



Government of Papua New Guinea

GUIDELINES FOR ESTABLISHING SMALLHOLDER RICE EXTENSION IN PAPUA NEW GUINEA

A MODEL FARMER APPROACH TO EXTENSION PROVISIONING

**DEPARTMENT OF AGRICULTURE & LIVESTOCK, PORT MORESBY
&
JAPAN INTERNATIONAL CORPORATION AGENCY (JICA)**

April, YEAR 2015

**GUIDELINES FOR ESTABLISHING SMALLHOLDER RICE EXTENSION
IN PAPUA NEW GUINEA**

A MODEL FARMER APPROACH TO EXTENSION PROVISIONING

**A BILATERAL TECHNICAL COOPERATION ON ECONOMIC DEVELOPMENT IN SMALLHOLDER
RICE PRODUCTION AND EXTENSION PROJECT**

BY

DEPARTMENT OF AGRICULTURE & LIVESTOCK

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

AND MADE POSSIBLE BY THE

DEPARTMENT OF FOREIGN AFFAIRS AND IMMIGRATION

AND

DEPARTMENT OF NATIONAL PLANNING & MONITORING

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Guidelines for Establishing Smallholder Rice in Papua New Guinea: A Model farmer Approach to Extension Provisioning
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DAL/JICA Promotion of Smallholder Rice Production Project – Phase II (2011-2015)

The information contained in this publication is intended for public use to assist public service and rural development officers to help establish a model farmer approach of extension provisioning in the rural farming communities of PNG and to assist in developing a sustainable smallholder rice production and processing system for the people who live in rural areas. Caution is given to all the users of this publication not rely on any information contained in this publication without taking specialist advice relevant to the reader's particular circumstances.

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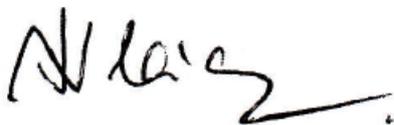
FOREWORD

Guidelines for establishing and conducting smallholder rice extension has been lacking in Papua New Guinea in the past four decades after Independence and now the Department of Agriculture & Livestock is pleased to endorse these Guidelines for Smallholder Rice Extension in Papua New Guinea for the provisioning of rice production extension for all the districts and the local-government areas throughout PNG. It places development of rice production a priority for ensuring its people food security and opportunities for developing a rice-based farming system. The model farmer approach to the smallholder rice extension is central theme in these Guidelines. It was developed in East Sepik, Madang, Milne Bay and Manus provinces though, it has the appeal and the general applicability to all potential rice growing areas and farming communities in PNG due to its cost effectiveness, it's monitoring and reporting mechanisms and the overall potential for its sustainable use.

The development and production of these Guidelines for Establishing Smallholder Rice Extension in Papua New Guinea was made possible through the bilateral technical cooperation between the Department for the Government of Papua New Guinea and the Japan International Cooperation Agency (JICA) over the past the three years. On behalf of the Government of Papua New Guinea and all its stakeholders, I extend this words of appreciation to JICA and to the people of Japan through their Government of the continued support PNG has got through the Phase 1 Project from Year 2003 to Year 2008; and in Phase 2 from Year 2011 to Year 2015 for the development and promotion of smallholder rice production in Papua New Guinea.

The Department hopes these Guidelines will be used by all the Rural Development Officers and, wherever there are Rice Officers, will continue to promote smallholder rice extension through the model farmer approach with the support from local-government administration through the Monitoring Reporting system put in place by these Guidelines. These are the fundamentals for the development of PNG's own rice industry in the foreseeable future.

Together, the people of PNG in general and the rice farming communities who subsist and whose livelihood is dependent on agriculture can be empowered by services rendered through the use of these Guidelines to become real participants in the economic development through rice production and processing for domestic rice grain self-sufficiency.



Dr. Vele Pat Ila'ava
The Secretary
Department of Agriculture & Livestock
KONEDOBU

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The development and the production of these Guidelines for Establishing Smallholder Rice Extension in Papua New Guinea was made possible through the bilateral technical cooperation between the Department of Agriculture and Livestock on behalf of the Government of PNG and Japan International Cooperation Agency (JICA) on behalf of the Government of Japan.

The authors of the Guidelines document would like to acknowledge all its collaborators and participants to the taskforce working-group who gave initial ideas and inputs into the production of these Guidelines. The PNG-side of the taskforce members included Mr. John Jave of NDAL Lae; Mr. Dakia Wokio of Markham District, Mr. Karajoy Domanai of Milne Bay; Mr. Pius Numbatai of East Sepik, Mr. John Lale Helepet, Ms. Mary Lilih of Madang. There were a number of people who participated in the number of taskforce and review meetings on the final stages of the document and included officers from Milne Bay, Madang, Manus and East Sepik and member of the REU Ms. Miriam John and Mr. Heai Steven Hoko.

