheim is assigned as the focal point for this evaluation from RFN.

**PARADISEA** is responsible for drafting the Terms of Reference and the schedule for the evaluators. Paradisea will be facilitating all necessary meeting with external or internal actors for the evaluators to get the information needed to conduct this evaluation. Supporting documents necessary for the evaluation is also to be provided by Paradisea. As this is an external evaluation, none of Paradisea's staff, management or board members will be present during interviews, except for the person being interviewed. Esau Nur Yaung is assigned as the focal point for this evaluation from Paradisea.

All parties will dedicate enough time and resources to ensure a thorough and useful evaluation.

## **7. Timing and reporting**

The evaluation will be conducted between August – October 2016.

This includes:

- 1) Maximum 5#days of document review and preparation for the evaluation team.
- 2) 10#days of visits and fieldwork, including travels. The timing of the field and office visits in Indonesia will have to be negotiated between the evaluation team and Paradisea, but is tentatively set for October 2016.
- 3) During the visit to Paradisea, the evaluation team shall facilitate a workshop for Paradisea where preliminary findings are presented.
- 4) Maximum 10#days for preparing the written report.
- 5) A draft report both in English and Bahasa Indonesia shall be submitted to Paradisea and RFN no later than 19 September 2016 for comments.
- 6) Paradisea and RFN will come back with comments by 26 September 2016
- 7) The final reports both in English and Bahasa Indonesia shall be submitted to RFN and Paradisea no later than 3 October 2015

## **Required Format for the Evaluation Report**

Title Page, including project title and number, date of report, authors and their affiliations, Paradisea and RFN contact point for the evaluation, etc.

Executive Summary (4-6 pages):

- Brief project description and context
- Purpose and expected use of the evaluation
- Objectives of the evaluation
- Summary of the evaluation methodology
- Principle findings and conclusions, especially relating to project goals / targets
- Key recommendations
- Summary of lessons learned

Acknowledgements

Table of Contents

List of Acronyms and Abbreviations

Main Report (maximum 60 pages)

- Purpose of the evaluation
- Audience for and use of the evaluation
- Objectives of the evaluation
- Evaluation methodology, including: rationale for choice of methodology, data sources, methods for data collection and analysis, participatory techniques, ethical and equity considerations, major limitations of the methodology
- Composition of the evaluation team, including any specific roles of team members
- Project description, including: context, underlying rationale, stakeholders and beneficiaries, conceptual model, results chain or logical framework, and project monitoring system
- Evaluation findings, documented by evidence (following guiding questions):

A. Project design, management and implementation

What is the evaluation team's assessment of the quality of the formal project documents and Paradisea capacity to formulate them?

What is the evaluation team's overall assessment of Paradisea's work in connecting the three corridors in between the nature reserves in West Papua?

- How have mapping related activities been conducted and has it been effectively done?
- What is the assessment of the chosen prioritized activities to achieve the project results?
- How has alternative income generation activities contributed to project?
- How effective is Paradisea in strengthening local community's capacity to establish and maintain a customary forest (hutan adat)?
- Are the advocacy strategy (lobby and intervention) with the government applied by Paradisea effective to influence the policy outcomes?
- What is the assessment on Paradisea's strategy on the positions related to land, tenure and natural resources in indigenous territories?

## Project management

- How can better resource allocation be done to achieve improved results?
- How are the internal routines for monitoring and evaluation of the project functioning?

To what degree is the gender perspective integrated into project design and implementation?

### B. Organisation and structure

Is Paradisea sufficiently staffed to manage the project? To what degree is the staff qualified for their tasks? Is there a plan for competence building in the organization and for attracting new qualified staff as the project grows?

What are the strengths and weaknesses of the organizational structure, decision-making structures and structures and routines for following up and implementing decisions?

What is the evaluation team's assessment of the internal division of tasks and authority in Paradisea?

### C. Paradisea and RFN cooperation

How is the cooperation between RFN and Paradisea functioning? What kind of assistance/follow-up from RFN would be most helpful?

- Conclusions: insights into the findings; reasons for successes and failures; innovations
- Recommendations (based on evidence and insights)
- Lessons learned with wider relevance and that can be generalized beyond the project

Annexes to the evaluation report:

- Terms of Reference for the evaluation
- Evaluation matrix
- Timetable
- List of individuals interviewed and of stakeholder groups and/or communities consulted
- List of supporting documentation reviewed
- Research instruments: questionnaire, interview guide(s), etc. as appropriate
- Project logical framework
- Specific monitoring data, as appropriate
- Summary tables of progress towards outputs, targets, goals – referring directly to the indicators established for these in the project logframe
- Short biographies of the evaluators.

**ANNEXE 3**  
**PROJECT LOGRAME**  
**2013 – 2017**  
**(ENGLISH TRANSLATION)**

## ANNEXE 2 – PROJECT LOGFRAME

**Project Title:** Forest zone protection in the Papuan Bird’s Head region through sustainable forest management by indigenous communities and government

**Organization:** Yayasan Paradisea Manokwari / Paradisea Foundation Manokwari – West Papua Province, Indonesia

**Project Goal:** Connection of the North Tamberau, South Tamberau and Arfak Mountains Strict Nature Reserves through agreement amongst indigenous communities to sustainably protect natural forests and recognition by concerned government agencies.

### Project Logframe 2013

Planned Annual Outputs	Activities		Activity Report	Asumptions
Output 1: Plantation crop propagation and cultivation skills	Activity 1.1	Cocoa propagation and cultivation training in Senopi and Miyah (Miyah Corridor).	✓	Support for economic development through plantation crops will provide credibility for the push for customary forests (Hutan Adat).
	Activity 1.2	Coffee propagation and cultivation training in Menyambouw and Catabouw.	✓	
	Activity 1.3	Cocoa propagation and cultivation in Senopi and Miyah (Miyah Corridor).		
	Activity 1.4	Coffee propagation and cultivation training in Menyambouw and Catabouw.		
Output 2: Geographical clarification of customary forest (Hutan Adat) in the 3 proposed corridors connecting the Nature Reserves.  <ul style="list-style-type: none"> <li>• Menyambouw-Catabouw Corridor</li> <li>• Mubrani-Kebar Corridor</li> <li>• Miyah Corridor</li> </ul>	Activity 2.1	Study / analyse development in government planning in Manokwari and Pegunungan Arfak Regencies and West Papua Province	✓	There is agreement regarding clan boundaries
	Activity 2.2	Study / analyse development in government planning in Tamberau Regency		
	Activity 2.3	Study / analyze land and forest tenure systems amongst target clans in Menyambouw, Catabouw, Senopi and Miyah	✓	
	Activity 2.4	Study/analyze land and forest tenure systems amongst clans outside the target areas	✓	
	Activity 2.5	Participatory mapping training for target clans		
	Activity 2.6	Participatory mapping of clan territories in the target corridors	✓	

Output 3: Facilitate and support Customary Clan Congresses (Musyawarah Adat Marga) to formalize customary forests	Activity 3.1	Preliminary discussions regarding agreement to customary forests in the Menyambouw-Catabouw Corridor with leaders representing clans	✓	No mineral potential is found within the <b>project's target corridors</b>
	Activity 3.2	Follow-up discussion regarding agreement to customary forests in the Menyambouw-Catabouw Corridor with leaders representing clans		
	Activity 3.3	Preliminary discussions regarding agreement to customary forests in the Senopi and Miyah area (Miyah Corridor) with leaders representing clans		
	Activity 3.4	Follow-up discussion regarding agreement to customary forests in the Senopi and Miyah area (Miyah Corridor) with leaders representing clans		
	Activity 3.5	Follow-up discussion regarding agreement to customary forests in the Mubrani – Kebar Corridor with leaders representing clans		
	Activity 3.6	Study tour for customary communities, coordination with the central government dan 1 <sup>st</sup> and 2 <sup>nd</sup> declarations of customary forests in the Regency and/or provincial capitals by the target clans.		
	Activity 3.7	Production of a film regarding the existence / lifestyle of indigenous communities from <b>the project's target clans.</b>	✓	
Output 4: Facilities for acknowledgement and recognition of customary forests by relevant government agencies	Activity 4.1	Advocacy and publication of ongoing government support for ecotourism and <b>community cocoa and coffee plantations in the project's target areas</b>		There is no conflicting policies between different government agencies regarding the concept of customary forests. Political conditions do not disturb / undermine the regional situation
	Activity 4.2	Advocacy regarding the opening up of forest areas along roads in the three project target corridors, large-scale mining and clarification of boundary markers for forest <b>zones in the Papuan Bird's Head region.</b>		

## Project Logframe 2014

Planned Annual Outputs	Activities		Activity Report	Asumptions
Output 1: Plantation crop propagation and cultivation skills	Activity 1.1	Cocoa propagation and cultivation training in Mubrani, Kebar and Senopi (Mubrani-Kebar and Miyah Corridors)	✓	Support for economic development through plantation crops will provide credibility for the push for customary forests (Hutan Adat).
	Activity 1.2	Coffee propagation and cultivation training in Menyambouw (Menyambouw-Catabouw Corridor)	✓	
	Activity 1.3	Facilitation of the marketing of community grown coffee in Menyambouw (Menyambouw-Catabouw Corridor)		
	Activity 1.4	Facilitation of the marketing of community grown cocoa in Mubrani, Kebar and Senopi (Mubrani-Kebar Corridor)		
	Activity 1.5	Advocacy for the potential of community grown plantation crops (Cocoa and Coffee)		
	Activity 1.6	Monitoring of the cultivation of cocoa and coffee	✓	
Output 2: Geographical clarification of customary forest (Hutan Adat) in the 3 proposed corridors connecting the Nature Reserves.  <ul style="list-style-type: none"> <li>• Menyambouw-Catabouw Corridor</li> <li>• Mubrani-Kebar Corridor</li> <li>• Miyah Corridor</li> </ul>	Activity 2.1	Celebration of World Environment Day through a flora and fauna drawing competitions for local children in the Menyambouw, Mubrani, Kebar, Senopi and Miyah target areas		There is agreement regarding clan boundaries
	Activity 2.2	Discussions with clan leaders re. the goals of mapping and protection of adat territories	✓	
	Activity 2.3	Participatory mapping training	✓	
	Activity 2.4	Participatory mapping in the 3 project target forest corridors	✓	
	Activity 2.5	Examine / monitor developments in spatial planning in Pegunungan Arfak Regency and West Papua Province	✓	
	Activity 2.6	Examine / monitor developments in spatial planning in Tambrau Regency	✓	

Output 3: Facilities and support for Customary Clan Congresses (Musyawarah Adat Marga) to formalize customary forests	Activity 3.1	Discussions to identify customary / village rules amongst the Hatam, Moile and Meyah (Arfak) tribes relating to protection and sustainable utilization of land and forests with clan leaders in the Menyambouw and Prafi areas.	✓	No mineral potential is found <b>within the project's</b> target corridors
	Activity 3.2	Discussions to identify customary / village rules amongst the Mpur tribe relating to protection and sustainable utilization of land and forests with clan leaders in the Mubrani and Kebar areas.		
	Activity 3.3	Discussions to identify customary / village rules amongst the Ileres and Miyah tribes relating to protection and sustainable utilization of land and forests with clan leaders in the Senopi and Miyah areas.	✓	
	Activity 3.4	Preparation of documents on the preliminary results of identification of customary land and forest resource management rules amongst the Hatam, Meyah, Moile, Mpur, Ileres <b>and Miyah in the project's target forest corridors</b>	✓	
	Activity 3.5	Production of a film regarding the existence / lifestyle of indigenous communities from the <b>project's target clans.</b>	✓	
Output 4: Facilities for information and recognition of customary forests by relevant government agencies	Activity 4.1	Preliminary seminar to inform relevant government technical agencies in Tamberauw <b>Regency regarding the project's plans and goals.</b>		There is no conflicting policies between different government agencies regarding the concept of customary forests.  Political conditions do not disturb / undermine the regional situation
	Activity 4.2	Advocacy and publication of the condition of roads, customary communities and forest zones along the trans-Papua Barat Road connecting Manokwari, Menyambouw, Prafi, Mubrani, Kebar, Senopi, Miyah, Fef, Sausapour and Sorong		
	Activity 4.3	Study and documentation of potential for forest management by customary communities <b>as the project's target.</b>		
	Activity 4.4	Focus group discussions regarding the stages involved in formation of customary forests with relevant stakeholders from government, civil society and community leaders from <b>the project's target areas.</b>		
	Activity 4.5	Project planning coordination visits to relevant government agencies including the Centre for Natural Resource Management, Forestry Service and Regional Planning Agency.		
	Activity 4.6	Policy dialog and focused discussions regarding community participation in spatial planning policy in Papua.		
	Activity 4.7	Focus group discussions with customary communities regarding village spatial planning and customary territory in the project target areas.	✓	
	Activity 4.8	Action plan for ongoing West Papuan spatial planning policy advocacy		

## Project Logframe 2015

Planned Annual Outputs	Activities		Activity Report	Asumptions
Output 1: Plantation crop propagation and cultivation skills	Activity 1.1	Cocoa cultivation and pest management training in Mubrani - Kebar	✓	Support for economic development through plantation crops will provide credibility for the push for customary forests (Hutan Adat).
	Activity 1.2	Cocoa cultivation and pest management training in Senopi - Miyah		
	Activity 1.3	Coffee cultivation and pest management training in Menyambouw (Menyambouw-Catabouw Corridor)	✓	
	Activity 1.4	Study tour for successful coffee farmers to learn about coffee cultivation and processing in Ambaidiru Village, Yapen Regency	✓	
	Activity 1.5	Study tour for successful cocoa farmers to learn about cocoa cultivation and processing in Ransiki, Manokwari Selatan Regency	✓	
Output 2: Geographical clarification of customary forest (Hutan Adat) in the 3 proposed corridors connecting the Nature Reserves.  <ul style="list-style-type: none"> <li>• Menyambouw-Catabouw Corridor</li> <li>• Mubrani-Kebar Corridor</li> <li>• Miyah Corridor</li> </ul>	Activity 2.1	Formation of participatory mapping groups in the Uyehek Area, Menyambouw	✓	There is agreement regarding clan boundaries
	Activity 2.2	Formation of participatory mapping groups in the Miyah tribal area	✓	
	Activity 2.3	Formation of participatory mapping groups in the Ileres tribal area	✓	
	Activity 2.4	Continuation of participatory mapping in the Uyehek (Minyambouw); Miyah and Ileres (Senopi-Miyah Corridor); and the Manimbu and Manim clans (Mubrani-Kebar Corridor) customary territories.	✓	
	Activity 2.5	Update of maps and spatial data in the projects target corridors (including spatial data from the strategic work plans of government agencies) Team in support of the <b>Government of Tambrau Regency's commitment to become a "Conservation Regency"</b>		
	Activity 2.6	Participatory mapping training for the Participatory Mapping Planning Team in support of <b>the Government of Tambrau Regency's commitment to become a "Conservation Regency"</b>	✓	
Output 3: Facilities and support for Customary Clan Congresses (Musyawarah Adat Marga) to formalize customary forests	Activity 3.1	Basic training in the development of village spatial plans and strengthening customary institutions in the Minyambouw; Senopi-Miyah and Mubrani-Kebar areas.		No mineral potential is found within the <b>project's target corridors</b>
	Activity 3.2	Inventarization of potential for customary forest <b>management in the project's 3 corridors.</b>		
	Activity 3.3	Congress of community groups and villages regarding management of customary forests in the Miyah, Ileres, Mpur and Hatam, Moile, Meyah tribal areas.	✓	

