

**Encouraging customary landowners
in the lowlands of Papua New Guinea's Central Province
to reforest their grasslands with high value trees [PD 552/09-F]**



**Papua New Guinea Forest Authority
Port Moresby, National Capital District**



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Summary

Operation *Painim Graun na Planim Diwai* (“Operation Secure Land and Plant Trees”) aims to fast-track the PNG government's afforestation and reforestation strategies, leading to 800,000 hectares of new trees planted by the year 2050. Each province is expected to plant over 1,100 hectares of trees each year.

The ITTO Project has established a model reforestation framework (MRF) that provides customary landowners in Central Province with ongoing access to well-managed information and training services, as well as quality planting materials for trees and food crops. Working in collaboration with 3 target communities and 4 training and extension partners, 3 local outreach centres have been set-up at target community schools to provide school teachers, tree growers and field workers with on-site information. Two local distribution centres have also been established to supply landowners with quality seedlings for reforestation enterprises.

The MRF has encouraged the 2 target communities in Rigo District to allocate 110 hectares of grasslands for high-value plantations. To-date, 5 model reforestation enterprises (MREs) have been established and 10.6 hectares of teak planted at roadside locations. Each reforestation enterprise is promoting a model land group, a model business arrangement and a model production system to the wider community. Although the Project has focussed on teak, a series of pamphlets have also been produced to assist landowners to choose, grow make money from 6 high-value trees that grow well in the Central Province lowlands (including teak).

The MRF will continue to be managed by project partners using the tools and techniques that were tested during the project implementation phase. Whilst the face-to-face training, awareness and support services may be constrained at times by resource limitations, the growing network of community outreach centres and schools provides an ongoing source of technical information for landowners and the wider community. The User Guides and Promotional Videos will support the ongoing roll-out of the model reforestation framework across Central Prince and PNG.

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Abbreviations and Acronyms

ACIAR	Australian Centre for International Agricultural Research
ILG	Incorporated Land Group
ILO	International Labour Organisation
MRE	Model Reforestation Enterprise
MRF	Model Reforestation Framework
NARI	National Agricultural Research Institute
NFS	National Forest Service
PIP	Pacific Island Projects
PNG	Papua New Guinea
PNGFA	Papua New Guinea Forest Authority
ITTO	International Tropical Timber Organisation
SMEC	Small & Medium Enterprise Corporation

1. Project Background

Log exports from primary forests have made a significant contribution to the economy of Papua New Guinea (PNG). As accessible forests become increasingly depleted, however, the PNG Forest Authority (PNGFA) is focusing increasingly on reforestation as a means to maintain a permanent forest estate that supplies existing and new forest industries. Under its national reforestation programme, *Operation Painim Graun na Planim Diwai* (“Operation Secure Land and Plant Trees”), the PNGFA aims to plant 800 000 hectares of trees for commercial, community and conservation purposes by 2050.

The Pacific 2020 Review (AusAID 2006) concluded that, although there is potential to establish large plantations in the Pacific Islands, community and household arrangements are more likely to succeed due to land-tenure constraints. The review recommended growing high-quality furniture timber such as teak and mahogany and reducing the harvesting of natural forest stands, which would drive up demand and export prices. ITTO’s Diagnostic Mission to PNG (Lakani et al., 2006) also found that

“large areas of degraded land and grassland areas are available for establishing commercial forest plantations. However, this option is subject to availability of investment funds, willingness of the landowners to participate, ownership rights of the landowners being respected, availability of planting materials and appropriate seed sources. The role of the government agencies, private sector together with the customary landowners is the prime catalyst to stimulate the growth and further the plantation development”.

The ITTO Project aims to create a model reforestation framework (MRF) that addresses the key constraints to community reforestation through the provision of tailor-made awareness-raising, training and support services. The project, which involves partnerships with service providers from the public and private sectors, is focusing on teak but also encompasses other suitable species, such as mahogany and sandalwood. The MRF enables the establishment of model reforestation enterprises (MREs) that promote effective land groups, production systems and business arrangements in the wider community.

2. Central Province

The project was implemented in Central Province, which lies on the country’s southern coast and has an area of about 3.1 million hectares. The topography comprises coastal lowlands and hills that rise up to the rugged Owen Stanley Ranges. There are extensive areas of tropical savanna (163 000 hectares) and grasslands (535 000 hectares) along the lowland coastal areas and the northern ranges, representing 23% of the total land area. This vegetation is strongly influenced by a monsoonal climate, weathered soils and land-use practices (particularly fire).



Figure 1: Typical savannah grassland landscape in the Central province lowlands

Central Province is well-linked to the national capital, Port Moresby, and therefore offers good access to the marketing infrastructure needed to target both domestic and international markets. The province contains large areas of unoccupied land, a good road network, and four administrative districts. Many areas have access to power and a mobile phone network.

3. Creating a Model Reforestation Framework (MRF)

The project selected 3 sites in the Kairuku-Hiri and Rigo districts with a population of around 3000 residents (400 households). Each community has adequate organisational structures and resources in place for the planned reforestation activities. Working closely with 5 landowner groups, the project partners developed a MRF that addresses the key constraints to community reforestation through tailor-made support services (Figure 2).