JICA is also acknowledged for its inputs through the funding of the costs associated with the development and production of the Guidelines and include the dispatching of short-term experts to the Project in PNG. They include Mr. Tatsuo Fujita, the former JICA Chief Advisor to the project; Mr. Masakazu Kanamoto, the JICA Chief Advisor to the Project and the long-term expert for Coordination for the Project on Promotion of the Smallholder Rice Production in PNG Mr. Shigeo Watanabe. There were short-term experts dispatched to the PNG on short-term assignments who gave valuable inputs and insights into the production of number of topics in the Guidelines and they included Dr. Kazunari Tsuchiya, Dr Masaya Matsumura, Dr. Mizuhiko Nishida, Ms. Mari Ono, and Mr. Tateo Ajika, all were from Japan.

This includes funding by JICA for the printing of the Guidelines for Establishing Smallholder Rice Extension in PNG for its wider audience and distribution.

Overall but not the least, the authors would like to acknowledge all the model farmers in Maprik and rest of East Sepik province, Madang, Milne Bay and Manus, whose names is difficult to put here, have contributed immensely through their participations and contribution to make model-farm approach to rice extension workable in PNG. Special mention is made for Messrs Ganei Agodop, M. Lilih, Late E. Liru, Kevin Hawan, B Bulungon, John Lale Helepet and James Duks from the target province for their unwavering and consistent support to DAL REU and JICA for the implementation of the DAL/JICA Project on Promotion of Smallholder Rice Production in PNG.

ABBREVIATIONS

AWP	Annual Work Plan
DAL	Department of Agriculture & Livestock or Division of Agriculture & Livestock
NDAL	National Department of Agriculture & Livestock
DDAL	District Division of Agriculture & Livestock
DNP&M	Department of National Planning & Monitoring
DRDO	District Rural Development Officer
FTFEA	Farmer-To-Farmer-Extension Activity
JICA	Japan International Cooperation Agency
LG	Local Government
LLG	Local-Level Government
MF	Model farmer
MFA	Model-Farm Approach
MOU/MOA	Memorandum of Understanding / Memorandum of Agreement
NARI	National Agricultural Research Institute
OIC	Officer-In-Charge
PDAL	Provincial Division of Agriculture & Livestock
PNG	Papua New Guinea
PM	Program Managers
REU	Rice Extension Unit
RDO	Rural Development Officer
RO	Rice Officer
T&V	Training & Visit

PREFACE

The Guidelines for Establishing Smallholder Rice Extension in Papua New Guinea is a culmination of three years of bilateral technical cooperation between Department of Agriculture & Livestock (DAL), the four provinces of East Sepik, Madang, Milne Bay and Manus, and the international donor partner Japan International Cooperation Agency (JICA).

The DAL has been developing and implementing the Model farmer Approach of smallholder rice extension in the above mentioned provinces, spanning the years from 2003 to 2008 during the Phase I of the Project, and in the subsequent years from 2009 to 2015. The Phase 2 of the Project was from November Year 2011 to May of Year 2015.

The development of these Guidelines was necessitated by the lack of general and specific extension materials and non-availability of guide-books in the rural districts and provinces where rice has been grown and promoted as the alternative food crop and a candidate for food security crop item. Many rural development officers, provincial and district training officers and farmers who are cultivating rice do not have printed materials that they can refer to in guiding them on how smallholder upland rice cultivation and production can be taught and instruction given to farmers during training and extension visits that can be sustained within their respective constituency.

It is the intention and the expectation of the producers of these Guidelines that, beside the above mentioned provinces, any province, district or community of farmers and intending rice growers in Papua New Guinea can utilize these Guidelines in setting up their rice extension programme. The Rice Extension Unit of DAL and JICA have produced a number of publications that will complement these Guidelines and they include Guidelines on Rice Milling Services in Papua New Guinea; Handbook on Upland Rice Cultivation; and Handbook on Rice Post-Harvest Techniques.

Users of these Guidelines can consult these publications for help in establishing their smallholder rice extension programmes. Care should be taken when utilizing these publications by seeking practical advice and consultation with appropriate persons with the provinces, and DAL.

The Guidelines on Smallholder Rice Extension cover topics such as Model-Farm Approach to Smallholder Rice Extension, Model farmers, Selection and Training of Model farmers, Monitoring reporting system for Model farmer Approach of Extension; Reporting System and Annual Work Planning for each local government.