	Activity 3.4	Congress of community groups and villages regarding the establishment of rules and institutions for utilization and protection of customary forests in the Miyah, Ireres, Mpur and Hatam, Moile, Meyah tribal areas.	✓	
	Activity 3.5	Focus group discussion to promote a Provincial regulation on the recognition and protection of customary law communities in cooperation with civil society organizations, the Papuan Peoples Representative Assembly (DPR), and the Papuan Peoples Council (MRP) at the level of the West Papuan Provincial Government.	✓	
Output 4: Facilities for information and recognition of customary forests by relevant government agencies	Activity 4.1	Focus group discussion on the formation of a customary law community committee in Tambrau and Pegunungan Arfak Regencies in relation to recognition and protection of of the Miyah, Ireres, Mpur, Hatam, Moile and Meyah tribes.		There is no conflicting policies between different government agencies regarding the concept of customary forests.
	Activity 4.2	Research and development of scientific materials to support recognition and protection of customary communities including materials on the history, customary territories, customary law, customary material wealth and customary institutions and governance systems amongst the Miyah, Ireres, Mpur, Hatam, Moile and Meyah tribes.		
	Activity 4.3	Academic analysis regarding the proposed change of status of the Strict Nature Reserves (Cagar Alam) to National Parks in support of Tambrau Regencies commitment to <b>become a “Conservation Regency”</b>		Political conditions do not disturb / undermine the regional situation
	Activity 4.4	Environmental education to celebrate World Environment Day through a flora and fauna drawing competitions for local children in the Minyambouw, Mubrani, Kebar, Senopi and Miyah target areas in support of Tambrau Regencies commitment to become a <b>“Conservation Regency”</b>		
	Activity 4.5	Expedition to explore the various <b>rainforest ecosystems in the Bird’s Head Region</b>		
	Activity 4.6	Coordination with government institutions regarding planning and the results of annual work program in Tambrau and Pegunungan Arfak Regencies and West Papua Province.		
	Activity 4.7	Discussion of an action plan for disputing the West Papua Province Spatial Plan Regulation and discussion to review the Strategic Environmental Assessment (SEA) documents for revision of the West Papua Spatial Plan.		
	Activity 4.8	Government perceptions survey ( Bupati, Forestry Service, Planning Agency Centre for Natural Resources Conservation and universities) in Teluk Bintuni, Maybrat, Manokwari Selatan, Manokwari, Pegunungan Arfak and Tambrau Regencies as well as West Papua Province regarding the plans to propose that the status of the Arfak Mountains, North Tambrau and South Tambrau Mountains Strict Nature Reserves be changed to National Parks.	✓	

## Project Logframe 2016

Planned Annual Outputs	Activities		Activity Report	Assumptions
Output 1: Plantation crop propagation and cultivation skills	Activity 1.1	Coffee propagation in Uyehek, Dirie, in Menyambouw Distyric and Duaipei and Maibrig Villages in Warmare District		Support for economic development through plantation crops will provide credibility for the push for customary forests (Hutan Adat).
	Activity 1.2	Facilitate potential local coffee buyers (Cafes, restaurants, hotels, government and banks) from Manokwari to visit the Menyambouw area to motivate farmers to cultivate coffee gardens.		
	Activity 1.3	Monitoring of cocoa cultivation and harvesting in community gardens in Mubrani and Kebar.		
	Activity 1.4	Support successful cocoa farmers from Mubrani and Kebar to asist other farmers through conducting training and establishing cocoa nurseries.		
	Activity 1.5	Training and propagation of plantation crops in Senopi and Miyah areas		
	Activity 1.6	Identification and facilitation of non-timber forest product markets for customary communities in Menyambouw, Mubrani, Kebar, Senopi and Miyah		
	Activity 1.7	Planting of trees as customary territory boundary markers and traditional medicines by women in Menyambouw, Mubrani, Kebar, Senopi and Miyah		
Output 2: Participatory mapping in customary territories in the target corridors <ul style="list-style-type: none"> <li>• Menyambouw-Catabouw Corridor</li> <li>• Mubrani-Kebar Corridor</li> <li>• Miyah Corridor</li> </ul>	Activity 2.1	Preliminary Customary Congress to agree to participatory mapping of tribal bounaries including social and technical aspects with 4 groups in the Arfak Mountains (1. Mbenti and Mokwam; 2. Inding and Uyehek; 3.Wasirawi and Warmomi; and 4. Catubouw)		There is agreement regarding clan boundaries
	Activity 2.2	Participatory mapping training of tribal bounaries including social and technical aspects for 4 groups in the Arfak Mountains (1. Mbenti and Mokwam; 2. Inding and Uyehek; 3.Wasirawi and Warmomi; and 4. Catubouw)		
	Activity 2.3	Formation of participatory mapping teams (social and technical teams) for 4 customary community groups in the Arfak Mountains (1. Mbenti and Mokwam; 2. Inding and Uyehek; 3.Wasirawi and Warmomi; and 4. Catubouw)		
	Activity 2.4	Implementation of advanced participatory mapping including (social and technical aspects) in the 3 target corridors		
	Activity 2.5	Tribal congresses to agree to the results of participatory mapping of customary territories(including social and technical aspects) for 4 customary community groups in the Arfak Mountains (1. Mbenti and Mokwam; 2. Inding and Uyehek; 3.Wasirawi and Warmomi; and 4. Catubouw)		

	Activity 2.6	Training and preparation for implementation of detailed (clan level) participatory mapping with selected Miyah clans (those who are identified as ready to conduct detailed mapping) in the Senopi-Miyah Corridor.		
	Activity 2.7	Meetings to reach agreement and form participatory mapping teams (social and technical teams) for implementation of detailed (clan level) participatory mapping with selected Miyah clans (those who are identified as ready to conduct detailed mapping) in the Senopi-Miyah Corridor.		
	Activity 2.8	Implementation of detailed (clan level) participatory mapping with selected Miyah clans (those who are identified as ready to conduct detailed mapping) in the Senopi-Miyah Corridor.		
	Activity 2.9	Sosialization and agreement to the results of detailed (clan level) participatory mapping (maps and supporting documents) with selected Miyah clans, including the leaders of all 14 Miyah clans in the Senopi-Miyah Corridor.		
	Activity 2.10	Meeting of the leaders of all 14 Miyah clans to verify the results of detailed (clan level) participatory mapping (maps and supporting documents) with selected Miyah clans in the Senopi-Miyah Corridor.		
	Activity 2.11	Proposal of customary forests areas for the 14 Miyah clans to the Head of Tambrauw Regency.		
	Activity 2.12	Proposal of customary forests areas for the 14 Miyah clans to the West Papua Provincial Forestry Service and the Ministry of Environment and Forestry..		
Output 3: Facilitate and support Customary Clan Congresses (Musyawarah Adat Marga) to formalize customary forests	Activity 3.1	Compilation of supporting documents as the basis for Village head decrees regarding the proposal of customary forest areas.		No mineral potential is found within the <b>project's</b> target corridors
	Activity 3.2	Sosialization and training in the preparation of village head decrees regarding the proposed establishment of customary forest areas for 4 customary community groups in the Arfak Mountains (1. Mbenti and Mokwam; 2. Inding and Uyehek; 3. Wasirawi and Warmomi; and 4. Catubouw)		
	Activity 3.3	Sosialization and training in the preparation of village regulations (Peraturan Kampung) regarding the formal establishment of customary territory and customary forests of Miyah 7 clans (including the Hai, Bawe-Wanar, Bame-Vitator, Bame-Sinau, Yeum, Titit and Nso clans) in the Senopi-Miyah Corridor.		
	Activity 3.4	Sosialization and training in the preparation of village regulations (Peraturan Kampung) regarding the formal establishment of customary territory and customary forests of 3 Mpur clans (Manim, Manimbu and Kasi) in the Mubrani-Kebar Corridor.		

	Activity 3.5	Facilitation of ceremonies for the signing of village head decrees regarding the establishment of customary forests in the Arfak, Mubrani-Kebar and Senopi-Miyah areas.		
	Activity 3.6	Indicative participatory mapping of clan territory boundaries based on sketch maps overlaid on satellite images based on the results of agreements reached during congresses between the Manim, Manimbu, Kasi and Makambak clans in the Mubrani-Kebar Corridor		
	Activity 3.7	Facilitate legal consultations regarding the village head decrees on customary territories and forests with relevant government agencies in Tambrauw, Pegunungan Arfak and Tambrauw Regencies and West Papua Province.		
	Activity 3.8	Policy lobbying to the governments of Pegunungan Arfak and Tambrauw Regencies regarding the proposed customary forests in the target corridors.		
Output 4: Facilities for information and recognition of customary forests by relevant government agencies	Activity 4.1	Facilitate clan representatives to present the results of the Congress of the Manim, Manimbu, Kasi dan Makambak Clans (Mubrani-Kebar Corridor) relating to forest protection of clan territories to the government of Tambrauw Regency.		There is no conflicting policies between different government agencies regarding the concept of customary forests.  Political conditions do not disturb / undermine the regional situation
	Activity 4.2	Facilitate a workshop on the proposal for protection of the customary forests of the Manim, Manimbu, Kasi dan Makambak Clans (Mubrani-Kebar Corridor) to the government of Tambrauw Regency.		
	Activity 4.3	Facilitate a workshop on the proposal for a regulation or decree for the protection of customary forests in the Indabri and Kwau areas (Menyambouw-Catabouw Corridor) in Pegunungan Arfak Regency.		
	Activity 4.4	Facilitate a workshop to discuss the drafting of a regulation or decree for the protection of customary forests in the Manim, Manimbu, Kasi and Makambak clan areas (Mubrani-Kebar Corridor) to the government of Tambrauw Regency in Sausapor.		
	Activity 4.5	Facilitate a workshop to discuss the drafting of a regulation or decree for the protection of customary forests in the Indabri and Kwau areas (Menyambouw-Catabouw Corridor) in Pegunungan Arfak Regency.		
	Activity 4.6	Limited discussion with relevant government agencies in Tambrauw and Pegunungan Arfak Regencies regarding the plan to recommend customary forest areas and share project developments / experiences from the field.		
	Activity 4.7	Consultation and handing over of customary territory maps developed with communities in the three proposed connecting forest corridors to the Customary Territories Registration Agency (Badan Registrasi Wilayah Adat - BRWA) in Jakarta.		

	Activity 4.8	Focus group discussion regarding living space for customary communities in the midst of development investment by the regional governments.		
	Activity 4.9	Study and compilation of formal proposals for the recognition of customary forest rights in the three proposed connecting forest corridors.		
Output 5 Facilities for information and recognition of customary forests outside the proposed connecting forest corridors by relevant government agencies in Pegunungan arfak, Tamberau and Manokwari Regencies	Activity 5.1	Collection and analysis of bio-physical and spatial data for forest areas outside the 3 proposed connecting forest corridors.		Customary communities outside the proposed connecting forest corridors support efforts for their customary territory to be recognized by the government
	Activity 5.2	Study to identify customary territorial units and customary forest areas outside the 3 proposed connecting forest corridors.		
	Activity 5.3	Socialization of laws and regulations regarding the stages involved in recognition of the customary rights of communities outside the 3 proposed connecting forest corridors.		
	Activity 5.4	Training in participatory mapping of customary territories and forests for selected communities outside the 3 proposed connecting forest corridors.		
	Activity 5.5	Identification and development of indicative maps of the distribution and customary territories of selected communities living adjacent to the Pegunungan Arfak, North Tamberau and South Tamberau Strict Nature Reserves outside the 3 proposed connecting forest corridors.		
	Activity 5.6	Training of volunteers and development of indicative maps of customary territories with selected communities outside the 3 proposed connecting forest corridors.		
Output 6 Proposal for the formation of a national park including the Arfak Mountains, North Tamberau and South Tamberau SNRs and the three proposed connecting forest corridors.	Activity 6.1	Survey of ecosystem characteristics in the Pegunungan Arfak, North Tamberau and South Tamberau Strict Nature Reserves and utilization by customary communities to support the formation of a national park, in collaboration with the University of Papua.		Extended conflicts between customary communities do not arise
	Activity 6.2	Study tour to learn about the process (steps) and academic studies involved in the establishment of the Wasur National Park in Merauke District.		
	Activity 6.3	Study of developments regarding the alignment of forest areas in the Pegunungan Arfak, North Tamberau and South Tamberau Strict Nature Reserves, proposed connecting forest corridors and surrounding forest areas in relation to the indicative identification of customary forest areas.		
	Activity 6.4	Policy lobbying for the formation of a national park to the Ministry of Environment and Forestry and relevant Provincial and Regency level government agencies.		

## Project Logframe 2017

Planned Annual Outputs	Activities		Activity Report	Assumptions
Output 1: Plantation crop propagation and cultivation skills	Activity 1.1	Ongoing mentoring of Coffee and Cocoa Farmers		Support for economic development through plantation crops will provide credibility for the push for customary forests (Hutan Adat).
	Activity 1.2	Competition for the collection of non-timber forest products as sources of food and traditional medicine from customary forests		
	Activity 1.3	Inventory of non-timber forest product commodities in customary territories		
	Activity 1.4	Demonstration of planting forest plants in customary forest areas with local children		
	Activity 1.5	Planting of trees as boundary markers in community garden areas by indigenous women		
Output 2: Participatory mapping in customary territories in the target corridors	Activity 2.1	Continuation of customary territory mapping with 12 Ileres clans in Ileres District		There is agreement regarding clan boundaries
	Activity 2.2	Continuation of customary territory mapping with 4 Mpur clans in Muhrani District		
	Activity 2.3	Continuation of participatory customary territory mapping with clans in Catabouw area		
Output 3: Facilitate and support Customary Clan Congresses (Musyawarah Adat Marga) to formalize customary forests	Activity 3.1	Research and training on zonation of forest areas with the aim of establishing basic forest conservation functions in the nature reserves and the 3 proposed forest corridors		No mineral potential is found within the <b>project's</b> target corridors
	Activity 3.2	Customary assemblies to develop customary forest management and utilization plans in line with traditional ecological knowledge in the 3 proposed connecting forest corridors		
	Activity 3.3	Mapping of genetic resources used by indigenous communities based on traditional knowledge in the 3 proposed connecting forest corridors		
	Activity 3.4	Inventory of non-timber forest products and ecosystem services in-line with mapping of forest ecosystem functions in the 3 proposed connecting forest corridors		
	Activity 3.5	Training in development of village regulations regarding maintaining the forest ecosystem functions in-line with traditional ecological knowledge in the 3 proposed connecting forest corridors		
	Activity 3.6	Design of sustainable forest management systems based on the forest characteristics and local socio-cultural conditions in the 3 proposed connecting forest corridors		
	Activity 3.7	Restoration and strengthening of forest functions with local children through demonstration of plant propagation and planting of forest trees in customary territories in the 3 proposed connecting forest corridors		