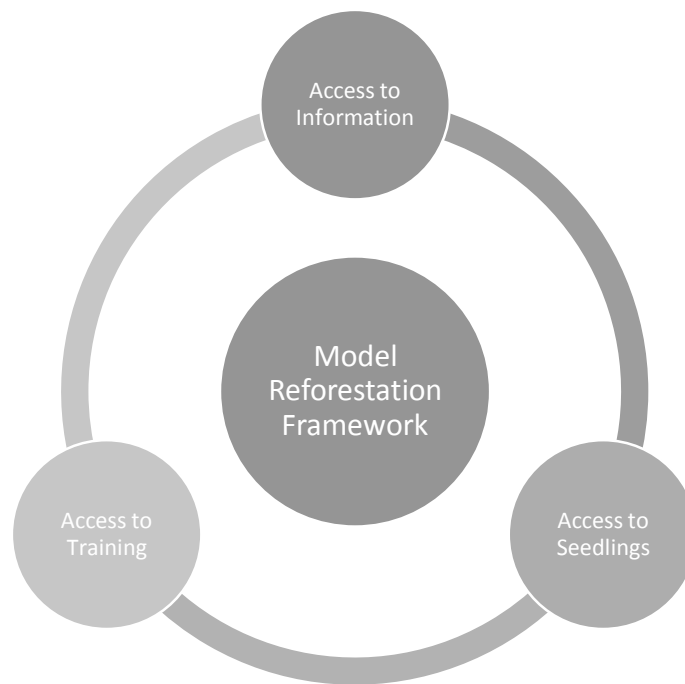


Figure 2: Key components of the model reforestation framework (MRF)

3.1. Access to information

Pacific Island Projects (PIP) was selected to provide project partners and landowners with a one-stop source of information. A rapid appraisal exercise showed that schools in the three target sites had adequate physical resources (e.g. electricity, the internet and communication equipment suitable for accessing, sharing and using information on Google Drive) to act as community outreach centres under the project. Such centres were duly established, with ongoing support from PIP.

The following 3 information kits are now available at each community outreach centre¹:

- a) **The Landowner Awareness Kit** assists the PNGFA to identify landowners and landowner groups ready to plant trees on their land under *Operation Painim Graun na Planim Diwai*. Landowner awareness activities follow a step-by-step approach, with two awareness-raising steps (A and C) and two data-collection steps (B and D). A User Guide and [Promotional Video](#) were prepared to support the roll-out of LAK resources across PNG.



Figure 3: Landowner awareness activities follow a step-by-step approach

¹ The information kits are also available at <http://pip.com.pg> (Resources menu)

b) The **Forest Learners Kit** promotes the benefits of trees and forests to the next generation of landowners through the Humanities-Social Science and Science-Mathematics pathways of PNG's Standards Based Curriculum. Fifty-eight new sets of teaching aids were selected to suit the Central Province context (e.g. grassland biomes), as well as fill information gaps (e.g. on climate-change mitigation). The Forest Learners Kit now contains more than 100 sets of multi-media teaching aids for elementary, primary and high school teachers to choose from, including games, lesson plans, presentations, puzzles, quizzes, videos, worksheets and more. A User Guide and [Promotional Video](#) were prepared to support the roll-out of Forest Learners Kit resources across PNG.

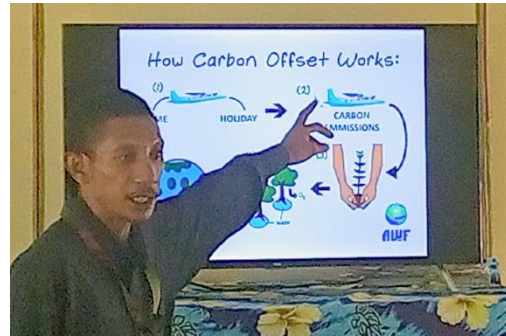


Figure 4: Teacher giving presentation from a set of teaching aids titled *Carbon Footprints & Offsetting*

c) The **Tree Growers Tool Kit** helps landowners and field workers choose, grow and make money from trees. Seven pamphlets (1 “tree selector” and 6 “tree factsheets”) were prepared to promote 6 high-value trees that grow well in the Central Province lowlands: damson terminalia (*Terminalia sericocarpa*); mahogany (*Swietenia macrophylla*); mango (*Mangifera indica*); rosewood (*Pterocarpus indicus*); sandalwood (*Santalum macgregorii*); and teak (*Tectona grandis*). These pamphlets provide information on tree products and ecosystem services, site selection, nursery establishment, planting-out and maintenance, and market opportunities and requirements. The Tree Growers Tool Kit now contains over 250 multimedia resources.



Figure 5: Landowner reading the Tree Selection pamphlet for Central province

TREE SELECTOR CENTRAL PROVINCE LOWLANDS
CHOOSING THE RIGHT TREES:
 WHICH TREES SHALL I PLANT?

Which trees can help me?
 Trees provide many useful things (e.g. food, firewood and timber). They can also make your village a better place to live in (e.g. control soil erosion and improve soil fertility). The diagram below presents six trees that grow well in the Central Province lowlands. Look carefully at each tree (a “✓” shows what this tree can provide). Then think about Question 1. Select any tree which can help you (your family and community) by putting a “✓” in the appropriate green box.

Note: Visit the Tree Growers Tool Kit for more information about choosing, growing and making money from these trees. There are 6 more pamphlets (one for each tree.)

	Provides firewood to cook with	Provides posts and poles to build with	Provides fruit and nuts for healthy eating	Provides long-lasting timber for use outside	Provides high-quality timber for use inside	Provides products for export markets	Protects your soil from erosion	Improves your soil fertility	Grows very quickly	Grows quite quickly	Grows quite slowly	QUESTION 1: Can this tree help you?
Mango	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mahogany	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rosewood	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sandalwood	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Teak	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminalia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

CHOOSING THE RIGHT TREES | WHICH TREE SHALL I PLANT?