It is the firm belief of the authors of these Guidelines and Handbooks that building upon the existing farming system and working with the rural farmers and growers, a rice industry can be developed with definite path to success and sustainability of the effect been achieved through the DAL/JICA bilateral technical cooperation.

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1 INTRODUCTION TO THE GUIDELINES

1.1 The Scope of Guidelines

The Guidelines were developed based on the experiences of the technical cooperation project between the JICA and DAL, with the collaboration and the participation of the four target provinces of East Sepik, Madang, Milne Bay and Manus Provinces. The scope of the Guidelines covers the development and technical back-stopping of upland, rain-fed rice production system in rural smallholder farming and food production systems where farmers or growers use basic hand-tools and traditional land-use techniques for rice production.

It is hoped that any new expansion and adoption of the Model farmer Approach (herein after called 'MFA') for smallholder rice extension within a district, or within a province to a new district, the Guidelines can be used for the setting up and establishing of provincial or district rice development programme in each respective jurisdiction.

The Guidelines do not cover irrigated paddy rice production methods and/or large-scale rice productions that require high inputs such as heavy machineries, water for irrigation and chemical fertilizers and paddy processing plants and equipment as seen and operated by large-scale producers and foreign investor. However, all the techniques for upland rice can be utilized for anybody wishing to transform the upland system into an irrigated lowland rice production system.

Background information on the rice crop production and post-harvest processes, its developmental history can be sourced elsewhere in published and unpublished literature at DAL, NARI and others. This includes information on the agricultural system of the country, its ecology, and the socio-economic status, and policy environment of the country in which the Guidelines were developed.

1.2 Basic Tenet of Smallholder Rice Approach

The basic tenet of promoting smallholder rice product is food security. A strong food security status within an economy will ensure social well-being and harmony, economic growth and prosperity, and increased opportunities for service to others by PNG farmers. The Papua New Guinea Rice Development Policy of Year 2004 to 2014 had emphasis on the importance of sustainable rice production as an alternative for supplementing the subsistence root-and-tuber based food system for household food security in areas that are naturally endowed with good soils, adequate rain-falls and adequate semi-skilled and hardworking rural farmers and food growers.

Eighty per cent of the people of Papua New Guinea are rural villagers, whose livelihood and occupation are based on practising the traditional agriculture, hunting and gathering, and some level of tree-crop farming for generating cash income. Their level of production activities, investments into farming, and farmers output are typical of smallholder household unit farming system. It is this population of rural farmers who are land-owners and custodians that the Project is targeting in its development of the sustainable smallholder rice production system.

Rice paddy, with its derivatives, can be easily grown by all rural food growers or farmers and the rice paddy can be substantially stowed away after its harvest for later use when food are scarce or farmers need to trade or barter in return for basic services and money. The long-term storability of rice paddy, the use of simple hand-tools and basic techniques, the short-duration of the rice cropping cycle, the increase use of rice as staple for calorific needs of the people, makes rice paddy production a necessity and an important food crop to be developed and supported by both the local governments and DAL at the national level.

1.3 Purpose of these Guidelines

The purpose of the Guidelines is to give procedural and operational guidance to rice officers, rural development officers, and agricultural program managers in the districts and for managers at the provincial administrative headquarter level for the planning and the implementation of rice development extension to the farming communities in PNG. The rice development extension methodology advocated in the Guidelines was built on the Model farmer Approach (MFA) of smallholder rice extension developed by JICA and DAL bilateral technical cooperation project implemented between the Years 2003 to 2008 during Phase 1 and from Years 2011 to 2015 during Phase 2.

1.4 The Target of these Guidelines

The targeted end-users of this Guidelines document are Rural Development Officers, District and Provincial Rice Officers, District Programme Managers, District and LLG Managers, and others who may find this useful to the development and delivery of the basic social and technical services under the smallholder rice development program to the people.

The use of these Guidelines will help rural development officer or rice officers in the provinces in the establishment of rice extension programme based on the MFA that is unified and systematic in its operation, implementation and management. The Guidelines can also be utilized by the training and educational institutions in the country at technical, undergraduate and post-graduate level for the student training and the teaching staff.

These Guidelines can be used alone or together with its associated publications such as the Guidelines on Rice Milling Services in PNG; Handbook on Upland Rice Farming; and Handbook on Rice Post-Harvest Techniques in PNG, for the training and the implementation of the smallholder rice development program in the country.