	Activity 3.8	Customary assemblies to plan for protection of customary forests including protection from fire and land conversion in the 3 proposed connecting forest corridors		
Output 4: Facilitate for information and recognition of customary forests by relevant government agencies	Activity 4.1	Limited discussion to develop recommendations for forest conservation systems with customary communities and relevant government agencies in Pegunungan Arfak Regency		There is no conflicting policies between different government agencies regarding the concept of customary forests.  Political conditions do not disturb the regional situation
	Activity 4.2	Limited discussion to develop recommendations for forest conservation systems with customary communities and relevant government agencies in Tamberauw Regency		
	Activity 4.3	Limited discussion to develop recommendations for forest conservation systems with customary communities and government agencies in Manokwari & Manokwari Selatan		
Output 5 Facilitate for information and recognition of customary forests outside the proposed connecting forest corridors by relevant government agencies in Peg. Arfak, Tamberauw & Manokwari	Activity 5.1	Training and development of zonation for the Strict Nature Reserves and protected forest areas within the proposed national park.		Customary communities outside the proposed forest corridors support efforts for their territory to be recognized by the government
	Activity 5.2	Development of documents of local conditions, adat laws and institutions with customary communities outside the 3 proposed connecting forest corridors		
Output 6 Proposal for the formation of a national park including the Arfak Mountains, North Tamberauw and South Tamberauw SNRs and the three proposed connecting forest corridors.	Activity 6.1	Study on technical considerations regarding the location, boundaries, extent and functions of the 3 Nature Reserves and protected forest areas within the proposed national park		Extended conflicts between customary communities do not arise
	Activity 6.2	Study on technical considerations regarding the bio-physical conditions in the 3 Nature Reserves and protected forest areas within the proposed national park		
	Activity 6.3	Study on technical considerations regarding the sustainable utilization plans of forest areas in the 3 Nature Reserves and protected forest areas within the proposed national park		
	Activity 6.4	Seminar of the results of technical studies regarding the 3 Nature Reserves and protected forest areas within the proposed national park		
	Activity 6.5	Focus Group Discussion to build partnerships for proposal of the incorporation of forest areas in the 3 Nature Reserves and connecting forest corridors into the proposed national park		

#### ANNEXE 4 – EVALUATION IMPLEMENTATION TIMETABLE

Day / Date	Activities
Monday 10 <sup>th</sup> October	<ul style="list-style-type: none"> <li>● Meeting with Oyvind Sandbukt – RFN Program Support Staff</li> <li>➤ Travelling from Jakarta to Manokwari (Angel Manembu)</li> </ul>
Tuesday 11 <sup>th</sup> October	<ul style="list-style-type: none"> <li>➤ Travelling from Jakarta to Manokwari (Angel Manembu)</li> </ul>
Wednesday 12 <sup>th</sup> October	<ul style="list-style-type: none"> <li>● Meeting with Paradisea management and staff (Angel Manembu)</li> <li>➤ Travelling from Jakarta to Manokwari (Robert Hewat)</li> <li>➤ Overnight in Swiss-Bel Hotel Manokwari</li> </ul>
Thursday 13 <sup>th</sup> October	<ul style="list-style-type: none"> <li>➤ Meeting with Paradisea management and staff</li> <li>➤ Meetings with local NGO personnel               <ul style="list-style-type: none"> <li>- <i>Imam Setiawan</i> – Bentara Papua</li> <li>- <i>Sena Bagus</i> – Kamuki</li> <li>- <i>Andi Seragih</i> – Mnukwari</li> <li>- <i>Risdianto</i> – Perdu</li> <li>- <i>Nurul Chairunnisa</i> – Samdhana Institute</li> <li>- <i>Lili Hasanuddin</i> and <i>Fadillah Ayu Hapsari</i> – The Asia Foundation (TAF)</li> </ul> </li> <li>➤ Overnight in Swiss-Bel Hotel Manokwari</li> </ul>
Friday 14 <sup>th</sup> October	<ul style="list-style-type: none"> <li>➤ Meeting with <i>Yoppie Bakarbesy</i> – Head of Production Division, Papua Province Forestry Service and Paradisea Board of Directors</li> <li>➤ Meeting with <i>Donal Hutasoid</i>, <i>A.D.B Kasardata</i> and <i>Gerard Wamaer</i> - Head and staff of the West Papua Natural Resources Management Agency (BBKSDA)</li> <li>➤ Meeting / discussion with Paradisea field staff</li> <li>➤ Meeting with <i>Charlie Heatubun</i> and <i>Johan Koibur</i> –Biodiversity Research Centre, University of Papua</li> <li>➤ Meeting with <i>Agus Wabdaron</i> – Local participatory mapping consultant</li> </ul>
Saturday 15 <sup>th</sup> October	<ul style="list-style-type: none"> <li>➤ Travelling from Manokwari Town to Siakwa Village (Miyah-Senopi Corridor)               <ul style="list-style-type: none"> <li>● Informal discussions with community members in Siakwa</li> </ul> </li> <li>➤ Overnight in Siakwa Village</li> </ul>
Sunday 16 <sup>th</sup> October	<ul style="list-style-type: none"> <li>➤ Informal discussions with community members in Syakwa</li> <li>➤ Travelling from Syakwa Village to Tabamsere Village and Fef Town (Proposed capital city of Tambrauw Regency)               <ul style="list-style-type: none"> <li>● Informal discussion with community members in Tabamsere Village</li> <li>● Informal discussions with community members in Fef</li> </ul> </li> <li>➤ Travelling from Fef Town to Asiti Village (Miyah-Senopi Corridor)               <ul style="list-style-type: none"> <li>● Meeting with Bernadus Syufi – former head of Asisti Village</li> </ul> </li> <li>➤ Travelling from Asisti Village to Arfu Village (Mubrani – Kebar Corridor)</li> <li>➤ Overnight in Bijamfouw Village, Mubrani District</li> </ul>
Monday 17 <sup>th</sup> October	<ul style="list-style-type: none"> <li>➤ Meetings / discussions with community members in Arfu, Atori and Bijamfouw Villages, Mubrani District               <ul style="list-style-type: none"> <li>● Informal discussions with Salmon Manim, Arfu Village</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Discussions with Marten Manim &amp; visit to cocoa agroforest, swidden gardens and the Mubrani-Kaironi Wildlife Sanctuary (Turtle Nesting Beach)</li> <li>• Discussions with village head &amp; community members in Atori Village</li> </ul> <ul style="list-style-type: none"> <li>➤ Travelling from Arfu Village to Warokon (Mubrani District Capital) <ul style="list-style-type: none"> <li>• Meeting with Ismail Manim – Head of Mubrani District in Warokon Village</li> </ul> </li> <li>➤ Travelling from Mubrani Village to Indabri Village (Minyambouw-Catabouw Corridor) <ul style="list-style-type: none"> <li>• Discussion with community members in Indabri Village</li> </ul> </li> <li>➤ Travelling from Indabri Village to the Parikeet Guest House, Mokwam Valley (Minyambouw-Catabouw Corridor) <ul style="list-style-type: none"> <li>• Discussions with Hans Mandacan – Birdwatching / Ecotourism Guide</li> <li>• Discussions / interviews with Paradisea field staff</li> </ul> </li> <li>➤ Overnight in Parikeet Guest House</li> </ul>
Tuesday 18 <sup>th</sup> October	<ul style="list-style-type: none"> <li>➤ Travelling from Mokwam Valley to Andang</li> <li>➤ Meeting with Yosias Saroy - Head of Pegunungan Arfak Regency</li> <li>➤ Informal discussion with Hans L. Mandacan - Head of Pegunungan Arfak Regency Planning Agency (BAPPEDA)</li> <li>➤ Travelling from Andang to Indabri Village</li> <li>➤ Visit to coffee gardens with Marianus &amp; Daniel Mandacan</li> <li>➤ Discussion with local women in Indabri Village</li> <li>➤ Travelling from Indabri Village to the Parikeet Guesthouse</li> <li>➤ Discussions / interviews with Paradisea field staff</li> <li>➤ Overnight in Parikeet Guest House</li> </ul>
Wednesday 19 <sup>th</sup> October	<ul style="list-style-type: none"> <li>➤ Meeting with community members in Kwau Village</li> <li>➤ Travelling from Parikeet Guesthouse to Manokwari Town</li> </ul>
Thursday 20 <sup>th</sup> October	<ul style="list-style-type: none"> <li>➤ Discussions / interviews with Paradisea admin staff – Norvita, Helma and Agustin</li> <li>➤ Meeting with Agus Sumule – Head of Agriculture Department, University of Papua</li> <li>➤ Meeting with Yunus Yumte – Samdhana Institute Papua Program Manager</li> <li>➤ Meeting with Daud Womsiwor – Head of the Extensions Service, Papua Province Agriculture Service and Paradisea Board of Directors</li> <li>➤ Meeting with Nico Wanenda – Former head of the Papua Barat Lands Agency</li> </ul>
Friday 21 <sup>st</sup> October	<ul style="list-style-type: none"> <li>➤ Evaluator meeting to develop preliminary findings, recommendations &amp; presentation</li> <li>➤ Pre-workshop meeting with Paradisea to canvas recommendations for Paradisea and RFN</li> <li>➤ Telephone interview with R. Torheim &amp; G. Erichsrud, RFN Project Management Team</li> </ul>
Saturday 22 <sup>nd</sup> October	<ul style="list-style-type: none"> <li>➤ Evaluation team meeting to finalize presentation materials</li> <li>➤ Workshop with Paradisea team to present preliminary findings and develop team recommendations for Paradisea and RFN</li> </ul>
Sunday 23 <sup>rd</sup> October	<ul style="list-style-type: none"> <li>➤ Travelling from Manokwari to Jakarta (Angel Manembu)</li> <li>➤ Preparation of draft evaluation report (Robert Hewat)</li> </ul>
Monday 24 <sup>th</sup> October	<ul style="list-style-type: none"> <li>➤ Meeting with Yance de Fretes – <b>Conservation International</b> ....</li> <li>➤ Teleconference with Natalia Kiniho - Forest Protection Section, Tambrauw Forestry Service</li> </ul>

## ANNEXE 5 - LIST OF RESPONDENTS

### Internal Stakeholders

No.	Name of Respondent	Sex	Organization / Position
<b>Rainforest Foundation Norway</b>			
1.	Ramadani Torheim	F	RFN – West Papua Program Manager
2.	Geir Erichsrud	M	RFN – Papua / PNG Program Manager
3.	Oyvind Sandbukt	M	RFN Program Support Staff
<b>Paradisea Foundation Manokwari Staff</b>			
4.	Esau Nur Young	M	Executive Director – Paradisea Foundation
5.	Norvita	F	Finance Manager
6.	Agustin Manuputty	F	Personnel Manager
7.	Helma Wonsiwor	F	Administrator
8.	Francine Hematang	M	Coordinator Data Analysis and Advocacy
9.	Fourly Latul	M	Policy / Legal Drafting Coordinator
10.	Hengky Yesapadanya	M	Program Manager – Arfak-Tambrau
11.	Pasifilionira (Yani) Sawaki	F	Indigenous Peoples & Economic Policy Staff
12.	Jefry Resubun	M	Data Management
13.	Andrin Sirandan	M	Advocacy Staff
14.	Daniel Mandacan	M	Arfak (Minyambouw-Catabouw) Corridor Coordinator
15.	Dwi Astuti RUmakat	F	Field Staff – Arfak (Minyambouw-Catabouw) Corridor
16.	Nerius (Damas) Sai	M	Coordinator – Mubrani-Kebar Corridor
17.	Ayu Wulandari	F	Field Staff – Mubrani-Kebar Corridor
18.	Ratna Nofiati	F	Coordinator - Miyah-Senopi Corridor
19.	Jaqualine Kafiar	F	Field Staff – Miyah-Senopi Corridor
20.	Sulfianto Alias	M	Coordinator – Bintuni REDD+ Program
21.	Abdullah Hindom	M	Field Staff – Bintuni REDD+ Program
22.	Reiny Suruan	F	Coordinator – Fakfak REDD+ Program
23.	Stefani Pedai	F	Field Staff – Fakfak REDD+ Program
24.	Obed Kosai	M	Volunteer
25.	Robby Masoka	M	Driver
26.	Kanen Kosai	M	Office Assistant

<b>Manokwari Civil Society Stakeholders</b>			
27.	Bustar Maitar	M	Bentara Papua (Local NGO)
28.	Imam Setiawan	M	Bentara Papua (Local NGO)
29.	Sena Bagus	M	Kamuki (Local NGO)
30.	Andi Saragih	M	Mnukwar Papua (Local NGO)
31.	Risdianto	M	Perdu Foundation (Local NGO)
32.	Agus Wabdaron	M	Participatory Mapping Consultant
33.	Nurul Chairunnisa	F	Samdhana Institute
34.	Yunus Yumte	M	Samdhana Institute – Papua Program Manager
35.	Meity Mondong	F	Conservation International – Papua Program Director
36.	Yance de Fretes	M	Conservation International – Bird’s Head Program Manager
37.	Geraldi Afief	M	Conservation International – Bird’s Head Program GIS Officer
38.	Mujiyanto	M	Conservation International – Bird’s Head Program Staff
39.	Metuzalak Awom	M	JANGKAR – Papuan Public Finance & Policy Advocacy Network
40.	Lili Hasanuddin	M	The Asia Foundation
41.	Fadillah Ayu Hapsari	F	The Asia Foundation
42.	Yan Christian Warinussy	M	Executive Director – Legal Aid Research, Investigation & Development Institute (LP3BH) Manokwari
43.	Samuel Yensenem	M	Staff – LP3BH
44.	Ferry Manufandu	M	Staff – LP3BH
45.	Yohannis Akwan	M	Bin Mata Hom Foundation / West Papua Customary Council / West Papua Legal Aid Foundation (LMA Papua Barat)
46.	Willie Lefteuw	M	West Papua Legal Aid Foundation
47.	George Dedaida	M	Director - Papuana Conservation Foundation & Secretary – West Papua Customary Council (LMA Papua Barat)
48.	Herman Orissu	M	WWF Sorong Office – Former manager of Coastal Communities Ag. Development (CCAD) Project & Papua Conservation Fund
49.	Sahat Seragih	M	Head of the Peduli Sehat – Former Director YBLBC
50.	Luki Rumetna	M	The Nature Conservancy – Raja Ampat Program Manager
51.	Benja Mambai	M	National Director - World Wide Fund for Nature
52.			