CENTRAL PROVINCE LOWLANDS
CHOOSING THE RIGHT TREES:
 TERMINALIA [*Terminalia microcarpa* or *sericocarpa*]

Introduction
 Damson terminalia is a quite big tree that grows to a height of 20-30m. It has a straight, cylindrical trunk and a wide, spreading canopy with layered branches and small white flowers. Trees usually lose their leaves during the dry season. Damson terminalia produces a high-quality, red-brown timber, as well as a tasty fruit (that looks like the damson plum from England). Damson terminalia is commonly found in Malaysia, Indonesia, Philippines, Northern Australia and PNG.

What does this tree provide?
 Damson terminalia trees provide:
 • High-quality timber for indoor use (e.g. interior construction, flooring, furniture and veneer);
 • Good firewood;
 • Tasty fruit for eating raw or making into jam;
 • Leaves for cattle fodder.

Damson terminalia trees can also be used to:
 • Provide shelter from the sun, wind and rain;
 • Control soil erosion;
 • Restore grasslands and degraded sites;
 • Decorate the environment.

Where does this tree grow?
 Damson terminalia trees grow in the PNG lowlands up to 750m. They can survive more than 6 months without rain. Damson terminalia grows well in:
 • Full sunlight below 600m;
 • Both wet and wet/dry locations (particularly along rivers and creeks);
 • Windy sites (including near the sea);
 • Well-drained, medium to light soils.

CHOOSING THE RIGHT TREES | WHICH TREE SHALL I PLANT?

Figure 6: Front page of the tree selector and mahogany factsheet for the Central province lowlands

Open days were held at each target community to showcase the selected resource packs at the community schools, and to register landowners interested in planting trees under *Operation Painim Graun na Planim Diwai* using smart-phones with KoboCollect software. The survey found that a high proportion of active farmers are women. Although only 24% of respondents were currently growing trees (77% were growing cash crops), everyone interviewed indicated they would like to grow (more) trees in the future. Information needs were broad, ranging from reforestation awareness through to technical training. Most people interviewed preferred print to electronic media. All community members who answered the question, “*Would you like to use the community outreach centre again?*” responded positively.

3.2. Access to training

The National Agricultural Research Institute (NARI), the National Forest Service (NFS) and the Small and Medium Enterprise Corporation (SMEC) continue to provide specialized training services for target communities. The project has assisted these agencies to improve the delivery of their training programmes through the provision of relevant, user-friendly resources for landowners and field workers (such as the information kits described above). The following training services are now available:

a) **Agroforestry training services** are provided by NARI and NFS field-workers to assist target communities select and manage the most appropriate production systems for their local environment (e.g. regarding soils, slope and accessibility) and local needs (e.g. for woodfuel, timber and soil erosion control). Training topics include land-use planning, site-species election, site establishment, fire control, site operations through to harvesting, and nursery management. Training resources are selected from the Tree Growers Tool Kit (e.g. the 7 new pamphlets for the Central Province lowlands).



Figure 6: Food crops growing in ploughed soil in beds (left) and between Teak trees

b) **Business training services** are provided by SMEC field workers under their Start Your Business programme. This programme is licensed by the International Labour Organisation and comprises business awareness and planning activities. Various learning approaches are used, including simulation games, case studies and group discussions. Business awareness topics are tailored to individuals and groups and their business ideas. Business planning topics include legality, costing, pricing, marketing, cash-flow and start-up capital. Training resources are selected from the Tree Growers Tool Kit (e.g. the checklist “Are you ready to start a tree business?” and the “Cost & returns calculator”).



Figure 8: Participants displaying their cash flow plans during the SYB training at Girabu village

3.3. Access to seedlings

NARI and NFS continue to provide high-quality seeds and seedlings, which are further distributed through local satellite nurseries. The project has assisted in the provision of nursery equipment and materials. The following distribution centres are operational:

- a) **Provincial nursery** at the Kuriva Forestry Station (NFS) and Laloki Agricultural Station (NARI) provide high-quality seeds and seedlings to model sites and local nurseries. Teak is the principal species at the Kuriva Forestry Station and the nearby Mount Lawes Clonal Orchard. Scientists at the Forest Research Institute have established a replicate clonal seed orchard for teak comprising 208 clonal ramets on secure state land at the Kuriva Forestry Station. This work was undertaken through a project funded by the Australian Centre for International Agricultural Research (ACIAR).
- b) **Local nurseries** are managed by the 2 target communities in Rigo district to supply high-quality seedlings of high-value trees and food crops that grow well in the Central Province lowlands. These local distribution centres provide a cost-effective means for delivering planting stock and materials to reforestation enterprises, minimizing transport costs and seedling mortality while encouraging farmers to plant trees. Issues such as water supply, fire control, security and overall management were assessed carefully at each location before establishment.



Figure 9: Local distribution centres such as this one in Rigo district provide a cost-effective means of delivering planting stock and materials to reforestation enterprises.

4. Setting-up Model Reforestation Enterprises (MREs)

The MRF has encouraged the two target communities in Rigo district to allocate 110 hectares of grasslands for high-value plantations along the Magi highway. The third target community in Kairuku-Hiri district is also preparing to allocate a suitable demonstration area. Four model reforestation enterprises have been established to date, and 10.6 hectares of teak have been planted at roadside locations. Interplanting with agricultural crops has provided these tree-growers with early financial returns at local and provincial markets. Teak thinnings and prunings have also supplied high-quality building materials for community use. Each community forestry operation promotes the following 3 key components of a MRE to the wider community:

- **A land group** that ensures transparent and effective governance.
- **A production system** for delivering planned products and services.
- **A business arrangement** for delivering planned financial returns.