2 SMALLHOLDER RICE EXTENSION DELIVERY MECHANISM

2.1 Agricultural Extension Service and Rice Development in PNG

The general background on agricultural extension, and its historical trends and approaches used in Papua New Guinea can be sourced elsewhere in literature (ACIAR, 2000; DAL; 1998, DAL, 2002).

The traditional agricultural extension in Papua New Guinea was modelled on the Training and Visit (T&V), a traditional school-of-thought extension, that was based on agricultural training provided through field visits, demonstrations, and field-days where awareness were raised on a product, system, process, and/or a methodology. The T&V approach or its derivatives were mainly carried on coconut (copra), cocoa, coffee, tea, rubber, fisheries, and introduced vegetables throughout the country in the last sixty years.

The same approach was used for rice crop development in the country between the years of 1950s and the 1970s, and this continued on into the 1980s. In the 1990s, there were new entrants into domestic rice productions and development work and these included the Taiwan Agricultural Technical Mission, UN Food Agriculture Organisation (FAO) and Trukai Industries Limited. However, their approach of rice development was based on the traditional T&V where occasional field-days and demonstrations were organised as the means of information and technology transfer. However, those approaches did have short-coming such as how the implementations were monitored and reported, based on the recipient farmers' activities, and how the interventions were measured and documented of their adoption rates and productions statistics. Moreover, how were the local governments involved in promoting smallholder rice extension and what was the enabling environment for local governments in rice development, weren't clear and duplicated by others.

In year 2003, a five (5) years technical cooperation project between JICA and DAL was started after DAL requested JICA a Project that had its basis on the past rice development work carried out by DAL and the need was expressed to develop a rice production system. One of the major outcomes of the Project implemented was the development of the extension approach for rice production and development while collaborating with East Sepik and Madang provinces.

A MFA for rice extension was developed by DAL under a bilateral technical cooperation with JICA and was further expanded and extended to another two province of Milne Bay and Manus, together with East Sepik and Madang. The extension methodology developed over the two phases of the Project was based on the premise that there was no extension mechanism or approach in the place for rice development in PNG. A need for a rice-based extension approach was identified by DAL and JICA as lacking that should adequately and effectively promote smallholder rice development in the four provinces. Hence, a MFA to smallholder rice production and processing extension was developed under the Project. The Projects then were called Promotion of Smallholder Rice Production in PNG Phase 1 and Phase 2 and were modelled and trialled in the four provinces mentioned above.

2.2 Model farmer Approach (MFA)

(1) What Model Farmer Approach (MFA) Is?

MFA is a farmer-to-farmer-extension activities (FTFEA) carried out by a model farmer (hereinafter called 'MF'). In the MFA, a farmer who is selected and trained on the basic knowledge and skills of rice cultivation cycle becomes a MF. The MF is trained to conduct extension activities to promote rice production in his or her village community or Ward area. A MF would use locally available resources (seeds, labours, hand-tools) within a walking distance from model farmers' place of dwelling or home; and with some support from the local rice officer or RDO.

Basically, MFs are expected to extend practical knowledge and skills of upland rice cultivation cycle to other farmers voluntarily using their own demonstration plot. The cycle consists of all processes involved in the upland rice production which includes land preparation, seed preparation, planting,

weeding, harvesting, threshing, drying, winnowing, milling and seed selection and storage for next cropping season. The Handbook for Upland Rice Farming in PNG can be referred for additional and supporting information to these Guidelines.

(2) What Model Farmer Approach Is Not?

MFA is not a component, nor a part, nor a full government agricultural extension system. Those who implement MFA are village-based volunteers, who commit their time, personal energy or efforts, together with the family, household or village resources, or using private personal resources to promote sustainable smallholder rice paddy productions. They undertake rice extension, initially to meet the need to produce rice for their family consumption and at the same time to satisfy their desire to help secure and improve their community's food security status.

The MFs are not on a government pay roll, either as casual or on a contract; neither are they business person nor a public official. However, MFs can become successful rice growers, rice milling service operators, and small-and-medium entrepreneurs based on trainings and recognitions they may receive through their voluntary work in promoting smallholder rice cultivation techniques to others within their community. They may become partners with the local governments, development agencies, and businesses in rice production, rice milling services and in extension training.

2.3 Roles and Activities of a Model Farmer

A Model farmer (MF), who is trained and endorsed by the local government for a particular village or ward within a LLG area, will have specific roles and responsibilities. This roles and responsibilities are linked to the MF's knowledge and skills on basic knowledge on rice cultivations, the subsequent number of supplementary trainings he or she has attended, and the experiences gained from conducting the farmers-to-farmers-extension activities (FTFEA).