<b>Government Stakeholders</b>			
53.	Donald Hutasoid	M	Head - West Papua Natural Resources Management Agency
54.	ADB Kasardata	M	Staff - West Papua Natural Resources Management Agency
55.	Gerard Wamaer	M	Staff - West Papua Natural Resources Management Agency
56.	Yakobus (Yoppie) Bakarbessi	M	Head - Production section, Provincial Forestry Service & Paradisea Board Member
57.	Daud Womsiwor	M	Head - Extensions Service, Provincial Agriculture Service & Paradisea Founder
58.	Nico Wanenda	M	Former head of the West Papua Lands Agency
59.	Marthen Nauw	M	Head - Forest Protection Section, Tambrau Forestry Service
60.	Natalia Kiniho	F	Staff - Forest Protection Section, Tambrau Forestry Service
61.	Yosias Saroy	M	Head of Pegunungan Arfak Regency (Bupati Pegaf)
62.	Hans Lodewyk Mandacan	M	Head Pegunungan Arfak Regency Planning Agency (BAPPEDA)
63.	Jakob Manggaprouw	M	Pegunungan Arfak Regency – Public Works Service
64.	Mohammad Lakotani	M	Candidate for Vice Governor of West Papua
65.	Peter Matani	M	Head of the West Papua
66.	Nathaniel Mandacan	M	Provincial Secretary - West Papua Environmental Protection Agency Environmental Protection Agency
67.	Agus Tarami	M	Manokwari Selatan Agriculture Service
<b>University of Papua (UNIPA) Stakeholders</b>			
68.	Jacob Manusawai	M	Dean of the University of Papua (UNIPA) & Former Head of the West Papua Environmental Protection Agency
69.	Charlie Heatubun	M	Head of Biodiversity Research Center of UNIPA
70.	Johan Koibur	M	Secretary - Biodiversity Research Center of UNIPA
71.	Agus Sumule	M	Dean of Agriculture Faculty & Founder of Paradisea
72.	Sepus Fatem	M	UNIPA Lecturer & Advisor to the Head of Tambrau Regency
73.	Zulkifar	M	UNIPA Lecturer & Member of Conservation Province Regulation Drafting Committee
74.	Deasy Lontoh	F	UNIPA Program Coordinator - Tambrau Marine Turtle Sanctuaries
75.	Sinus Keroman	M	UNIPA Ag.I Advisor – Tambrau Marine Turtle Sanctuaries
<b>Private Sector</b>			
76.	Hidayat Alhamid	M	External Relations - BP Tangguh LNG Project
77.	Charles Roring	M	Ecotourism Guide / Social Entrepreneur
78.	Peter Pelamonia	M	Agricultural Contractor – Former Director of Paradisea

## Community Stakeholders

<b>Miyah – Senopi Corridor</b>			
79.	Lukas Momo	M	Village Head - Syakwa Village
80.	Agustinus Momo	M	Community Member – Syakwa Village
81.	Marta Iran	F	Community Member – Syakwa Village
82.	Decky Momo	M	Community Member – Syakwa Village
83.	Gaspar Teniwut	M	Community Member – Syakwa Village
84.	Anis Iron	M	Youth – Syakwa Village
85.	Januarius Baru	M	Youth – Syakwa Village
86.	Lukas Sedik	M	Youth – Syakwa Village
87.	Vitakor Esyah	M	Youth – Syakwa Village
88.	Bernard Syufi	M	Village leader of Astiti Village
89.	Yosofat Baru	M	Community Member – Tabamsere Village
90.	Yantja Nauw	M	Village Head - Fef
91.	Petrus Iran	M	Community Leader – Fef
92.	Helena Momo	F	Community Member - Fef
93.	Martha	F	Community Member - Fef
<b>Mubrani – Kebar Corridor</b>			
94.	Ikanor Manimbu	M	Atori Village Council
95.	Tomas Manimbu	M	Atori Village Council
96.	Martin Manimbu	M	Atori Village leader
97.	Zakarias Masi	M	Head of Atori village
98.	Sarah Manimbu	F	Community Member – Atori Village
99.	Salmon Manim	M	Community Leader - Arfu village (Cocoa Farmer)
100.	Yohan Manim	M	Community Member - Arfu village
101.	Marten Manim	M	Community Member - Arfu village (Cocoa Farmer)
102.	Wife of Martin Manim	F	Community Member - Arfu village
103.	Ismail Manim	M	Head of Mubrani District

<b>Arfak (Minyambouw – Catabouw Corridor) – Indabri and Ninsimoi Villages</b>			
104.	Obet Bikiou	M	Village secretary - Ninsimoi Village
105.	Frans Sayori	M	Community Member- Indabri Village
106.	Yudas Muid	M	Community Member- Indabri Village
107.	Yustus Sayori	M	Community Member- Indabri Village
108.	Paulina Bikiou	F	Community Member – Minsimoi Village
109.	Maria Bikiou	F	Community Member – Minsimoi Village
110.	Salomina Pungwan	F	Community Member – Minsimoi Village
111.	Regina Sayori	F	Community Member- Indabri Village
112.	Enita Muid	F	Community Member- Indabri Village
113.	Marianus Mandacan	M	Community Member - Ninsimoi Village (Coffee Farmer)
114.	Wife of Marianus Mandacan	F	Community Member - Ninsimoi Village
<b>Arfak (Minyambouw – Catabouw Corridor) - Kwau Village</b>			
115.	Hans Mandacan	M	Ecotourism Guide - Head of Parikeet Guesthouse - Kwau
116.	Paulus Mandacan	M	Treasurer - Parikeet Guesthouse / Kwau Ecotourism Group
117.	Yustinus Mandacan	M	Head of Kwau Village
118.	Benny Mandacan	M	Village secretary – Kwau Village
119.	Yance Mandacan	M	Community Member – Kwau Village
120.	Markus Mandacan	M	Community Member – Kwau Village
121.	Domiggus Wonngor	M	Honorarium Teacher - Kwau Elementary School
122.	Yustinus Mandacan	M	Community Member – Kwau Village
123.	Cornelis Mandacan	M	Community Member – Kwau Village
124.	Lazarus Wonggor	M	Community Member – Kwau Village
125.	Ruben Mandacan	M	Community Member – Kwau Village
126.	Nuryak Mandacan	F	Community Member – Kwau Village
127.	Setermina Mandacan	F	Community Member – Kwau Village
128.	Avares Mandacan	F	Community Member – Kwau Village
129.	Yusuf Mandacan	M	Community Member – Kwau Village
130.	Daud Wonggor	M	Community Member – Kwau Village
131.	Dominggus Mandacan	M	Community Member – Kwau Village
132.	Yunke Mandacan	F	Community Member – Kwau Village
133.	Yuni Mandacan	F	Community Member – Kwau Village
134.	Hani Mandacan	F	Community Member – Kwau Village
135.	Tigwa Mandacan	F	Community Member – Kwau Village
136.	Soleman Ulo	M	Community Member – Kwau Village
137.	Syance Mandacan	F	Community Member – Kwau Village

## ANNEXE 6 - LIST OF SUPPORTING DOCUMENTATION REVIEWED

No.	Date	Document Title
<b>Arfak – Tambrau Project Planning Documents, Annual Reports &amp; Audit Reports 2013 Financial Year</b>		
1.	April 2013	Form 1A (Paradisea 2013-2017) - Formulir aplikasi multi-tahun untuk proyek baru atau kelanjutan proyek yang sedang berjalan bagi mitra Rainforest Foundation Norway (RFN) – Name Proyek: Terlindungnya kawasan hutan di Wilaya Kepala Burung Papua melalui pengelolaan hutan secara berkelanjutan oleh masyarakat adat dan pemerintah.  <i>[Multi-year application form for new or ongoing projects with RFN – Project tile: Forest zone protection in the Papuan Bird’s Head through sustainable forest management by indigenous communities and government]</i>
2.	April 2013	Form 1B (Paradisea 2013) - Rencana kerja untuk tahun 2013 <i>[Work plan for 2013]</i>
3.	April 2013	Form 1C (Paradisea 2013) – Annual Budget 2013
4.	December 2013	Form 2A (Paradisea 2013) – Logframe 2013
5.	December 2013	Form 2B (Paradisea 2013) – Laporan Naratif Akhir Tahun 2013 <i>[End-of-year Narrative Report 2013]</i>
6.	December 2013	Form 2C (Paradisea 2013) - Statement of Budget and Expenditure for the period of January to December 2013
7.	March 2014	Project Audit Report (Syarief Basir & Assoc., Registered public accountants)
8.	March 2014	Project Audit Report – Management Letter (Syarief Basir & Assoc., Registered public accountants)
<b>Arfak – Tambrau Project Planning Documents, Annual Reports &amp; Audit Reports 2014 Financial Year</b>		
9.	April 2014	Form 1B (Paradisea 2014) - Hasil tahunan dan perencanaan aktivitas <i>[Annual results and activity planning]</i>
10.	April 2014	Form 1C (Paradisea 2014) – Annual Budget 2014
11.	December 2014	Form 2A (Paradisea 2014) – Logframe 2014
12.	December 2014	Form 2B (Paradisea 2014) – Laporan Naratif Akhir Tahun 2014 <i>[End-of-year Narrative Report 2014]</i>
13.	December 2014	Form 2C (Paradisea 2014) - Statement of Budget and Expenditure for the period of January to December 2014
14.	March 2015	Project Audit Report 2014 (Syarief Basir & Assoc., Registered public accountants)
15.	March 2015	Project Audit Report 2014 – Management Letter (Syarief Basir & Assoc., Registered public accountants)

<b>Arfak – Tambrauw Project Planning Documents, Annual Reports &amp; Audit Reports 2015 Financial Year</b>		
16.	April 2015	Form 1B (Paradisea 2015) - Hasil tahunan dan perencanaan aktivitas
17.	April 2015	Form 1C (Paradisea 2015) – Annual Budget 2015
18.	December 2015	Form 2A (Paradisea 2015) – Logframe 2014
19.	December 2015	Form 2B (Paradisea 2015) – Laporan Naratif Akhir Tahun 2013 [End-of-year Narrative Report 2014]
20.	December 2015	Form 2C (Paradisea 2015) - Statement of Budget and Expenditure for the period of January to December 2014
21.	March 2016	Project Audit Report 2015 (Syarief Basir & Assoc., Registered public accountants)
22.	March 2016	Project Audit Report 2015 – Management Letter (Syarief Basir & Assoc., Registered public accountants)
<b>Arfak – Tambrauw Project Planning Documents, Mid-Year Reports &amp; Financial Reports 2016 Fin.Year</b>		
23.	May 2016	Form 1A (Paradisea 2016-2020) - Formulir aplikasi multi-tahun untuk proyek baru atau kelanjutan proyek yang sedang berjalan bagi mitra Rainforest Foundation Norway (RFN) – Name Proyek: Terlindungnya kawasan hutan di Wilaya Kepala Burung Papua melalui pengelolaan hutan secara berkelanjutan oleh masyarakat adat dan pemerintah.  <i>[Multi-year application form for new or ongoing projects with RFN – Project tile: Forest zone protection in the Papuan Bird's Head through sustainable forest management by indigenous communities and government]</i>
24.	May 2016	Form 1B (Paradisea 2016) - Hasil tahunan dan perencanaan aktivitas
25.	May 2016	Form 1C (Paradisea 2016) – Annual Budget 2016
26.	May 2016	Kontrak antara Yayasan Paradisea Manokwari dan Rainforest Foundation Norway (RFN) untuk proyek: Terlindungnya kawasan hutan di Wilaya Kepala Burung Papua melalui pengelolaan hutan secara berkelanjutan oleh masyarakat adat dan pemerintah.  <i>[Contract between Paradisea Foundation Manokwari and Rainforest Foundation Norway (RFN) for the project: Forest zone protection in the Papuan Bird's Head through sustainable forest management by indigenous communities and government]</i>
27.	July 2016	Form 2B (Paradisea 2016) – Laporan Naratif Tengah Tahun 2016 [Mid-year Narrative Report 2016]
28.	July 2016	Form 2C (Paradisea 2016) - Statement of Budget and Expenditure for the period of January to June 2016
<b>Other Paradisea Administrative Documents</b>		
29.	2014	Yayasan Paradisea Manokwari – Standard operating procedures (SOP) Keuangan
30.	Oct. 2016	General ledger (detail) – TVA YPM 2016 – 01/01/2016 – 30/09/2016
31.	Oct. 2016	General ledger (detail) – YPM 2016 REDD+ – 01/01/2016 – 30/09/2016

Activity Reports 2013		
32.	May 2013	Kajian penguasaan lahan dan hutan di daerah proyek 2013 [ <i>Study on land and forest ownership in the project area – 2013</i> ] – 8 pages
33.	July 2013	Laporan Pelatihan Pemeliharaan tanaman kakao di Kampung Senopi, Asiti dan Afrawi, Distrik Senopi, Kabupaten Tambrau [ <i>Report on cocoa cultivation training in Senopi, Asiti and Afrawi Villages, Senopi District, Tambaauw Regency</i> ] - 17 Pages
34.	August 2013	Notulensi diskusi awal terkait perlindungan kawasan hutan Prafi Kampung – Tanggal 14 Agustus 2013 [ <i>Notes on preliminary discussions regarding forest zone protection in Prafi Village – 14 August 2013</i> ] – 10 pages
35.	August 2013	Notulensi diskusi awal terkait perlindungan hutan Kampung Ugyehek, Brig dan Wamindahi – Tanggal 17 Agustus 2013 [ <i>Notes on preliminary discussions regarding forest protection in Ugyehek, Brig and Wamindah Villages – 17 August 2013</i> ] – 9 pages
36.	August 2013	Notulensi diskusi awal terkait perlindungan hutan Kampung Indabri – Tanggal 23 Agustus 2013 [ <i>Notes on preliminary discussions regarding forest protection in Indabri Village – 23 August 2013</i> ] – 8 pages
37.	September 2013	Pelatihan Pemeliharaan dan Pembibitan Tanaman Kopi masyarakat Ugyehek dan Dirie – Indabri 16 September 2013 [ <i>Report on training in coffee cultivation and propagation for the Ugyehek and Dirie communities – Indabri Village 16<sup>th</sup> September 2013</i> ] – 7 pages
38.	October 2013	Notulensi Pelatihan Pemetaan Batas – Batas Wilayah Umum Daerah Indabri - Tanggal 16 Oktober 2013 [ <i>Notes on participatory boundary mapping training in the Indabri area – 16 October 2013</i> ] – 3 pages
39.	November 2013	Hasil Pertemuan dan Kesepakatan Pelaksanaan Pemetaan Partisipatif di Daerah Indabri [ <i>Report on meeting and agreement to conduct participatory mapping in the Indabri area</i> ] – 5 <sup>th</sup> – 9 <sup>th</sup> November 2013 – 2 pages
40.	November 2013	Tahapan Persiapan Pelaksanaan Pemetaan Pengenalan Wilayah Umum Indabri – 18 – 24 Nopember 2013 [ <i>Preparatory activities for participatory mapping in the Indabri area – 18<sup>th</sup> to 24<sup>th</sup> November 2013</i> ] – 5 pages
41.	December 2013	Pemetaan Pengenalan Wilayah Umum Daerah Indabri – Lokakarya 2-4 Desember 2013 [ <i>Introductory participatory mapping workshop in the Indabri area – 2<sup>nd</sup> – 4<sup>th</sup> December 2013</i> ] – 11 pages