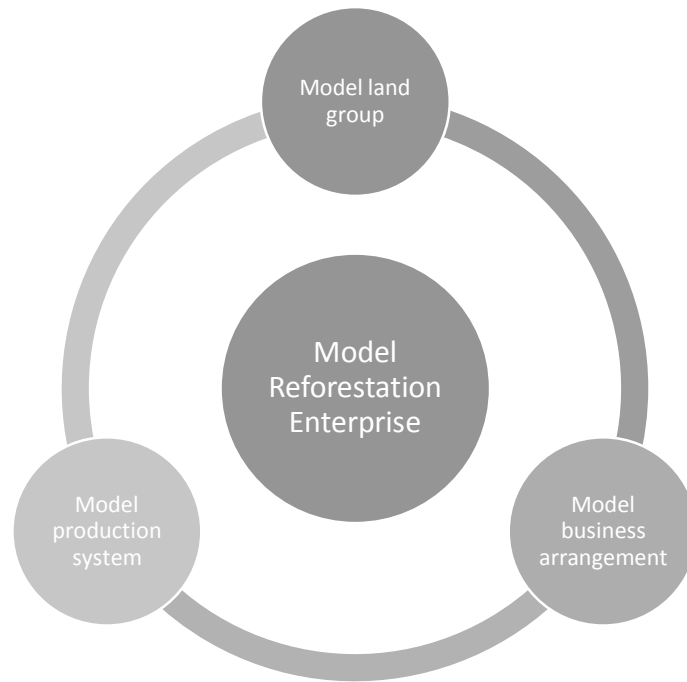


Figure 10: Key components of a model reforestation enterprise

4.1. Model land groups

Incorporated land groups (ILGs) are a recognized mechanism for enabling customary landowners to take part in the formal economy with support from the legal system. An ILG should provide its members with a solid platform for making decisions on the use of their land and its resources, as well as for the sharing of benefits derived from these assets. The ILG application process comprises a number of steps that assist landowners to organize themselves into the most appropriate decision-making body for a given area of land (usually a clan group).

NFS field workers have assisted the target communities in Rigo district with ILG awareness, ILG training, priority setting, land-use planning and participatory clan-land boundary mapping, leading to the formation of three ILGs (another ILG application is underway). Each ILG is governed by its own constitution, management committee and dispute settlement authority and is responsible for managing reforestation activities on its land (on behalf of the clan members).

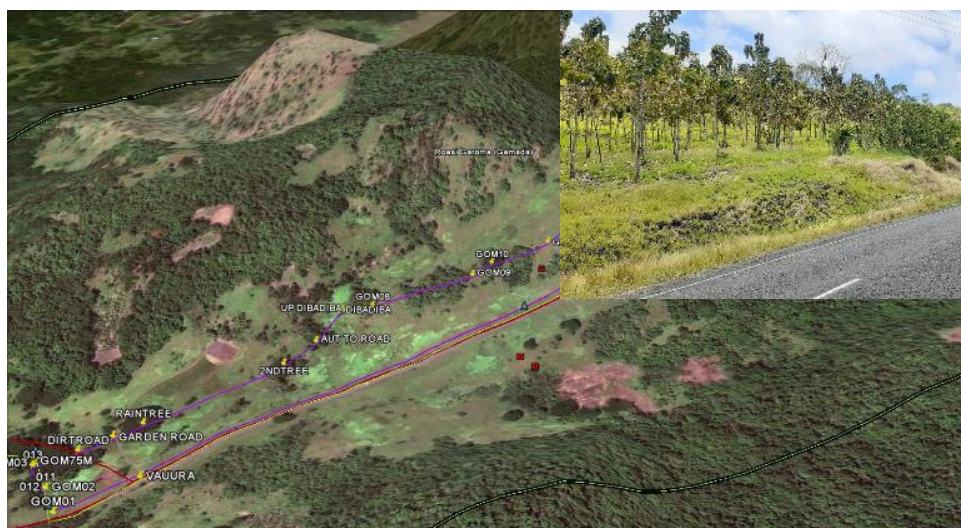


Figure 11: 30 hectares of grassland were made available for reforestation (within purple line) along the Magi highway (red line) by the 3 Incorporated Land Groups from Gomore.

4.2. Model business arrangements

SMEC field workers have assisted the 4 clan groups in Rigo district to identify the most appropriate business arrangements for their situation. This has led to one land group forming the Girabu Farmers' Cooperative with PGK 10 000 (US\$ 3 000) deposited into their bank as seed capital account by SMEC.

Each land group is now engaged in the preparation of model business plans using selected resources from the Tree Growers Tool Kit. This includes the production of a land-use plan and estimates of costs and returns for each reforestation enterprise.



Figure 12: Mr. Ralda (Managing Director, SMEC) presenting the Cooperative Passbook account to the Chairman of Girabu Farmers' Cooperative witnessed by Mr. Kaip (PNG Forest Authority).

4.3. Model production systems

NARI and NFS field workers have assisted the 4 clan groups in Rigo district to select the most appropriate production systems for their needs and the local environment (e.g. regarding soils, slope and accessibility). Common community constraints relate to high demand for wood products (i.e. woodfuel and timber) for home and community use, soil erosion, and a lack of planting materials and information.