When a MF conducts rice extension within the community, he or she becomes an agent-for-change, bringing about technical and technology innovation and their transfer to community of farmers and interested rice growers. MFs are encouraged to carry out following number of activities using their demonstration plot. There are seven main activities and they are described below:

(1) Demonstration Plot

The first requirement for a MF, sooner after his or her training and endorsement, is to construct a demonstration rice growing plot of land for demonstration, progressively validating and improving his skills and knowledge acquired at the first training. How the demonstration plot is constructed and what can be done for its utilization is described elsewhere in the Handbook for Upland Rice Farming. The demonstration plot of land must be used for training, instructional purposes and producing paddy seed during the course of the MF conducting the farmer-to-farmers-extension activity (FTFEA).

(2) Awareness Campaign

By using demonstration plot, the MF can raise awareness on all aspects of sustainable rice production. It is important to stress and emphasize simple instructional skills on the basic cycle of rice production. A successful rice cultivation starts with a good viable seeds and ends with a good harvest and more viable seed for the next cropping. Awareness must also be made on post-harvest techniques, and the farming households having access to good supply of rice grain for food. The targets of the awareness are the members of community or communities in which the MF resides.

(3) Consultation

Where and when MFs have increasing number of rice growers within his or her community, during cropping times, new growers may wish to consult the MFs on number of rice cultivation aspect they wish to know more about. In this instance, the MFs can use his or her demonstration plot as a tool for consultation with enquiring rice growers.

Another important role for the MF is to consult with other MFs within his or her constituency such as the Ward/LLG, the District or in other districts within the Province. This consultation may be on matters of interest and sharing knowledge and skills on FTFEA and rice cultivation.

Another important consultation that should take place is with the local government station or officer where Rice Officers or the RDOs are stationed for technical issues that the MF may need help on. It is important that this consultation should be on regular basis, such as on monthly or quarterly basis; or during and after cropping.

(4) Field Day

Field-day is an event when and where the MFs can call members of the community to witness an event or series of events the MF believes can help promote rice cultivation and production by rural households who have yet to take up rice cultivation. This may also include new techniques or issue relating to sustaining or improving rice production the MFs may have acquired recently.

The good occasions for organising a field-day are when MF are raising a good rice seedling nursery and wants to demonstrate seedling picking and transplanting techniques; during standing rice crop's grain-filling stage, and for a more interesting and exciting stage, the grain harvesting time. This may include the post-harvesting techniques of winnowing, drying, milling and after-milling chores such as cleaning, bagging or packaging if required.

The field-day described here is localized at the MF's village, or at MF's rice garden or farm. This is not to be regarded like those organised by institutions or governments at the provincial or national level where hundreds of farmers and neighbours are involved. When and where such large provincial or national field-days are organised, then, the MF may be invited to participate in it. In this instance, the MF would prepare to do so in consultation with his or her LLG or District officer.

(5) Rice Seed Distribution

MFs, whose long-term experience and continued rice cultivation will make them the number one source for rice seeds within the community. MF's having their rice seed producing plots of land and superior skills and good eyes for identifying and collecting good rice grains on the rice panicles can supply very good rice seeds with almost above 80 percent germination rate to the new rice growers who have requested rice seed.

(6) Record Making and Reporting

One important requirement a MF needs to meet while conducting his or her FTFEA is the routine note-taking and record keeping. Regular notes on events, data and persons will help the MF will his or her rice cropping cycle and meet the need to report to the local rice or rural development officer. MFs must fill in the monitoring sheet (formats 1 to 3 of APPENDIX B, C and D) and submit them at the first week of May and November. This is explained in details in section 4.1 (1) 1) to 3) of the Guidelines.

(7) Model farmers Meeting

MFs are required to attend model farmers' meeting organised by the local rice officer or the rural development officer responsible for the area in which MF operates. This may include requests to participate in activities sanctioned by the LLG, district, and the province or by the REU at the national level.

The MFs are central to the MFA used in these Guidelines. Without it, the extension approach will be of little used in the extension service aimed at bolstering and sustaining the domestic smallholder rice produce and processing in the country. Since all MFs are volunteers, FTFEA undertaken by MFs will certainly require local government support either on individually basis or collectively by LLG, DDAL and PDAL. This is explained further in the Section on Local Government's Roles and Responsibilities in MFA.

2.4 How Model farmers are Chosen and Made

2.4.1 Basis of Determining a Need for Model farmer

The need for MFs in a geographical location, representing a community or communities of smallholder farmers, will be made by the province or district responsible for the area. The need can be raised formally through oral or written expression, either by an existing MF whose area of responsibility may be too far a distance to include this area, or the request was raised by farming communities through their representative or an individual with the desire to introduce rice farming into his or her community.