Activity Reports 2014		
42.	February 2014	Laporan Pelaksanaan Pemetaan Pengenalan Lanjutan Wilayah Umum Daerah Indabri [ <i>Report on implementation of mapping socialization (continued) in the Indabri area</i> ] – 13 pages
43.	April 2014	Laporan lokakarya – Perubahan fungsi kawasan hutan sebagai substansi kehutanan dalam rangka revisi RTRWP Papua Barat [ <i>Workshop report – Change of forest zone functions in relation to revision of the West Papua Province Spatial Plan</i> ] – 15 pages
44.	May 2014	Notulensi diskusi identifikasi aturan adat suku hatam Indabri – [ <i>Notes on discussions to identify customary rules of the Hatam tribe in Indabri</i> ]
45.	May 2014	Notulensi kesepakatan batas wilayah oleh orang Figout dan orang Mingrei dan juga orang Maibri dan daerah Cibout [ <i>Notes on discussions regarding territorial boundaries by the Figout and Mingrei people and also the Maibri and Cibout people</i> ]
46.	May 2014	Identifikasi aturan adat di wilayah Indabri dalam perlindungan dan pemanfaatan lahan dan hutan serta rencana pembentukan lembaga pengelola – Lokakarya 30-31 Mei 2014 [ <i>Identification of customary laws in the Indabri area in relation to protection of land and forests as well as planning for the formation of a management body – Workshop 30-31 May 2014</i> ] – 10 pages
47.	Juli 2014	Laporan Pemetaan Pengenalan Wilayah Umum Indabri – 21 Juli [ <i>Introductory participatory mapping report in the Indabri area – 21<sup>st</sup> July 2014</i> ] – 12 pp
48.	August 2014	Pelatihan Pemetaan Partisipatif Penguasaan Marga Di Wilayah Ugyehek dan Dirie – 22 Juli 2014 [ <i>Report on participatory mapping of clan owned lands in the Ugyehek and Dirie area – 22<sup>nd</sup> July 2014</i> ] – 8 pages
49.	August 2014	Daftar nama-nama kordinator dan anggota-anggota pada 6 kelompok wilayah dari masyarakat adat Ugyehek dan Dirie – Kelompok Ugyehek, Dirie, Inding, Utai, Ungguen dan Aimasi - August 2014 [ <i>List of names of coordinators and members of 6 area (clan) groups from the Ugyehek and Dirie customary communities - Ugyehek, Dirie, Inding, Utai, Ungguen and Aimasi Groups - August 2014</i> ] – 1 page
50.	September 2014	Laporan Pemetaan Pengenalan Wilayah Umum Indabri - 22 September 2014 [ <i>Introductory participatory mapping report in the Indabri area – 22<sup>nd</sup> Sept. 2014</i> ] – 13 pp
51.	September 2014	Laporan pelatihan pembibitan dan pemeliharaan tanaman kopi di wilayah Indabri – 19 September 2014 [ <i>Report on training in propagation and cultivation of coffee in the Indabri area – 19<sup>th</sup> September 2014</i> ] – 6 pages
52.	October 2014	Laporan Diskusi kesepakatan Pemetaan Wilayah Adat Ugyehek dan Dirie – 30 Sept. 2014 [ <i>report on discussion on the participatory mapping agreement in the customary territory of Ugyehek dan Dirie – 30 September 2014</i> ] - 9 pages

53.	November 2014	Diskusi kesepakatan pemetaan wilayah adat masyarakat adat Indabri, Minggrei, Maibri dan Kwau – 31 Oktober 2014 <i>[Discussion on the participatory mapping agreement in the customary territory of the Indabri, Minggrei, Maibri and Kwau Customary Communities – 31<sup>st</sup> October 2013]</i> – 12pp
54.	December 2014	Laporan Pelatihan Pemeliharaan tanaman kakao di Kampung Asiti <i>[Report on cocoa cultivation training in Asiti Village]</i> - 9 Pages
55.	December 2014	Monitoring Pemeliharaan Tanaman Bibit Kakao Di Kampung Inam, Distrik Kebar dan Kampung Arfu dan Kampung Atori, Distrik Mubrani <i>[Monitoring of cocoa seedling nurseries in Inam Village, Kebar District and Arfu and Atori Villages, Mubrani District]</i> – 8 pages
56.	December 2014	Laporan lokakarya – Penetapan indikasi penundaan ijin baru (PIPIB) revisi VI Provinsi Papua Barat dan wilayah sasaran proyek & perubahan kawasan hutan dan penunjukan kawasan hutan serta konservasi perairan Papua Barat <i>[Workshop report – Establishment of indications of postponement of new licenses revision VI in West Papua Province and the project area and changes to the forest zone and marine conservation in West Papua]</i> – 12 pages
<b>Activity Reports 2015</b>		
57.	February 2015	Laporan kegiatan laporan pemetaan partisipatif - Membangun kesepahaman bersama dalam proses pemetaan partisipatif wilayah marga Manim dan marga Manimbu di Distrik Mubrani dan Distrik Kebar <i>[Participatory mapping activity report – Building mutual understanding of the participatory mapping process in the Manim and Manimbu Clan areas in Mubrani and Kebar Districts]</i> – 10 pages
58.	April-May 2015	Update informasi terkait perkembangan pemerintahan di wilayah Mubrani, Kebar dan Miyah, Kabupaten Tambrauw <i>[Information update relating to governance developments in the Mubrani, Kebar and Miyah areas, Tambrauw Regency]</i> – 23 pages
59.	May 2015	Studi Banding Petani kakao dari wilayah Mubrani dan Kebar pada kebun masyarakat lokal dan kebun Ex. PT. Cokran di Ransiki, Kabupaten Manokwari selatan. <i>[Study tour for cocoa farmers from Mubrani and Kebar to local community and PT. Cokran cocoa gardens in Ransiki, South Manokwari Regency]</i> – 14 pages
60.	June 2015	Kajian Persepsi Perubahan Status Cagar Alam Pegunungan Arfak, Tambrauw Selatan, dan Tambrauw Utara menjadi Taman Nasional <i>[Study of perceptions regarding the proposed change of status of the Arfak, North Tambrauw and South Tambrauw Nature Reserves to a National Park]</i> – 17 pages
61.	July 2015	Mempelajari perkembangan pemekaran dan indikasi aktivitas di wilayah koridor Mubrani-Kebar. <i>[Review of developments in administrative division and indications of activities in the Mubrani-Kebar Corridor area]</i> – 7 pages

62.	July 2015	Pembahasan dan bedah rancangan perda Masyarakat Hukum Adat di Kabupaten Tambrauw. <i>[Discussion and analysis of the draft regional regulation on adat law communities in Tambrauw Regency]</i> – 30 pages
63.	July 2015	Persiapan Pembentukan Panitia Musdat Marga di Wilayah Mubrani. <i>[Preparation for committee formation for the Customary Clan Congress in Mubrani area]</i> – 6 pages
64.	August 2015	Laporan lokakarya - Analisis Keadaan Umum Wilayah Ijin Usaha Pertambangan (IUP) Pada Wilayah Kepala Burung Tanah Papua <i>[Workshop report – Analysis of general conditions of mining licenses in the Bird's Head Region of Papua]</i> – 16 pages
65.	September 2015	Laporan Pembuatan Sketsa Wilayah Adat Kampung Ugyehek dan Dirie - Indisei 7-12 September 2015 Report on scetch mapping in the Customary territory of Ugyehek and Dirie Villages - Indisei 7-12 September 2015] – 6 pages
66.	September 2015	Pelatihan fasilitator pemetaan partisipatif wilayah adat dan penyebaran suku di kabupaten Tambrauw <i>[Participatory mapping facilitator training and the distribution of tribes in Tambrauw Regency]</i> – 14 pages
67.	October 2015	Laporan studi banding petani kopi di Kampung Ambaidiru, Kabupaten Pulau Yapen – 20-24 Oktober 2015 <i>[Report of the coffee farmer study tour to Ambaidiru Village, Yapen Island Regency – 20th-24<sup>th</sup> October 2015]</i> – 4 pages
68.	November 2015	Laporan kegiatan pelatihan pembibitan dan pemeliharaan tanaman kopi di Indabri oleh peserta studi banding - Indabri, Kamis, 22 Oktober – Kamis, 05 November 2015 <i>[Report on coffee cultivation and propagation training in Indabri Village by study tour participants – Indabri Village, 22<sup>nd</sup> October – 5<sup>th</sup> November 2015]</i> – 5 pages
<b>Activity Reports 2016</b>		
69.	April 2016	Rapat bersama Sembilan Kampung Untuk menyepakati Pertemuan dengan Pemerintah untuk menyampaikan hasil pemetaan yang sudah ada <i>[Combined meeting of 9 villages to reach agreement on meeting with government to present the results of mapping activities – Workshop Report 27-29 April 2016]</i> – 5 pages
70.	April 2016	Laporan Update Informasi Rencana Pemetaan Partisipatif Wilayah Marga Siraro, Sedikruf, Titit, Syufi, Sewia, Dan Hae <i>[Information update report on participatory mapping planning in the territory of the Siraro, Sedikruf, Titit, Syufi, Sewia, Dan Hae clans]</i>
71.	April 2016	Laporan Tindak Lanjut Rencana Pemetaan Partisipatif Wilayah Adat Kampung Ugyehek, Dirie, dan Indisie serta Kajian Awal Penguasaan Lahan Catubouw

		<i>[Report on follow-up planning for participatory mapping in the customary territory of Ugyehek, Dirie and Indisie as well as preliminary investigation of land tenure in Catubouw]</i>
72.	April 2016	Pembibitan Tanaman Kopi di Ugyehek, Dirie di distrik Minyambouw serta Dueibey, Maibri Distrik Warmare. <i>[Propagation of coffee seedlings in Ugyehek and Dirie Villages in Menyambouw District and Dueibey and Maibri Villages in Warmare District]</i>
73.	April 2016	Analisa Awal Wilayah Program diluar Kawasan Koridor dan Cagar Alam <i>[Preliminary analysis of program areas outside of the Forest Corridors and Nature Reserves]</i>
74.	May 2016	Pelatihan Pembuatan Peptisida Nabati untuk Hama Buah Kakao. <i>[Training in production of organic pesticide for the Cocoa Pod Borer pest]</i> – 14 pages
75.	July 2016	Kegiatan Kerjasama Antara Yayasan Paradisea dengan Perkumpulan Akawuon Tambrauw <i>[Collaborative activities between the Paradisea Foundation and the Aka Wuon Association in Tambrauw Regency]</i>
76.	July 2016	Laporan Musyawarah Adat Suku Ileres ke 2 Kaupaten Tambrauw <i>[Report on the 2<sup>nd</sup> Ileres Customary Tribal Congress in Tambrauw Regency]</i>
77.	July 2016	Diskusi Kesepahaman dan Kesepakatan Pelaksanaan Program Pengusuulan Hutan Adat ke Pemerintah Tambrauw Bersama Tokoh Marga Manim, Manimbu, Makambak, dan Kasi <i>[Discussion to build mutual understanding and agreement regarding the Customary Forest proposal to the government of Tambrauw Regency with leaders of the Manim, Manimbu, Makambak, and Kasi Clans]</i>
78.	July 2016	Diskusi Terbatas dengan pemerintah Pegunungan Arfak dan Manokwari serta dinas Kehutanan Kabupaten dan Provinsi <i>[Limited discussion with the governments of Pegunungan Arfak and Manokwari Regencies and the regency and provincial forestry services]</i>
79.	July 2016	Laporan Sosialisasi dan Verifikasi Dokumen Pengusulan Hutan adat 9 Kampung <i>[Report on socialization and verification of the Customary Forest Proposal documents for 9 villages – Kwau and Indabri areas]</i>
80.	July 2016	Laporan Sosialisasi Pengusulan Hutan adat 14 marga di Distrik Miyah <i>[Report on socialization of the Customary Forest Proposal for 14 clans in Miyah District]</i>
81.	July 2016	Laporan Verifikasi Dokumen Pengusulan Hutan adat 14 marga di Distrik Miyah <i>[Report on verification of the Customary Forest Proposal documents for 14 clans in Miyah District]</i>
82.	July 2016	Analisis Biofisik di Wilayah 3 Koridor <i>[Biophysical analysis in the 3 forest corridors]</i>

83.	September 2016	Laporan Proses Pengusulan Hutan Adat kepada Bupati Pegunungan Arfak <i>[Report on the process of proposing customary forests to the Head of Pegunungan Arfak Regency]</i>
84.	September 2016	Pertemuan dengan Kementerian Lingkungan Hidup dan Kehutanan <i>[Meeting with the Ministry of the Environment and Forestry]</i>
85.	September 2016	Laporan Perkembangan Pengusulan Perubahan Kawasan Cagar Alam Pegunungan Arfak, Tambrauw Selatan, dan Tambrauw Utara dan Daerah Koridor Menjadi Taman Nasional <i>[Report on development in relation to proposed change of status of the Pegunungan Arfak, North Tambrauw and South Tambrauw Nature Reserves and connecting forest corridors to become a national park]</i>
86.	September 2016	Identifikasi dan Fasilitasi Pemasaran Hasil-hasil hutan bukan kayu Masyarakat adat Minyambouw, Mubrani, Kebar, Senopi, dan Miyah. <i>[Identification and marketing facilitation for non-timber forest products of customary communities in Minyambouw, Mubrani, Kebar, Senopi, and Miyah]</i>
87.	September 2016	Laporan proses pengusulan hutan adat kepada Bupati Pegunungan Arfak <i>[Report on the process of recommending customary forests to the Head of Pegunungan Arfak Regency]</i> – 5 pages
88.	September 2016	Keterlibatan peserta dan kegiatan 2013-2016 <i>[Involvement of participants and activities 2013-2016]</i> Excel Spreadsheet - 4 pages
<b>Customary Forest Proposals</b>		
89.	August 2016	Pengusulan hutan adat 14 marga suku Miyah – Marga Siraro, Titit, Hae, Syufi, Sedikruf, Momo, Mo, Bame Wannar, Bame Fietato, Bame Sinaum, Eisyah, Irun, Yeum dan Sewia, Distrik Miyah, Kabupaten Tambrauw. <i>[Customary forest proposal for 14 clans of the Miyah tribe - Siraro, Titit, Hae, Syufi, Sedikruf, Momo, Mo, Bame Wannar, Bame Fietato, Bame Sinaum, Eisyah, Irun, Yeum and Sewia clans, Miyah District, Tambrauw Regency]</i>
90.	August 2016	Pengusulan hutan adat suku Mpur – Marga Manim, Manimbu, Makambrak dan Kasi, Distrik Mubrani, Kabupaten Tambrauw. <i>[Customary forest proposal for the Mpur tribe - Manim, Manimbu, Makambrak and Kasi clans, Mubrani District, Tambrauw Regency]</i>
91.	August 2016	Pengusulan hutan adat 5 kampung – Figoud, Ndonbei, Duaibei, Kwau, dan Mingrei, Distrik Warmare, Kabupaten Manokwari. <i>[Customary forest proposal for 5 villages - Figoud, Ndonbei, Duaibei, Kwau and Mingrei, Warmare District, Manokwari Regency]</i>
92.	August 2016	Pengusulan hutan adat 4 kampung – Handuk, Indabri, Umpug dan Ninsimoi, Distrik Minyambouw, Kabupaten Pegunungan Arfak. <i>[Customary forest proposal for 4 villages Handuk, Indabri, Umpug and Ninsimoi, Warmare District, Manokwari Regency]</i>