Two production systems were trialled in Rigo district. In one, the sites were ploughed and vegetables were intercropped with teak trees. In the other, vegetables were planted and harvested before the teak trees were planted. Teak seedlings (stumps) were found to grow best in soil ploughed by local tractors during the wet season. Agricultural crops (e.g. pineapple, corn, watermelon, cucumber and Chinese cabbage) also grew best in soils ploughed by local tractors during the wet season. Pineapple, corn and watermelon were found to grow well when interplanted with teak trees, which reduced the time spent on site maintenance (e.g. weeding) and provided quick returns for tree-growers.



Figure 13: Two year old teak trees growing well on ploughed land at Girabu in Rigo District. The Konido family has allocated over 70 hectares of their land for tree planting, with 5 hectares of teak planted to-date.

5. Conclusion

The ITTO Project has managed to create a MRF that addresses the key constraints to community reforestation; providing customary landowners in Central Province with ongoing access to well-managed information and training services, as well as high-quality planting materials for trees and food crops.

The MRF has encouraged 2 target communities in Rigo District to allocate 110 hectares of grasslands for high-value plantations. To-date, 5 model reforestation enterprises have been established and 10.6 hectares of teak planted at roadside locations. Each reforestation enterprise is promoting a model land group, a model business arrangement and a model production system to the wider community. Although the Project has focussed on teak and food crops, a series of pamphlets have also been produced to assist landowners to choose, grow make money from 6 high-value trees that grow well in the Central Province lowlands (including teak).

The model reforestation framework will continue to be managed by project partners using the tools and techniques that were tested during the project implementation phase. Whilst the face-to-face training, awareness and support services may be constrained at times by resource limitations, the growing network of community outreach centres and schools provides an ongoing source of technical information for landowners and the wider community.

References

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Annex 1: Landowner Registration Form



Operation Painim Graun na Planim Diwai: Registration Form for Tree Growers v72



The purpose of this survey is to learn more about landowners who are growing trees now or are interested to grow trees in the future. The information collected will help us to provide better services for tree growers in Papua New Guinea. All respondents who complete this form will be registered with:

- PNG Forest Authority through “Operation Painim Graun na Planim Diwai”
- Pacific Island Projects through the “Tree Growers Tool Kit”

INTERVIEW DETAILS

First provide some background information (before you start the interview)...

1. Name of interviewer Full name:	2. Gender of interviewer (select one) Female <input type="checkbox"/> ; Male <input type="checkbox"/>
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3. Date of interview Day-Month-Year:	4. Time of interview Start: Stop:
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5. Name of the organisation you work for Name:	6. Your position within the organisation Position:
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7. **Ask the respondent (person being interviewed) to consent to the following terms and conditions of the interview:**

The purpose of this survey is to learn more about landowners who are growing trees now or are interested to grow trees in the future. The information collected will help us to provide better services for tree growers in Papua New Guinea. All respondents who complete this form will be registered with:

- PNG Forest Authority through “Operation Painim Graun na Planim Diwai”
- Pacific Island Projects through the “Tree Growers Tool Kit”

OK. Please continue

A. TELL US ABOUT YOURSELF

Now start the 1st part of the survey...

8. What is your name? First name:	Last name:
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9. Where do you live? Village name:	Ward name:
LLG name:	District name:
Province name:	GPS reading:

10. Enter respondent's gender (select one) Female <input type="checkbox"/> ; Male <input type="checkbox"/>	11. Are you the household head? (select one) Yes <input type="checkbox"/> ; No <input type="checkbox"/>
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12. How are you related to the members of your household? (select one or more)

Grandmother / Grandfather ; Aunt / Uncle ; Cousin ; Son / Daughter ; Husband / Wife
Mother / Father (living with husband / wife) ; Mother / Father (not living with husband / wife) ;
Single adult (NO children)

Other (specify)

13. Are you employed? (select one)

Yes (part-time) ; Yes (full-time) ; Now go to Question a No Now go to Question 14

a. Where do you work? (select one)

In village ; Near village ; LLG centre ; District centre ; Provincial centre

Other (specify)

14. What position(s) do you hold within your community? (select one or more)

Church leader ; Clan leader ; Farmer ; Group leader ; Ward leader ;

Other (specify)

15. Are you a member of an incorporated land group (ILG)? (select one)

Yes Now go to Questions a-c No Now go to Question 16

a. What is the registered name of the ILG?

b. What is the registration number of the ILG?

c. When was the ILG registered?

16. Are you a member of a grower co-operative? (select one)

Yes Now go to Question a No Now go to Question 17

a. What is the name of the co-operative?

17. Do you grow cash crops now? (select one)

Yes Now go to Question a No Now go to Question 19

a. Which cash crop(s) do you grow now? (select one or more)

Betelnut ; Cocoa ; Coconuts ; Coffee ; Fruit/vegetables ; Oil palm ; Tobacco ; Vanilla

Other (specify)

18. Why do you grow cash crops? (select one or more)

Cash for daily use (e.g. food) ; Short-term savings (e.g. school fees) ; Long-term savings (e.g. house)

Other (specify)

19. Do you grow **trees now**? (select one)

Yes Now go to [Question a](#)

No Now go to [Question 22](#)

a. **Which trees do you grow now**? (select one or more)

Balsa ; Galip ; Kalopulim ; Kamarere ; Kwila ; Malas ; Rosewood ; Taun ; Teak

Acacia ; Castanopsis ; Casuarina ; Cryptocarya ; Eucalyptus grandis ; Eucalyptus robusta

Hoop pine ; Klinki pine ; Nothofagus ; Pinus spp.