The next step to be followed by a district or a province responsible is to visit the community expressing such a need and determine the following for any consideration into having a MF stationed within the community:

- 1) The community's farming household population;
- 2) Availability of arable land per household for rice cultivation;
- 3) Any information on rice cultivations and data on its production from the community;
- 4) The potential for any significant change in the farming system of the community that may consider including rice paddy production into their farming system; and
- 5) The potential for growth in future paddy rice production from the area.

Where there is significant population of the farming households, large area of available arable land, and a considerable number of farming households cultivating rice on an *ad hoc* basis but are not so well sustained due to lack of proper skills and technique training, the district or province can liaise with the community for a MF to be made present.

The community's views and consent need to be obtained on the promotion of rice paddy production, first, as a source for food and, second, to secure their food security status. The community's expressed desire to be involved in rice paddy production should be the determining factor in considering for a MF for the area.

2.4.2 Selection Criteria and Major Pitfalls to Avoid

After a decision is made to proceed in determining a need for a new MF for a community as described in Section 2.4.1 above, the following can be used as a basis for the selection of a person, or groups of persons, who would be trained, mentored and prepared to become MF(s) for their respective communities.

The officer-in-charge (OIC) will liaise with community for potential recruits. If the OIC has advanced knowledge on ideal persons as candidates, the OIC can proceed to making necessary formal selection. The OIC from the Ward/Local-Level Government area or the District, and the Provincial office will carefully screen and evaluate all the candidates before the selection can be made on the MF candidate.

The following are the qualities and characteristic of the person or individuals that must be used for the MF candidate selection and they are:

- (1) Has being recommended by an existing MF or government officer or by the community from the area;
- (2) Must have basic literacy and numeracy skills, including demonstrable skills to communicate and listen;
- (3) Must be 18 years of age and above; and under the age of 55 years old;
- (4) Is the member of community, both culturally and physically, with long-term residence in the community;

- (5) Has had over two years of rice cultivation experience, with or without any formal training on basic rice cultivation and/or processing;
- (6) Has a very keen interest in rice cultivation and has the desire and determination to cultivate rice paddy and share his knowledge and skills to others;
- (7) Has been able to secure his or her own rice seeds and have maintained and kept seeds over the previous cropping;
- (8) Have been self-motivated to share his knowledge and skills, including rice seeds to other interested farming households, families, individuals and farmers groups;
- (9) Must be willing and able to analyse critical issues and conduct problem solving, together with tendency to liaise and report frequently with OIC for the area; and
- (10) Be able to construct a demonstration plot as instructed under the Handbook for Upland Rice Farming in PNG for conducting training and awareness to others.

The pitfalls of selecting MF candidates may include the following:

- (1) Selecting individuals not recommended by existing MF or the community;
- (2) Selecting individuals that have hidden motives such as self-recognition within the community for political reasons;
- (3) Selecting a candidate as a special treat or return of a favour without seriously considering his or her ability and role as a rice grower or farmer and eventually not becoming a good MF in the future;
- (4) Selecting a candidate who is not a permanent member of the community and may not be around for much too long to serve the community as a MF; and
- (5) Socially and mentally unstable person who may be a liability than an asset for the community.

2.4.3 Selection Process and Rapport Development

The following process should be followed in selecting rice grower or ordinary farmer who will be trained, mentored and prepared to become the community's MF. At this stage of selection, he or she will only be a candidate for new MFs training, organised at the District or Provincial level.

- (1) PDAL and DDAL/LLG agree on priority rice extension area/communities where there is no MF, where there are some rice farmers and potential in growing more rice, and where DDAL/LLG rice extension officer can visit on a monthly basis especially during a cropping season for supervision;
- (2) DDAL/LLG identifies the potential MF candidates in consultation with community and witnessed observations and information received from the community of concern;
- (3) DDAL/LLG screens and finalises the list of MF candidates and submits the list with the application form by MF to PDAL or DDAL with detail information of candidates based on the criteria above;
- (4) PDAL/DDAL conducts selection meeting to screen applicants against the list from districts and finalise/ endorse the candidates list;
- (5) PDAL/DDAL gives feedback to DDAL/LLG as well as NDAL/REU about the final list of candidates and plan for new MFs training; and
- (6) DDAL/LLG gives feedback to MF candidates about the result of selection and plan for the training. In this feed-back, the details of the training can be announced, such as the venue, dates, and the personal preparation the MF needs to make before attending the training.