Maps & Spatial Database		
93.	2013-2016	Various thematic maps of the project area – Arfak Mountains, North and South Tamberau Mountains and connecting Corridors
94.	2013-2016	Various sketch maps of each of the clan areas mapped across the three corridors
95.	2013-2016	Various thematic maps of each of the areas mapped across the three corridors
96.	2016	Peta indikatif wilayah hutan adat dan wilayah koridor di Kepala Burung Provinsi Papua Barat <i>[Indicative map of customary forest areas and forest corridors in the Bird's Head Region, West Papua Province]</i>
97.	2016	Peta Cagar Alam Pegunungan Arfak, Tamberau Utara dan Tamberau Selatan dan usulan koridor (Penghubung)
98.	2016	Peta Wilayah Adat 4 Marga di Distrik Mubrani dan koridor di dalam Kawasan Hutan <i>[Map of customary territory of 4 clans in Mubrani District and the corridor in the forest area]</i>
99.	2016	Peta Wilayah Adat 9 kampung Indabri – Kwau dan koridor di dalam Kawasan Hutan <i>[Map of customary territory of 9 villages in the Indabri-Kwau area and the corridor in the forest area]</i>
100.	2016	Peta Wilayah Adat 14 Marga di Distrik Miyah dan koridor di dalam Kawasan Hutan <i>[Map of customary territory of 14 clans in Miyah District and the corridor in the forest area]</i>
101.	2016	Peta wilayah adat – Suku Ileres <i>[Map of customary territory – Ileres Tribe]</i>
102.	2016	Peta wilayah adat – Kampung Ugyehek dan Dirie di Koridor Menyambouw-Catubouw <i>[Map of customary territory – Ugyehek and Dirie Villages, Menyambouw-Catubouw Corridor]</i>
103.	2016	Album peta tematik kehutanan Provinsi Papua Barat <i>[Album of thematic forestry maps for West Papua Province]</i>
104.	2016	Daftar album peta Paradisea 2016 <i>[List of hard and soft copy maps held by Paradisea 2016 – Including 335 thematic maps of West Papua and selected regions – primarily the Arfak, Tamberau, Bintuni Bay and Fakfak target areas]</i>
Other RFN Documents		
105.	2013	Rainforest Foundation Norway Annual Report 2013

Audio-Visual Materials		
106.	2014	Title: Defending Land, Arfak Tribe - Manokwari West Papua Producer: Mnukwari Production & Paradisea Foundation Manokwari
107.	2015	Title: Tambrauw Society and Regency's Conservation Producer: Paradisea Foundation Manokwari
108.	2015	Title: Masyarakat Adat Suku Mpur dan Pembangunan - Tambrauw, Papua Barat Producer: Paradisea Foundation Manokwari
109.	N/D	Various other audio-visual materials documenting Customary Clan Congresses (Musyawarah Adat) and field activities conducted by Paradisea Foundation.
Newspaper Articles		
110.	7 Feb. 2014	<b>Media Papua</b> - Dialog Rencana Tata Ruang Papua Barat mendapat apresiasi aktifis kampus <i>[Dialog on the West Papua Spatial Plan receives appreciation from campus activists]</i>
111.	7 Feb. 2014	<b>Cahaya Papua</b> – Salabai: Pembangunan jangan hilangkan kearifan local <i>[Development should not expunge customary knowledge]</i>
112.	8 Feb. 2014	<b>Media Papua</b> - Pembentukan RTRWP Papua Barat dinilai tidak melibatkan masy. adat <i>[Preparation of the West Papua Spatial Plan considered not to involve customary communities]</i>
113.	8 Feb. 2014	<b>Cahaya Papua</b> – Aktivist lingkungan mendorong penyusunan RTRWP mengacu draf OTSUS Plus <i>[Environmental activists push for the the development of a Provincial spatial plan based on Special Autonomy Plus]</i>
114.	20 Feb. 2014	<b>Media Papua</b> - RTRWP Papua Barat disetujui 750.174 hektar <i>[West Papua spatial plan agreed 750,174 hectares]</i>
115.	8 March 2014	<b>Media Papua</b> - Dinas Pertanian Pegaf Programkan tanaman kopi di Minyambouw <i>[The Arfak Mountains Agriculture service plans a coffee program in Minyambouw]</i>
116.		<b>Media Papua</b> - Perlunya tata ruang yang pro masyarakat adat Papua <i>[Need for a spatial plan which is pro customary communities]</i>
117.		<b>Media Papua</b> - Sosialisasi UU tata ruang dinilai bentuk pembohongan public <i>[Socialization of the law on spatial planning considered a form of public deception]</i>
118.		<b>Media Papua</b> – Yayasan Paradisea gelar dialog tentang RTRWP Papua Barat <i>[Paradisea foundation recognized for dialog on the West Papua Spatial Plan]</i>
119.		<b>Media Papua</b> - Pemda didorong tindaklanjuti putusan MK soal pengakuan hutan adat <i>[Government pushed to follow up the constitutional court decision on customary forests]</i>
120.	2016	<b>Media Papua</b> - Provinsi konservasi Papua Barat: Sebaiknya masyarakat adat diberi tahu dan dilibatkan <i>[West Papua Conservation Province: Adat communities should be informed &amp; involved]</i>

121.	26 Feb. 2016	<b>Media Papua</b> - Koalisi masyarakat sipil peduli ruang adat tolak pembukaan lahan 800 ribu hektar di Papua Barat [ <i>The civil society coalition for customary lands rejects the conversion of 800 hectares of land in West Papua</i> ]
122.	27 Feb. 2016	<b>Media Papua</b> – 2016, Paradisea prioritaskan penyelamatan hutan [ <i>2016 – Paradisea prioritizes saving forests</i> ]
123.	30 Sept. 2016	<b>Tabura Pos</b> - LMA Papua Barat mendukung pemetaan hutan adat [ <i>The West Papuan Customary Council support mapping of customary forest</i> ]
<b>District &amp; Regency Level Government Statistical Reports</b>		
124.	2015	Distrik Miyah dalam angka 2014 – Miyah District in Figures 2014
125.	2015	Distrik Senopi dalam angka 2014 – Senopi District in Figures 2014
126.	2015	Distrik Kebar dalam angka 2014 – Kebar District in Figures 2014
127.	2015	Distrik Mubrani dalam angka 2014 – Mubrani District in Figures 2014
128.	2015	Distrik Menyambouw dalam angka 2014 – Menyambouw District in Figures 2014
129.	2015	Distrik Catabouw dalam angka 2014 – Catabouw District in Figures 2014
130.	2016	Distrik Warmare dalam angka 2015 – Warmare District in Figures 2014
131.	2016	Distrik Prafi dalam angka 2015 – Prafi District in Figures 2015
132.	2016	Distrik Masni dalam angka 2015 – Masni District in Figures 2015
133.	2016	Statistik daerah Kabupaten Tambrau 2015
134.	2016	Statistik daerah Kabupaten Pegunungan Arfak 2015
135.	2016	Statistik daerah Kabupaten Manokwari 2015
136.	2016	Statistik daerah Kabupaten Manokwari Selatan 2015
137.	2016	Statistik daerah Provinsi Papua Barat 2015
138.	2016	Index Pembangunan Manusia Provinsi Papua Barat tahun 2015 [ <i>Human Development Index – West Papua Province, Indonesia, 2015</i> ]
<b>Social and Ecological References</b>		
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146.	2001	Title: Igya ser Hanjop: Masyarakat Arfak dan Konsep Konservasi. Authors: Laksono, P.M. & Yayasan Bina Lestari Bumi Cendrawasih (YBLBC) Publisher: Pusat Studi Asia Pasifik, Universitas Gadjah Mada
147.	2002	Title: Pengaruh Proyek CCAD terhadap tingkat pendapatan usahatani di Kabupaten Manokwari (Studi kasus di Desa Meiforga dan di Desa Imhasuma) [Effect of the CCAD Project on agricultural enterprise income levels in Manokwari Regency (Case studies in Meiforga and Imhasuma Villages) ] Editors: Wirawon, P. Publisher: Bachelors degree essay, Uiversity of Papua.
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### Relevant National Laws & Regulations

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162.	1999	Amandemen ke-2 tahun 1999 - Undang-undang Dasar RI 1945 - [ <i>Constitution of the Republic of Indonesia – 2<sup>nd</sup> Amendment</i> ]
163.	1999 2004	Undang-undang RI No.41 tahun 1999 tentang kehutanan; & Undang-undang RI No. 19 tahun 2004 tentang ???? [ <i>Law No. 41 (1999) on Forestry &amp; Law No. 19 (2004) on ????? of Law No. 41 (1999) on Forestry</i> ]
164.	2001	Undang-undang RI No. 21, tahun 2001 tentang Otonomi khusus bagi Provinsi Papua [ <i>Law No. 21 (2001) on Papuan Special Autonomy</i> ]
165.	2004	Peraturan Menteri Kehutanan nomor 19, tahun 2004 tentang kolaborasi pengelolaan kawasan suaka alam dan kawasan pelestarian alam [ <i>Minister of Forestry Regulation No.19 (2004) on collaboration in the management of wildlife sanctuaries and nature protection areas</i> ]
166.	2007	Undang-undang RI No. 26, tahun 2007 tentang penataan ruang [ <i>Law No. 26 (2007) on Spatial Planning</i> ]
167.	2007	Peraturan pemerintah nomor 6, tahun 2007 tentang tata hutan dan penyusunan rencana pengelolaan hutan serta pemanfaatan hutan Govt. Regulation No. 6 (2007) on Forest Management and Making Forest Management Plan and Forest Utilization
168.	2010	Peraturan pemerintah nomor 68, tahun 2010 tentang bentuk dan tata cara peran masyarakat dalam penataan ruang [ <i>Govt. Regulation No. 68 (2010) on Form and Procedure of Community Role in Spatial / Landscape Planning</i> ]
169.	2010	Peraturan pemerintah nomor 24, tahun 2010 tentang penggunaan kawasan hutan [ <i>Govt. Regulation No. 24 (2010) on the Use of Forest Area</i> ]
170.	2010	Peraturan pemerintah nomor 36, tahun 2010 tentang pengusaha pariwisata alam di suaka margasatwa, taman nasional, taman hutan raya dan taman wisata alam [ <i>Govt. Regulation No. 36 (2010) on Natural Tourism Utilization in Wildlife Sanctuary, Forest Park, Botanical Garden, and Natural Tourism Park</i> ]
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172.	2011	Keputusan Mahkamah Konsitusi No. 45 tahun 2011 tentang kawasan hutan

		<i>[Constitutional Court ruling No. 45 (2011) regarding the forest zone]</i>
173.	2012	Keputusan Mahkamah Konsitusi No. 35 tahun 2012 tentang kawasan hutan adat <i>[Constitutional court descision No.35 (2012) regarding customary forest zones ]</i>
174.	2013	Surat Edaran Menhut No.1 2013 ttg Putusan MK No.35 Tahun 2013 <i>[Minister of Forestry Memomorandum No. 1 (2013) regarding Constitutional Court Decision No. 35, 2012]</i>
175.	2013	Undang-undang RI No. 18, tahun 2013 tentang pencegahan dan pemberantasan perusakan hutan <i>[Law No. 18 (2013) on Prevention and Eradication of Forest Destruction]</i>
176.	2014	Undang-undang RI No.6, tahun 2014 tentang Desa <i>[Law No.6 (2014) on Villages]</i>
177.	2014	Undang-Undang RI No. 23 tahun 2014 tentang Pemerintahan Daerah <i>[Law No. 23 (2014) regarding regional government]</i>
178.	2014	Rancangan Undang-undang RI tentang pengakuan dan perlindungan hak masyarakat hukum adat (RUU-PPMHA) <i>[Draft Law on the Recognition and Protection of Adat Law Communities]</i>
179.	2014	Peraturan bersama Menteri Dalam Negeri, Kehutanan, Pekerjaan Umum dan Agraria No. 79, tahun 2014 tentang tata cara penyelesaian penguasaan tanah yang berada dalam kawasan hutan <i>[Joint Regulation of the Ministries of Home Affairs, Forestry, Public Works and Agraria No. 79 (2014) on Procedures for settlement of control of land within the forest estate]</i>
180.	2014	Peraturan Menteri Dalam Negeri Nomor 52 tahun 2014 tentang pedoman pengakuan dan perlindungan masyarakat hukum adat <i>[Minister of Home Affairs Regulation No. 52 (2014) regarding guidelines for recognition and protection of adat law communities]</i>
181.	2015	Peraturan Menteri Lingkungan Hidup dan Kehutanan No. 32 tahun 2015 tentang Hutan Hak <i>[Minister of Forestry Regulation No. 32 (2015) regarding forest rights]</i>
182.	2016	Peraturan Menteri Agraria dan Tata Ruang no.10, tahun 2016 tentang Tatacara Penetapan Hak Komunal <i>[Minister of Lands and Spatial Planning Regulation No. 10 (2016) on procedures for establishing communal land rights]</i>
183.	2016	Rancangan Undang-undang tentang pengakuan & perlindungan masyarakat hukum adat <i>[Draft Law on the Recognition and Protection of the Rights of Indigenous Peoples]</i>
184.	2016	Rancangan Undang-undang RI tentang Pertanahan <i>[Draft law on Lands]</i>
185.	2016	Rancangan Undang-undang Ri tentang konservasi keaneka ragaman hayati <i>[Draft law on biodiversity conservation]</i>

Relevant Regional & Special Autonomy Regulations		
186.	December 2015	Peraturan daerah Kabupaten Bulukumba Nomor 9, tahun 2015 tentang pengukuhan, pengakuan hak dan perlindungan hak masyarakat hukum adat Amatoa Kajang [ <i>Bulukumba Regency Regional regulation No.9 (2015) regarding the designation, recognition and protection of the rights of Amatoa Kajang adat law community</i> ]
187.	April 2016	Rancangan peraturan daerah khusus Provinsi Papua Barat Nomor ... Tahun 2016 tentang wilayah adat [ <i>Draft Special autonomy regulation, West Papua Province, Number ... 2016, regarding customary (adat) territories</i> ]
188.	April 2016	Naskah akademis - Rancangan peraturan daerah khusus Provinsi Papua Barat tentang wilayah adat [ <i>Academic paper - Draft Special autonomy regulation, West Papua Province, Number ... 2016, regarding customary (adat) territories</i> ]
189.	2016	Rancangan peraturan daerah Provinsi Papua Barat Nomor ... Tahun 2016 tentang Provinsi Konservasi [ <i>Draft regulation, West Papua Province, Number ... 2016, regarding Conservation Province</i> ]
190.	2016	Naskah akademis - Rancangan peraturan daerah Provinsi Papua Barat Nomor ... Tahun 2016 tentang Provinsi Konservasi [ <i>Academic paper - Draft regional regulation, West Papua Province, Number ... 2016, regarding Conservation Province</i> ]
191.	2016	Rancangan peraturan daerah Kabupaten Tambrauw Nomor ... Tahun 2016 tentang Kabupaten Konservasi [ <i>Draft regulation, Tambrauw Regency, Number ... 2016, regarding Conservation Regency</i> ]
192.	2016	Naskah akademis - Rancangan daerah Kabupaten Tambrauw Nomor ... Tahun 2016 tentang Kabupaten Konservasi [ <i>Academic Paper - Draft regulation, Tambrauw Regency, Number ... 2016, regarding Conservation Regency</i> ]

## **Annex 7 – Evaluator Biographies**

### **Robert Hewat**

Robert Hewat is an Australian citizen with 25 years' experience working on nature conservation, sustainable natural resource management and indigenous empowerment with bilateral & multi-lateral aid organizations, research institutions, local & international NGOs, government & multi-national resource companies. This includes experience across a wide range of fields spanning participatory planning and community development, community-based natural resource management, biodiversity & ethno-ecology, horticulture & livelihoods, participatory mapping of customary territories, spatial planning, sustainable development, forestry and natural resource management policy development, social-safeguards, multi-stakeholder engagement & capacity building in Indonesia, PNG, Solomon Islands, Malaysia, New Caledonia & Australia, including over 16 years working in Papua and West Papua Provinces, Indonesia.