Other (specify)

20. **Why do you grow trees**? (ask respondent to think of 3 or more reasons)

Products for sale (cash) ; Products for sale (savings) ; Products for home and community use

Firewood ; Fruit and nuts ; Poles ; Seeds and/or seedlings ; Timber

Conserve environment ; Control soil erosion ; Improve soil fertility ; Mark-out land boundaries

Protection from sun, wind, rain ; Store carbon

Other (specify)

21. What are your **top-3 reasons** for growing trees? (rank 1st, 2nd and 3rd with reference to Question 20)

1st choice:

2nd choice:

3rd choice:

22. Are you interested to plant some (more) trees **in the future**? (select one)

Yes If the answer to Question 19 was "Yes", now go to [Question 23](#)

If the answer to Question 19 was "No", now go to [Question 39](#)

No If the answer to Question 19 was "Yes", now go to [Question 23](#)

If the answer to Question 19 was "No", now go to [Question 45](#)

B. TELL US ABOUT YOUR TREES

Now start the 2nd part of the survey (with reference to [Question 19](#))...

23. **How many trees do you grow now**? (select one)

0 ; 1-10 ; 11-100 ; 101-250 ; 251-1000 ; 1,001+

24. **What area has been planted**? (estimate area with reference to Question 23)

Hectares:

25. **Who owns the trees you grow now**? (select one or more)

Myself ; Me with my family ; Me with my extended family ; Me with my clan members

Other (specify)

26. Where are your trees planted? (select one or more)

- In rainforest (highland) ; In rainforest (lowland) ; In savannah forest ; In swamp forest
In degraded forest (gardening) ; In degraded forest (logged) ; In degraded forest (other)
On cleared land ; On scrub land ; On grassland ; On wetland ; In mangrove
Around house ; In village ; With cash crops ; With food crops
Other (specify)

27. How are your trees laid out? (select one or more)

- Along boundary ; Randomly spaced ; In empty spaces
In food gardens ; In block/s (trees and crops) ; In block/s (trees only) ;
In plantation/s (trees and crops) ; In plantation (trees only)
Other (specify)

28. When did you plant your trees? (select one or more)

- This year ; Last year ; 1-5 years ago ; 6-10 years ago ; 11-25 years ago ; 26+ years ago

29. How did you plant your trees? (select one or more)

- From cuttings ; From seeds ; From seedlings ; From wildings
Other (specify)

30. Where did you collect the seeds / seedlings / cuttings / wildings from? (select one or more)

- Own land (any tree) ; Own land (selected tree) ; Own land (selected fruit or nut)
Other land (any tree) ; Other land (selected tree) ; Other land (selected fruit or nut)
Local nursery ; District nursery ; Provincial nursery (PNGFA) ; Provincial nursery (other)
Local market ; District market ; Provincial market
Other (specify)

31. What are the main difficulties that you face as a tree grower? (ask respondent to think of 3 or more problems)

- Lack of finance ; Lack of land ; Lack of planting materials ; Poor quality planting materials
Lack of information ; Poor quality information ; Lack of training ; Poor quality training
Lack of markets ; Poor relationship with buyers ; Poor access to markets and services
Lack of time ; Poor family support ; Poor community support
Drought ; Fire ; Flood ; Pests / disease
Other (specify)

32. What are the top-3 difficulties (rank 1st, 2nd and 3rd with reference to Question 31)

- 1st choice:
2nd choice:
3rd choice:

33. **How many more trees would you like to grow in the future?** (select one)
 0 ; 1-10 ; 11-100 ; 101-250 ; 251-1000 ; 1,001+

34. **What area would you like to plant in the future?** (estimate area with reference to Question 33)
 Hectares:

35. **Who will own the trees you grow in the future?** (select one or more)
 Myself ; Me with my family ; Me with my extended family ; Me with my clan members
 Other (specify)

C. TELL US ABOUT THE HELP YOU HAVE RECEIVED
Now start the 3rd part of the survey...

36. **Has anybody helped you to grow your trees?** (select one)
 Yes *Now go to Question a* No *Now go to Question 39*
 a. **Who has helped you to grow trees?** (select one or more)
 Govt (PNGFA) ; Govt (Provincial) ; Govt (District) ; Government (LLG)
 Non-govt ; Church ; Private sector Neighbour ; Friend ; Family member
 Other (specify)

37. **What type of help have you received in the past?** (select one or more)
 Finance (grant) ; Finance (loan) ; Finance (advance payment for timber)
 Field visits ; Training courses ; Printed information ; Electronic information
 Planting materials (local nursery) ; Planting materials (district nursery) ;
 Planting materials (PNGFA provincial nursery) ; Planting materials (other provincial nursery)
 Other (specify)

38. **Are you still receiving help now?** (select one)
 Yes *Now go to Question a* No *Now go to Question 39*
 a. **What type of help are you receiving now?** (select one or more)
 Finance (grant) ; Finance (loan) ; Finance (advance payment for timber)
 Field visits ; Training courses ; Printed information ; Electronic information
 Planting materials (local nursery) ; Planting materials (district nursery) ;
 Planting materials (PNGFA provincial nursery) ; Planting materials (other provincial nursery)
 Other (specify)

D. HOW CAN WE COMMUNICATE WITH YOU?

Now start the 4th part of the survey...