2.4.4 Planning for Training of Individuals

The planning for training requires experiences, skills and knowledge from previous training conducted and will recover either different levels of delivery methods depending on the composition of the trainees, the , the number of participants or trainees, the venue in which the training will be conducted that will determine the overall costs and logistics involved. The following steps (1) to (11) describes considerations that is required in planning for training.

(1) Determine the Local Demand and Need

Training needs for the community can be appraised and determined from time to time, preferably on quarterly basis, beginning at the Ward level, then at the LLG level, then at the District level. The need for training in terms of subject or issue and the number of potentials candidates should be used as the basis for the planning a training course.

The type of training that can be organised includes:

- 1) New Rice Grower or Farmer Training;
- 2) New MFs' Training; and
- 3) New Officers Training.

Depending on the number of candidates and subject matters to be trained on, the duration, the venue and the method of the training delivery can be determined as described in Section 2.4.4 (2) to (11) below:

(2) Liaison and Consultation for Training

Training needs for the community and how the training can be organised and its objectives achieved must follow a period of consultation and liaison with appropriate persons. Communities can liaise with the LLG or District Office through their Ward Councillor or community leader. Where there are MFs operating, this consultation and liaison can be done through the MF.

Following this process, one can eliminate any opportunistic persons and individuals who may not be genuinely interested in cultivating rice paddy and more importantly, aren't prepared and able to share their acquired knowledge and skills to others.

(3) Cost and Logistics Planning for Training

The process of consultation and liaison can ensure clarity and understanding on what is required of each stakeholder in the organisation of training for farmers and officers. Training costs money, and in most instances, requires time to travel, hiring of the training venue, securing accommodation units, organising food and incidentals for daily subsistence during training, and inputs used during the training.

After the training needs and the decisions on the training have been made, the local government officials can take the following important considerations:

- 1) Ward and LLGs are responsible for supporting training candidates' travels to the main town centres or ports where the training will be conducted; therefore, logistical support can be provided through pick-ups and drop-offs of the participant before and after training;
- 2) When the training is organised by the province and the venue location decided, participants from non-host districts would need to travel into the training venue, the districts authorities of the participants should provide the basic logistic support, either through pick-up and drop-offs or giving the trainees traveling allowance for road/boat fares and incidentals;
- 3) Where trainings are organised outside of the province and the consultations have taken place between the province, district and REU, then the responsibility for the costs of the participants awaiting travel out of the province will be that of the province and district; and

- 4) Cost sharing upon mutual agreement, such as 50 to 50 percent or 40 to 60 percent, of the training should be encouraged between all the tiers of government, including that of REU and any bilateral foreign partner who may be involved. A basic design document on the activity will be very helpful for all the stakeholders to use for planning and implementing purposes.

(4) Training Course Content and Teaching Subjects

After the attendance and completion of the training, a rice grower or farmer is inducted into becoming a MF for his or her community.

The basic course subject and topics covered in the basic training for New MFs Training would include the following:

- 1) MFA and expected roles of MFs;
- 2) Rice cultivation cycle based on Handbook for Upland Rice Farming in PNG (rice cultivation cycle includes land preparation, demonstration plot, soil preparation, seed preparation, nursery, planting, weeding, harvesting, threshing, drying to right moisture content (14%), winnowing, milling, seed selection and storage for next cropping season);
- 3) How to record activities and outcomes in monitoring formats;
- 4) Understand the monitoring and Government support system; and
- 5) How to manufacture or make manual tools such as weaved bamboo-strips winnowing called 'Nyru'; and wooden framed rice paddy thresher; rice milling wooden Tong-tong or 'Kisér'. (Hand-tools are a necessity and effective use of these tools for rice production and consumption in very remote communities will ensure rice cultivation can be sustained).

(5) Group Size

The number of participants or trainee-group size for any one time is an important consideration when training is planned. This will allow for the logistics and determining the cost within budget for conducting the training; and the consideration should be given to the group size and its composition, i.e., farmers, MFs, or rural development officers from time to time. Where applicable, both spouses from the farming households should be encouraged to attend and gender consideration taken into account. An ideal trainee-group size may vary from one location to another due to availability of facilities such as accommodation units, training venue and facilitators. This group size can range from 6 to 25 individuals. Groups having more than 30 may prove difficulties in the planning and implementation of training due to the number logistics and the cost. However, the following can be used as a guide when planning a training programme:

- 1) When the number of candidate is less than six within the district, other districts need to be consulted for their training needs; as it may not be economical to conduct training in a district where the total participant is less than six (6);
- 2) Determine whether training will be required in other districts; for those districts having the similar number of less than six (6), the province then take up the responsibility of organising a combined provincial training; and
- 3) Where the number of candidates within a district is more than six (6) but less than 25, the district may conduct its own training within the district in consultation with all stakeholders.