He has an outstanding knowledge of highland Melanesian cultures, through over 10 years' experience living and working with highland communities, including:

- Six years' experience working with Dani, Lani, Yali, Nduga, Ngalum and other ethnic groups whilst working as a volunteer with local NGOs and as a consultant to WWF and World Vision in the Central Highlands of Papua Province (1993-1999);
- One year working with Rotokas and North Nasoi communities in the highlands of Bougainville, Papua New Guinea, whilst working on the AusAID Bougainville District Development Program (1998);
- Two and a half years working with Moile, Hatam, Soughb and Meyah communities whilst the USAID SUCCESS Alliance Farmer Field School program for smallholder cocoa farmers living around the Arfak Mountains (2003-2005);
- Two years working with Huli communities in the Southern Highlands of Papua New Guinea whilst working as the resettlement and livelihoods restoration field manager for the PNG-LNG Project (2010-2011)
- In 2006 he conducted research on conservation and development in the Arfak Mountains for the Centre for International Forestry Research (CIFOR); and
- In 2008 he conducted an evaluation of the ILO Papua Indigenous Peoples Empowerment Program in the Kebar Valley in Tambrauw Regency and Tanah Rubuh District on the Arfak Coast in Manokwari Regency.

Most recently he has worked as the Papua Landscape Advisor with the USAID Indonesia Forest and Climate Support (IFACS) Program (2013-2015) and as the team leader conducting research into indigenous peoples and sustainable local development in Indonesia (2016).

## **Angel Manembu**

Angel Manembu is an Indonesian citizen with over 25 years' experience in the area of poverty alleviation, sustainable livelihoods, forest governance, sustainable forest management, wildlife trafficking, forest conservation, and Millennium Development Goals and Minimum Service Standards related to decentralization issues.

She has reviewed many donor projects included The World Bank, ADB, Korean AID, DfID-UK, UNDP, AusAID, GIZ, USAID RDMA Bangkok, European Union and international NGOs such as WWF-Indonesia, The Rainforest Foundation of Norway and private sectors such Asia Pulp and Paper Company and Diamond Raya logging Company including the Smart wood Company.

She has trained international (Asian and African countries) planning bodies and national governments agencies such as the National Planning Body. She has experience working with various ministries in Indonesia including the Ministry of Home Affairs, Forestry, Agriculture and Social Affairs, as well as local governments in almost 40 districts all round Indonesia. Additionally, she has trained Civil Society groups and Local legislature members. She facilitated local government regulations (perda) in many topics and also assisted local governments and local legislature on how to make their budget more efficient for local community developments for basic services Moreover, she's also facilitated discussions on health and education issues included community engagement plus gender responsive.

She currently assists Indonesia's National Planning Agency (Bappenas) on issues related to Indonesia indigenous peoples living within and outside forest areas. She has experience working with many indigenous people groups included the Sempan, Amungme, Nakai and Nduga in Papua also the Talang Mamak and Orang Rimba in Sumatra and the Bajau in Sulawesi. She assisted WWF Papua on how to work with local governments to achieve MDGs for the people who live in and around conservation areas.

She is one of the team members who initiated pro poor Planning and Budgeting project for local government that has become a national program owned by Bappenas/Indonesia Planning Body. She also produced a guideline on how to interact with people with disabilities for a poverty national programme.

Angel Manembu has just finished a draft report for Social Review of AusAID Forestry Project-KFCP in 10 Dayak hamlets of Kapuas District in Central Kalimantan. She assessed whether the most vulnerable part of society of has received benefits from the project and also assess Free Prior and Informed Consent issues for an REDD+project.

## Annex 8

### Endemic, Near-Endemic and other important Fauna of the Arfak and Tambrau Mountains

The following list provides further information on the endemic, near-endemic and other important fauna of the Arfak and Tambrau Mountains. Whilst the Arfak Mountains have been relatively well explored, including by Alfred Russel Wallace, who visited the Arfak Mountains in the 1840s, and Odoardi Beccari and Luigi d'Albertis, who visited during the 1870s, the Tambrau Mountains and other areas of the interior of the Birdshhead remain poorly surveyed and undescribed species are likely to be found in the future, especially plants, insects and amphibians.

- **Endemic Birds** - 320 species of birds, including 14 endemic and 15 restricted range species / or 20 endemic and near endemic species, such as:
  - Vogelkop Bowerbird (*Amblyornis inornatus*)
  - Western Parotia (*Parotia sefilata*)
  - Long-tailed Paradigalla (*Paradigalla carunculata*)
  - Arfak Astrapia (*Astrapia nigra*)
  - Vogelkop Owlet-Nightjar (*Aegotheles affinis*)
  - White-striped Forest Rail (*Rallina leucospila*);
  - Vogelkop Scrubwren (*Sericornis rufescens*);
  - Vogelkop Whistler (*Pachycephala meyeri*);
  - Vogelkop Melidectes (*Melidectes leucostephes*);
  - Arfak Honeyeater (*Melipotus gymnops*);
  - Grey-banded Mannikin (*Lonchura vana*);
  - Ashy Robin (*Heteromyias albispectus*)
  - Papuan lorikeet (*Charmosyna papou*)
  - Arfak Catbird (*Ailuroedus arfakianus*)
  
- **Birds of Paradise** - In addition to the three endemic species of Birds of Paradise listed above a further 10 species are found in the Arfak and Tambrau mountains including:
  - Lesser Bird of Paradise (*Paradisea minor var. minor*);
  - Magnificent Bird of Paradise (*Diphyllodes magnificus*);
  - King Bird of Paradise (*Cicinnurus regius*);
  - Superb Bird of Paradise (*Lophorina superba*);
  - Black Sicklebill (*Epimachus fastuosus*);
  - Black-billed Sicklebill (*Epimachus albertisi*);
  - Magnificent Riflebird (*Ptilorus magnificus*);
  - Trumpet Manucode (*Phonygammus keraudrenii*);
  - Crinkle-collared Manucode (*Manucodia chalybatus*);
  - Glossy Manucode (*Manucodia chalybata*).

- **Mammals** - 90 to 110 mammal species including 10 endemic or near-endemic species such as:
  - Arfak Ringtail possum (*Pseudocheirus schlegeli*);
  - Reclusive Ringtail Possum (*Pseudochirops coronatus*);
  - Vogelkop Tree-kangaroo (*Dendrolagus ursinus*);
  - Western Long-beaked Echidna (*Zaglossus bruijni*);
  - Arfak Pygmy Bandicoot (*Microperoryctes aplini*);
  - Red-bellied Marsupial Shrew (*Phascolosorex doriae*);
  - Arfak Water Rat (*Leptomys arfakensis*);
  - Western White-Eared Giant Rat (*Hyomys dammermani*);
  - Arfak Mountain Rat (*Stenomys arfakianus*)
  - Western Silky Cuscus (*Phalanger vestitus interpositus*) – Arfak populations are likely to represent a separate species but further taxonomic work is required.
  
- **Reptiles and Amphibians** - 16 species of montane reptiles and amphibians (excluding lowland species) including 7 endemic species such as:
  - Arfak Mountains frog (*Hylarana arfaki*);
  - Arfak mountain tree frog (*Litoria chloronota*);
  - Arfak Fanged Frog (*Xenorhina arfakiana*);
  - Arfak Cannibal Frog (*Lechriodus platyceps*);
  - Arfak Giant Frog (*Rana arfaki*)
  - Vogelkop Gecko / Dtella (*Gehyra leopoldi*)
  - Arfak Stout-tailed Snake (*Calamophis sharonbrooksae*)
  
- **Insects** - The Arfak Mountains are also an important center of butterfly endemism, most notably the spectacular Birdwing Butterflies, with a total of 323 species of butterflies recorded to date including 23 endemic species. There are also numerous species of moths, beetles, cicadas and other insects, undoubtedly including many more endemic species, though these remain poorly researched;
  
- The lowland and foothill areas also provide habitat for many other charismatic and or economically valuable species such as
  - Northern cassowary (*Casuarius unappendiculatus*),
  - Dwarf cassowary (*Casuarius bennetti*),
  - Megapodes including the Moluccan Brush-Turkey (*Megapodius wallacei*), Arfak brush-turkey (*Aepyodius arfakianus arfakianus*) and the common scrubfowl (*Megapodius freycinet*)
  - Green tree python (*Chondrophyton viridis*),
  - Timor deer (*Cervus timorensis*)

## Annex 9 - Potential Species for Agroforestry Systems in the Bird's Head Region, West Papua

Latin Name	English Name	Indonesian Name	Uses & Advantages	Disadvantages	Potential Role in Agroforestry Systems
<i>Agathis labillardieri</i>			<ul style="list-style-type: none"> <li>➤ High value timber</li> <li>➤ Native to Papua</li> <li>➤ Produces damar pitch, which can be sold for industrial uses</li> </ul>	<ul style="list-style-type: none"> <li>➤ Extremely slow growing</li> <li>➤ Market potential for damar pitch very limited</li> </ul>	<ul style="list-style-type: none"> <li>➤ Can be grown as a boundary market tree</li> </ul>
<i>Ananas comosus</i>	Pineapple	Nenas	<ul style="list-style-type: none"> <li>➤ Fruits</li> <li>➤ Unfulfilled local market potential</li> <li>➤ Potential for use in home industries</li> <li>➤ Habitat for cocoa pollinating gnats</li> <li>➤ Erosion control</li> </ul>		<ul style="list-style-type: none"> <li>➤ Can be grown as an understory crop in cocoa and coffee gardens</li> <li>➤ Water resevoirs in the leaf axils provide a breeding site for midges, which pollinate cocoa trees</li> </ul>
<i>Annona muricata</i>	Soursop	Sirsak	<ul style="list-style-type: none"> <li>➤ Nutritious fruit</li> <li>➤ Attracts mealy bugs and associated ants</li> <li>➤ Market potential currently limited but the is potential for expansion</li> </ul>		<ul style="list-style-type: none"> <li>➤ Useful as a lower story shade crop for cocoa.</li> <li>➤ Attracts ants – Natural predators of Cocoa Pod Borer and other pests</li> </ul>
<i>Annona squamosa</i>	Sweetsop	Srikaya Buah Nona	<ul style="list-style-type: none"> <li>➤ Nutritious fruit</li> <li>➤ Attracts mealy bugs and associated ants</li> </ul>	<ul style="list-style-type: none"> <li>➤ Market potential limited</li> </ul>	<ul style="list-style-type: none"> <li>➤ Useful as a lower story shade crop for cocoa.</li> <li>➤ Attracts ants – Natural predators of Cocoa Pod Borer and other pests</li> </ul>
<i>Annona reticulata</i>	Custard Apple	Buah Nona	<ul style="list-style-type: none"> <li>➤ Nutritious fruit</li> <li>➤ Attracts mealy bugs and associated ants</li> </ul>	<ul style="list-style-type: none"> <li>➤ Market potential unkown</li> </ul>	<ul style="list-style-type: none"> <li>➤ Useful as a lower story shade crop for cocoa.</li> <li>➤ Attracts ants – Natural predators of Cocoa Pod Borer and other pests</li> </ul>
<i>Aquillaria spp.</i>	Agarwood	Gaharu	<ul style="list-style-type: none"> <li>➤ Produces high value incense</li> <li>➤ Native to Papua</li> <li>➤ Grows well in natural fores</li> </ul>	<ul style="list-style-type: none"> <li>➤ Requires inoculation in order to produce gaharu</li> </ul>	<ul style="list-style-type: none"> <li>➤ Potential high value crop, particularly for foothill areas</li> </ul>

Latin Name	English Name	Indonesian Name	Uses & Advantages	Disadvantages	Potential Role in Agroforestry Systems
<i>Areca catechu</i>	Betel	Pinang	<ul style="list-style-type: none"> <li>➤ Narrow crown produces light shade.</li> <li>➤ Root system does not compete significantly with other crops.</li> <li>➤ Soil improver – leaves contain high amounts of nitrogen, phosphorus and potassium.</li> <li>➤ Great local market potential – replace imports of dried betel nut from Sulawesi – and potential for export markets.</li> <li>➤ Trunks can be used for a variety of building purposes.</li> <li>➤ Potential health benefits from reduced consumption of formalin treated dried betel nut from Sulawesi.</li> <li>➤ Indigenous.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Problems have been encountered with stem borer pests – particularly in the North Coast area of Manokwari District – these are probably related to nutrient deficiency and poor crop protection / sanitation.</li> <li>➤ Negative health effects (throat cancer) are associated with excessive betel nut consumption.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Excellent lower-mid level shade crop for cocoa.</li> <li>➤ Can be used as a living standard for vine crops such as black pepper, betel vine, vanilla, etc.</li> </ul>
<i>Arenga pinnata</i>	Sugar Palm	Areng Enou	<ul style="list-style-type: none"> <li>➤ Sap from inflorescences can be processed into palm sugar &amp; alcohol.</li> <li>➤ Stem starch (similar to sago) could provide an important food reserve in case of El Nino droughts.</li> <li>➤ Fruit endocarps are edible when young.</li> <li>➤ Edible palm cabbage.</li> <li>➤ Hairy fibres on the outside of the trunk make extremely durable ropes, thatching, brushes, etc.</li> <li>➤ Hard outer part of the trunk produces timber for barrels, flooring, tool handles etc.</li> <li>➤ Roots produce an insect repellent.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Few crops will perform well in conjunction with the Areng Palm due to their extensive root systems and dense shade.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Due to extensive root system and dense shade the Areng palm is not suited to intercropping.</li> <li>➤ Furthermore, their wild abundance in some parts of Manokwari means that farmers may feel little or no need to plant them.</li> <li>➤ However they may be useful for stabilizing steep slopes and discouraging farmers from converting these to vegetable gardens.</li> </ul>
<i>Artocarpus altilis</i>	Breadfruit	Sukun	<ul style="list-style-type: none"> <li>➤ Native to Papua</li> <li>➤ Edible fruits</li> </ul>	<ul style="list-style-type: none"> <li>➤ Extensive root system and broad crown may create competition for understory crops</li> </ul>	<ul style="list-style-type: none"> <li>➤ Useful around the edge of cocoa gardens in swampy sites as it can draw up water &amp; reduce the risk of waterlogging and root rot</li> </ul>