39. Would you like to register with “Operation Painim Graun na Planim Diwai” and the “Tree Growers Tool Kit”? (select one)

Yes Now go to [Question a](#)

No Now go to [Question 45](#)

a. What type of information can we send you? (select one or more)

Why plant trees? ; Which trees to plant? ; Where to plant trees?

How to grow trees? ; How to grow trees with crops? ; Making money from trees

Protecting your environment with trees ; Slowing down climate change with trees

Other (specify)

40. Can we communicate with you using electronic equipment (like radio or mobile phone)? (select one)

Yes Now go to [Question a](#)

No Now go to [Question 41](#)

a. What type(s) of electronic equipment can we use? (select one or more)

Radio ; Computer ; Fax ; Mobile-phone ; Smart-phone ; Tablet

CD ; Flash drive ; Email ; Text message ; Video ; Website

Other (specify)

41. Can we communicate with you using printed materials? (select one)

Yes Now go to [Question a](#)

No Now go to [Question 43](#)

a. What type(s) of printed materials do you like to read? (select one or more)

Pamphlets ; Newsletters ; Reports

Other (specify)

b. Where can you collect printed materials from? (select one or more)

Post office box ; Govt (PNGFA area office) ; Govt (PNGFA provincial office)

Govt (Provincial) ; Govt (District) ; Govt (LLG) ; Non-govt ; Church ; Private sector

Other (specify)

42. Would you prefer us to use electronic equipment or printed materials? (select one)

Electronic media ; Print media

43. What language can we use? (select one or more)

English ; Motu ; Tok Pisin ; Tok Ples

44. What are your contact details? (Complete with reference to [Questions 40a and 41b](#))

Mobile number: Landline number:

Fax number: Email address:

Post office box:

45. How did you find out about “Operation Painim Graun na Planim Diwai”? *(select one or more)*

Radio ; Text message ; Pamphlet ; Video ; Meeting invitation ; Word-of-mouth

Other (specify)

46. Who gave you this information ? *(select one or more)*

Govt (PNGFA) ; Govt (Provincial) ; Govt (District) ; Government (LLG) ;

Non-govt ; Church ; Private sector Neighbour ; Friend ; Family member

Other (specify)

47. Thank you for registering with “Operation Painim Graun na Planim Diwai” and the “Tree Growers Tool Kit”!

Advise the respondent that he/she will be sent a confirmation email or text message...

Annex 2: Rapid Appraisal Form

Rapid Appraisal Form: *Outreach Partners*



Pacific Island Projects (PIP) is a not-for-profit enterprise that supplies the sustainable forestry sector with a holistic, one-stop source of information. Our multi-media resource packs focus on the information needs of landowners, school children, tree growers, field workers and wood processors in Papua New Guinea. We supply audios, videos, pamphlets, posters, research papers, reports and much more. There are currently over 800 files in 300 folders. Everything is freely available online.

We aim to circulate our user-friendly resource packs and news updates to sustainable forestry sector participants everywhere. We collaborate with research and development partners worldwide, and operate through a growing network of resource centres and schools at national, provincial, district and local levels.

The purpose of this questionnaire is to assess how we can help your organization to realize its development objectives by becoming an outreach partner. The information collected will be securely stored within our outreach services database, and will not be shared without permission from your organisation's contact person.

INTERVIEW DETAILS

First provide some background information (before you start the interview)...

1. Name of interviewer

Full name:

2. Date of interview

Day-Month-Year:

3. Interview location

Full name:

4. Photo of location & respondent (*select one*)

Yes ; No

5. Ask the respondent (person being interviewed) if they CONSENT to the terms and conditions of the interview:

The purpose of this questionnaire is to assess how we can help your organization to realize its development objectives by becoming an outreach partner. The information collected will be securely stored within our outreach services database, and will not be shared without permission from your organisation's contact person.

OK. Please continue

6. Note down any additional information collected during the interview:

A. TELL US ABOUT YOUR ORGANISATION

Now start the 1st part of the survey...

7. What is your name?

Name:

8. What is your position within the organisation?

Position:

9. What is your organisation's name?

Name:

10. When was your organisation established?

Year:

11. What type of organisation is it? (select one)

Registered company ; Registered association ; Church organisation ;

National government ; Provincial government ; District government ; Local government

Government school ; Government agency school ; Independent school ;

Other (specify)

12. Where is your organisation located?

Village/Town:

Ward:

LLG:

District:

Province:

Region:

13. What are your organisation's contact details?

Name:

Position:

Email:

Phone:

B. TELL US ABOUT YOUR ORGANISATION'S PROGRAMS AND PRIORITIES

Now start the 2nd part of the survey...