Latin Name	English Name	Indonesian Name	Uses & Advantages	Disadvantages	Potential Role in Agroforestry Systems
<i>Artocarpus heterophyllus</i>	Jackfruit	Nangka	➤	➤	➤
<i>Artocarpus integer</i>		Cempedak	➤	➤	➤
<i>Azadirachta excelcsa</i>	Papuan Neem Sentang	Nindi Papua	<ul style="list-style-type: none"> <li>➤ Timber of low to medium durability but of high quality for joinery and interiors.</li> <li>➤ Contains Azadirachtin a natural insecticide, nematocide and fungicide that is safe for fish and mammals</li> <li>➤ Young shoots, leaves and flowers can be consumed as a vegetable</li> <li>➤ Various uses as a natural medicine</li> <li>➤ Soil improver</li> <li>➤ Oil extracted from seeds has insect repellent qualities</li> <li>➤ Dried leaves can be used in storing grain and flocculating water</li> <li>➤ Bark contains tannins, resin used to make glue and fibre used to make rope.</li> <li>➤ Slow initial growth but subsequently rapid – can be harvested in 5 years.</li> <li>➤ Can be propagated from seed, root cuttings and large stem cuttings.</li> <li>➤ Fruits attracts birds &amp; bats providing an additional nutrient source from guano.</li> <li>➤ Indigenous</li> <li>➤ Much larger and somewhat faster growing than Indian Neem.</li> <li>➤ More tolerant of high rainfalls than Indian Neem.</li> </ul>		<ul style="list-style-type: none"> <li>➤ Potential use in improved fallow – improving soil fertility and structure, reducing nematode populations and providing pesticides for use in adjacent cocoa gardens.</li> </ul>
<i>Azadirachta indica</i>	Neem	Nindi	<ul style="list-style-type: none"> <li>➤ Similar to above but with greater work having been done on germplasm selection varieties with higher Azadirachtin contents are probably available.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Exotic but already grown locally</li> </ul>	

Latin Name	English Name	Indonesian Name	Uses & Advantages	Disadvantages	Potential Role in Agroforestry Systems
<i>Barringtonia edulis</i>	Pau Nut	Gayang	<ul style="list-style-type: none"> <li>➤ Nutritious nut crop</li> <li>➤ Leaves provide an excellent habitat for weaver ant colonies</li> <li>➤ Narrow crown – minimal light competition with cocoa</li> <li>➤ Soil improver – Nutrient miner</li> <li>➤ Indigenous</li> </ul>		
<i>Casuarina equisetifolia</i>	Casuarina She-oak	Kasuari	<ul style="list-style-type: none"> <li>➤ Non-leguminous soil fertilizer</li> <li>➤ Can grow on extremely unfertile sites</li> <li>➤ Extremely good fire and charcoal wood</li> <li>➤ Good for pole wood and rough fencing wood</li> <li>➤ Indigenous</li> </ul>	➤ Poor timber - splits	➤ Potential use in shortening fallow cycles
<i>Cinamomu culilawan</i>		Lawang	<ul style="list-style-type: none"> <li>➤ High value oil extracted from bark and leaves</li> <li>➤ Indigenous &amp; endangered</li> </ul>		<ul style="list-style-type: none"> <li>➤ Potential upper storey shade crop for cocoa gardens</li> <li>➤ Limited usefulness in fallow improvement due to long lead in time before oil production.</li> <li>➤ Work required on sustainable methods for oil extraction.</li> </ul>
<i>Citrus</i>		Jeruk Bali Jeruk Manis Jeruk Nipis Jeruk Keprok			
<i>Cocos nucifera</i>	Coconut	Kelapa	<ul style="list-style-type: none"> <li>➤ Fruits</li> <li>➤ Husks can be buried to improve water retention in sandy soils.</li> <li>➤ Provides light shade and limited root competition.</li> <li>➤ Soil improver</li> <li>➤ Attracts mealy bugs and associated ants</li> </ul>	➤ Potential host for <i>Phytophthera palmivora</i>	Excellent mid storey shade crop for cocoa.

Latin Name	English Name	Indonesian Name	Uses & Advantages	Disadvantages	Potential Role in Agroforestry Systems
<i>Coffea arabica</i>	Arabica Coffee	Kopi Arabika	<ul style="list-style-type: none"> <li>➤ Suited to cultivation in highland areas</li> <li>➤ Suited to cultivation under shade including in forests &amp; agroforests</li> <li>➤ Excellent market potential</li> </ul>	➤	
<i>Coffea canephora</i>	Robusta Coffee	Kopi Robust	<ul style="list-style-type: none"> <li>➤ Suited to cultivation in lowland area</li> </ul>	➤ Not as marketable as Arabica coffee	
<i>Durio zebithinus</i>	Durian	Durian	➤	➤	
<i>Garcinia mangostana</i>	Mangosteen	Manggis	<ul style="list-style-type: none"> <li>➤ High value fruits</li> <li>➤ Potential local demand but no local supply.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Very slow growing</li> <li>➤ Difficult to propagate</li> </ul>	
<i>Garcinia candiculata</i>	Moluccan Mangosteen	Tokuai	➤	➤	
<i>Gliricidia sepium</i>	Gliricidia Mother of Cocoa	Gamal	<ul style="list-style-type: none"> <li>➤</li> <li>➤ Nitrogen fixing</li> <li>➤ Attracts mealy bugs and associated ants</li> </ul>	<ul style="list-style-type: none"> <li>➤ Generally disliked by indigenous smallholder cocoa growers in Manokwari.</li> <li>➤ Suspected host of <i>Helopeltis clavifer</i>.</li> <li>➤ Rapid growth is not controlled by local farmers leading to high humidity and pest problems in gardens.</li> </ul>	<ul style="list-style-type: none"> <li>➤ This is currently almost exclusively used as the shade crop for cocoa in Manokwari.</li> <li>➤ Most indigenous smallholders are cutting or burning out these trees.</li> <li>➤ Retention of some tree should be encouraged at least in the short term.</li> </ul>
<i>Hevea brasiliensis</i>	Rubber	Karet	➤	➤	➤ Grows well in forests and agroforests

Latin Name	English Name	Indonesian Name	Uses & Advantages	Disadvantages	Potential Role in Agroforestry Systems
<i>Inga edulis</i>	Ice cream bean		<ul style="list-style-type: none"> <li>➤ Rapid growing fertilizing tree</li> <li>➤ High coppicing ability</li> <li>➤ Edible fruits – potential local commercial value</li> <li>➤ Potential pig fodder</li> <li>➤ Nitrogen fixing &amp; soil improving</li> <li>➤ Slowly decomposing leaves provide weed suppressing mulch</li> <li>➤ Potential to attract birds, bats and mammals</li> <li>➤ Produces good fuelwood</li> </ul>	<ul style="list-style-type: none"> <li>➤ Exotic – Native to South America</li> <li>➤ Not currently grown in Papua</li> </ul>	<ul style="list-style-type: none"> <li>➤ Excellent upper-storey shade for coffee and cocoa</li> <li>➤ Good alley or fallow crop</li> </ul>
<i>Intsia spp.</i>	New Guinea Ironwood	Kayu Besi Merbau	<ul style="list-style-type: none"> <li>➤ High quality timber tree</li> <li>➤ Native to New Guinea</li> </ul>	<ul style="list-style-type: none"> <li>➤ Very slow growing</li> <li>➤ Very large tree which may create root competition for other crops</li> </ul>	<ul style="list-style-type: none"> <li>➤ May be useful planted around agroforestry gardens in swampy sites, where it can help soak up excess water and reduce waterlogging.</li> </ul>
<i>Lansium domesticum</i>		Langsat Duku Kelengkeng	<ul style="list-style-type: none"> <li>➤</li> </ul>		
<i>Mangifera indica</i>	Mango	Mangga	<ul style="list-style-type: none"> <li>➤ Attracts a wide variety of ants, lizards, bats and other</li> </ul>	<ul style="list-style-type: none"> <li>➤ Broad crown – can create too much shade for understory crops</li> </ul>	
<i>Manilkara zapota</i>	Sapote	Sawo Manilla Sawo Londo	<ul style="list-style-type: none"> <li>➤ Attracts mealy bugs and associated ants</li> </ul>		
<i>Musa paradisiaca</i>	Banana	Pisang	<ul style="list-style-type: none"> <li>➤ Edible fruits</li> <li>➤ Good habitat for cocoa pollinating midges.</li> <li>➤ Felled pseudo-stems provide water reserves for times of drought.</li> <li>➤ Attracts birds and bats</li> </ul>		<ul style="list-style-type: none"> <li>➤ Short lived varieties suitable only as a nurse/shade crop for newly planted cocoa.</li> <li>➤ Longer lived varieties can be used as lower-storey shade crop for cocoa.</li> </ul>

Latin Name	English Name	Indonesian Name	Uses & Advantages	Disadvantages	Potential Role in Agroforestry Systems
<i>Nephelium lappaceum</i>	Rambutan	Rambutan	<ul style="list-style-type: none"> <li>➤ As it fruits simultaneously with cocoa it may be a potential trap plant for Cocoa Pod Borer.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Probably should not be planted close to cocoa gardens as it may act as a host plant for the cocoa pod borer pest.</li> </ul>	
<i>Malus domestica</i>	Apple	Apel	<ul style="list-style-type: none"> <li>➤ Suited to cultivation in tropical highlands</li> </ul>	<ul style="list-style-type: none"> <li>➤ Difficult to grow in tropical climates, requiring special techniques to induce fruiting</li> </ul>	<ul style="list-style-type: none"> <li>➤</li> </ul>
<i>Metroxylon sagu</i>	Sago	Sagu	<ul style="list-style-type: none"> <li>➤</li> </ul>		
<i>Moringa olifera</i>	Horse Radish Tree	Kelor	<ul style="list-style-type: none"> <li>➤ Vertical root system creates little competition for other crops.</li> <li>➤ Nitrogen fixer - Soil fertilizing tree</li> </ul>		
<i>Myristica argentea</i>	Papuan nutmeg	Pala negri			
<i>Myristica fragrans</i>	Nutmeg	Pala	<ul style="list-style-type: none"> <li>➤ Suited to cultivation in agroforestry systems</li> <li>➤ Excellent market potential</li> </ul>	<ul style="list-style-type: none"> <li>➤</li> </ul>	<ul style="list-style-type: none"> <li>➤</li> </ul>
<i>Neolamarkia cadamba</i>		Jabon	<ul style="list-style-type: none"> <li>➤ Fast growing timber tree</li> <li>➤ Native to Papua</li> <li>➤ Suitable in swampy sites</li> </ul>	<ul style="list-style-type: none"> <li>➤ Low value timber</li> </ul>	
<i>Pandanus conoidies</i>	Red fruited screw palm	Buah merah	<ul style="list-style-type: none"> <li>➤ Native to Papua</li> <li>➤ Can be grown in swampy sites</li> <li>➤ High value and good market potential</li> </ul>		
<i>Paraserianthes falcataria</i>	Falcataria Albizia	Senggon Albasia Salawaku	<ul style="list-style-type: none"> <li>➤ Extremely fast growing</li> <li>➤ Nitrogen fixing</li> <li>➤ Soil improving</li> <li>➤ Pulpwood, particle board &amp; fibre</li> <li>➤ Good for charcoal</li> <li>➤ Readily self seeds</li> </ul>	<ul style="list-style-type: none"> <li>➤ Poor timber – hard to mill and not very durable</li> <li>➤ Poor firewood - Fast burning – good fire starter</li> </ul>	<ul style="list-style-type: none"> <li>➤ Useful as an upper story shade crop for cocoa</li> <li>➤ Fallow improvement crop for subsistence gardens</li> </ul>

Latin Name	English Name	Indonesian Name	Uses & Advantages	Disadvantages	Potential Role in Agroforestry Systems
			➤ Indigenous	➤ Can become weedy ➤ Easily damaged by strong winds	
<i>Parkia speciosa</i>		Pete	➤ Edible beans – excellent market potential and long storage ➤ Nitrogen fixer ➤ Flowers attract bats and fruits attract birds	➤ Exotic – Native to Malaysia but already cultivated locally.	➤ Good mid to upper-storey shade tree for cacao.
<i>Persea americanum</i>	Avocado	Alpukat			
<i>Peueraria phaseoloides</i>	Tropical kudzu	Krandang (Java)	➤ Very vigorous soil fertilizer ➤ Edible tubers ➤ Can be grown in light shade (Coffee, oil palm, rubber & citrus) ➤ Suppresses weed growth ➤ Medicinal uses ➤ Grows from seed or cutting and rapidly regenerates after cutting.		
<i>Pomettia pinnata</i>	Oceanic lychee	Matoa	➤ Fruits with local commercial potential ➤ High quality timber ➤ Soil improver ➤ Attracts birds and bats ➤ Indigenous & heavily exploited in the wild ➤ Potential trap plant for Cocoa Pod Borer.	➤ Relatively slow growing ➤ Due to similarities of the fruit flesh to Rambutan & Cocoa it is suspected but unconfirmed host of CPB.	➤ Potential mid-upper storey shade crop for cocoa. ➤ Potential fallow improvement crop. ➤ Matoa Kelapa and Matoa Papeda are to superior varieties cultivated around Jayapura but not yet widespread in Manokwari.
<i>Piper betel</i>	Betel peper	Sirih	➤		
<i>Psidium guajava</i>	Guava	Giawas Jambu Batu	➤		
<i>Pterocarpus indicus</i>	New Guinea Rosewood	Sonokembang	➤ Highly valuable cabinet wood ➤ Amboyna Burl or Linggua kasturi is one		➤ Potential fallow improvement crop.

Latin Name	English Name	Indonesian Name	Uses & Advantages	Disadvantages	Potential Role in Agroforestry Systems
	Amboyna Narra		<p>of the highest value timber products and shavings can be used as an incense. Resulting from a pathological condition which only occurs in about 1% of trees.</p> <ul style="list-style-type: none"> <li>➤ Grow readily from large cuttings (up to 6cm diameter and 1.5 – 3 meters long)</li> <li>➤ Fast growing – up to 30 metres tall and 1.5 metre girth in 10 years.</li> <li>➤ Young leaves and shoots can be consumed as a vegetable.</li> <li>➤ Nitrogen fixing</li> <li>➤ Highly ornamental – extensively used as a street tree in Singapore and other cities.</li> <li>➤ Indigenous &amp; heavily wild exploited locally.</li> </ul>		
<i>Spondias dulcis</i>	Polynesian plum	Kedondong	<ul style="list-style-type: none"> <li>➤ Edible fruits</li> <li>➤ Attracts red weaver ants, a natural predator of CPB and other pests</li> </ul>	<ul style="list-style-type: none"> <li>➤ Limited market potential</li> </ul>	
<i>Syzygium aromaticum</i>	Clove	Cengkeh	<ul style="list-style-type: none"> <li>➤</li> </ul>	<ul style="list-style-type: none"> <li>➤ Not popular with Papuan farmers due to the difficulty of harvesting &amp; market price fluctuations</li> </ul>	
<i>Syzygium spp.</i>	Wax Jambu Water jambu	Jambu air Jambu bol	<ul style="list-style-type: none"> <li>➤</li> </ul>	<ul style="list-style-type: none"> <li>➤</li> </ul>	<ul style="list-style-type: none"> <li>➤</li> </ul>
<i>Theobroma cacao</i>	Cocoa	Kakao Coklat	<ul style="list-style-type: none"> <li>➤ Excellent market potential</li> <li>➤</li> </ul>	<ul style="list-style-type: none"> <li>➤ Susceptible to attack by cocoa pod borer (CPB)</li> </ul>	<ul style="list-style-type: none"> <li>➤ One of the most important cash crops in Papua</li> <li>➤ Grows well in light to medium shade, so can be grown in mixed agroforestry systems</li> </ul>