14. What are your organisation's community development priorities? (select one or more)

Environment ; Forestry ; Agriculture ; Small business development ; Financial management ;

Health ; Nutrition ; Water & sanitation ; HIV/AIDS ; Social work

Evangelism ; Bible studies ; Christian education

Elementary school education ; Primary school education ; Secondary school education

Other (specify)

20. Does your organisation employ any staff?

Yes *Now go to [Question a](#)* No *Now go to [Question 21](#)*

a. How many field staff does your organisation employ? (select one)

None
 1 field worker ; 2-5 field workers ; 6-10 field workers ; 11-25 field workers ; 26+ f-workers

b. How many office staff does your organisation employ? (select one)

None
 1 office worker ; 2-5 office workers ; 6-10 office workers ; 11+ office workers

21. Does your organisation collaborate with any local partners?

Yes *Now go to [Question a](#)* No *Now go to [Question 22](#)*

a. How many local organisations does your organisation collaborate with? (select one)

None
 1 local organisation ; 2-5 local organisations ; 6-10 local organisations ; 11+ local organisations

b. How many local field workers does your organisation collaborate with? (select one)

None
 1 local field worker ; 2-5 local field workers ; 6-10 local field workers ; 11-25 local f-workers ;
 26+ local field workers

22. Does your organisation have reliable access to electricity? (select one)

PNG Power ; Generator power ; Other ; No reliable power service

23. Does your organisation have reliable access to a phone or mobile network? (select one)

Telikom landline ; Digicel ; B-mobile/Vodafone ; Other ; No reliable phone or mobile network

24. Does your organisation have reliable access to an internet network suitable for downloading files? (select one)

Telikom ADSL ; Digicel ; B-mobile/Vodafone ; Other ; No reliable internet network

25. Does your organisation have any communication equipment? (select one or more)

Desktop computer ; Laptop computer ; Printer (ink jet) ; Printer (laser jet)
 Tablet ; Smartphone (Android) ; Smartphone (iOS) ; Smartphone (other)
 Multi-media projector ; Television with USB port
 Other (specify)

26. Who finances your community development activities? (select one or more)

User pays ; User contributes

Donor partners ; Government partners ; Non-government partners ; Church partners ;

Private sector partners

Other (specify)

27. Would you like PIP to assist your organisation secure financial support for its outreach services? (select one)

Yes ; Not sure ; No

28. Thank you for taking part in the rapid appraisal!

Advise the respondent that he/she will be informed in good time about the results of the survey...

Annex 3: Community Outreach Centre Evaluation Form



Community Outreach Centre: *Evaluation Form*

The ITTO Reforestation Project aims to encourage customary landowners in Central Province to grow high value trees on their grasslands. The project team has been invited to establish a **Community Outreach Centre at Barakau Primary School** that will focus on the information needs of landowners, school children and tree growers in Barakau Village. This work is being undertaken with support from the PNG Forest Authority, Pacific Island Projects and SME Corporation.

The purpose of this questionnaire is find out how we can improve our one-stop information service for the Barakau village community. **Please complete questions 1-3 with a pen.**

1. COMMUNITY RESOURCES						
<i>OUR QUESTION</i> (Circle your score for questions a-f and then add any comments to question g)					<i>YOUR SCORE</i> (1=low, 5-high)	
a. Do you like the four BIBLE EXPLORERS PACK folders?	1. Reading scripture	1	2	3	4	5
	2. Bible themes	1	2	3	4	5
	3. Bible stories	1	2	3	4	5
	4. Bible words	1	2	3	4	5
b. Do you like the three SCHOOL TEACHERS PACK folders?	1. Elementary	1	2	3	4	5
	2. Lower primary	1	2	3	4	5
	3. Upper primary	1	2	3	4	5
c. Do you like the three TREE GROWERS TOOL KIT folders?	4. Choosing trees	1	2	3	4	5
	5. Growing trees	1	2	3	4	5
	6. Making money from trees	1	2	3	4	5
d. Do you like these five different TYPES OF RESOURCES?	1. Video	1	2	3	4	5
	2. Handouts	1	2	3	4	5
	3. Posters	1	2	3	4	5
	4. Presentations	1	2	3	4	5
	5. Technical notes	1	2	3	4	5
e. Would you like to visit the BARAKAU OUTREACH CENTRE again?					Yes	No
f. Do you have a COMPUTER or TOUCH SCREEN PHONE?					Yes	No
• Would you like to ACCESS our library resources on your computer or phone?					Yes	No
g. Do you have any SUGGESTIONS to help us improve our one-stop information service?						

ITTO Project: PD 552/09 Rev. 1 (F): *Encouraging Customary Landowners in the Lowlands of Papua New Guinea's Central Province to reforest their Grasslands with High Value Trees.*

2. AWARENESS VIDEOS						
<i>OUR QUESTION</i> (Circle your score for questions a-c and then add any comments to question d)					<i>YOUR SCORE</i> (1=low, 5-high)	
a. Do you like these three AWARENESS VIDEOS?	1. Why plant trees?	1	2	3	4	5
	2. Uses for young teak trees	1	2	3	4	5
	3. Gutpela tri blo mi: Sandalwood	1	2	3	4	5
b. Would you like to see more VIDEOS at the Barakau Outreach Centre?					Yes	No
c. Do you have a COMPUTER or TOUCH SCREEN PHONE?					Yes	No
• Would you like to ACCESS our video resources on your computer or phone?					Yes	No
d. Do you have any SUGGESTIONS to help us improve our one-stop information service?						

3. LANDOWNER REGISTRATION		
<i>OUR QUESTION</i> (Answer questions a-e and then add any comments to question f)		<i>YOUR ANSWER</i>
a. What is your name?		
b. Where do you live?		
c. What are your contact details (email address and/or mobile number)		
d. Have you planted any trees on your land?		Yes No
e. Are you interested to plant some (more) trees on your land?		Yes No
• Have you registered with <i>Operation Painim Graun na Planim Diwai</i> ?		Yes No
f. Do you have any SUGGESTIONS to help us improve our one-stop information service?		

ITTO Project: PD 552/09 Rev. 1 (F): *Encouraging Customary Landowners in the Lowlands of Papua New Guinea's Central Province to reforest their Grasslands with High Value Trees.*