(6) Venue and Training Delivery Mechanism

Ideally, training can be conducted in public buildings where the environment is conducive to learning, lectures and practical sessions. Delivery mechanism employed under the smallholder rice development project has been as follows:

- 1) Classroom environment with white-board; chalk-board; overhead projector; and accompanied with lecturers;
- 2) Open ground area for demonstration of any kind that can be conducted without any hindrance and/or disturbance to the neighbouring persons or community;
- 3) Availability of the catering facilities; electricity and persons hygiene (toilet or bathrooms); and
- 4) Ease of travel to and from the field or farm demonstration plots, where practical sessions are held.

(7) Entry and Exit Knowledge Test

Training of the farmers and officers new to the rice production and are new to the MFs Approach, may require those planning and organising the training to conduct pre-training test and after-training test, to determine the level of knowledge and skills of the training participants. This can be utilized for the competency endorsement of the trainees, training reports and also used for future training.

- 1) Entry-Test is a set of questionnaire in one page on the training subjects, to be answer by the candidates and should not be answered for more than 20 minutes; and
- 2) Exit-test is a set of questionnaire may be similar to as the entry-test or jumbled, to reflect on the training subjects delivered in the training to be answered by the trainee. This questionnaire should be devised to be answered within 10 to 20 minutes period.

(8) Certification for Competence and Endorsement

The organisers of the training should always award certification of competence and endorsement as trained Rice Grower; MF; and Rice Officer delivering a formal recognition and acknowledgement for their participating in the training. This certification can also be used and added to the personal résumé of the participants.

(9) Implementation of the new MF Training

In the implementation of training for new MFs, the following consideration can be made before, during and after the training to effectively strengthen the MFs Approach concept of the providing rice extension in the community.

- 1) Local Governments (LLGs or District) decide the trainings based on the availability of budget in consultation with District Development Authority and the PDAL;
- 2) DDAL or PDAL decides and announces the date and venue in consultation with all stakeholders a month before the training. (Date and venue are carefully chosen to allow for MF candidates to practice one rice cultivation cycle in the field during the training);
- 3) PDAL or DDAL finalizes the training schedule and syllabus with necessary costs funding raised and ready for implementation.
- 4) The DDAL or PDAL facilitates the trainers and/or training facilitators in consultation as described above; and
- 5) The DDAL or PDAL should also organised internal travel of MF trainee or training candidates within the province. DDAL can also support PDAL in preparing and conducting training upon request by PDAL; and this would include accommodation, incidentals, stationery for the training, food and services associated with the training.

(10) Documentation of Training for Reporting Purposes

The following steps can be followed to ensure the implemented trainings are documented for record and would include:

- 1) Participant lists are made for each training with individually signed names and contact details;
- 2) Group photography can be taken and media coverage encouraged wherever possible;
- 3) Collecting back the pre-training and post-training short test – knowledge test answer papers, refer 2.4.4 (7) 2); and
- 4) Training Report produced by the organisers, together with financial costings within 30 days of training completion.

(11) Follow-Up Visits

Follow-up visits after three months from the training should be conducted to assess the performances of the farmers and MFs trained can offer incentives and encouragements, especially to MFs and rice growers in their respective communities. It is important that MF make head-start in conducting their FTFEA in constructing their demonstration plots and work plans.

2.5 Model farmer Work Plans

(1) Farmer-To-Farmer-Extension Activity

MF will be trained to conduct farmer-to-farmer-extension activity (FTFEA) and when implementing the FTFEA, MF will need to plan and organised the frequency and schedule for the FTFEA. The planning of this activity can be costed by the MF and submitted to the LLG or district office for its support. (See APPENDIX A for MF Activity Plan Format);

(2) Tools and Materials

MFs can also planned and cost their tools and material requirement based on the work plan and implementation schedule. Tools and materials basically will include those used in their demonstration plot of land and their rice garden or farm. During the series of training the MFs attends, he or she will know what tools and materials are required to effectively carried out the FTFEA and rice cropping (See APPENDIX L for Reporting on the list of Tools and Documents distributed).

(3) Communication and Follow-ups

Communication is an important tool for sustainable development and in FTFEA, the MFs will need to communicate with all stakeholders in the MFA of smallholder extension in PNG. Officers in district can use mass media like radio station to inform, announce and make ‘tok save’ to MFs of impeding activity or program. MFs can use cell-phone networks like Digicel and B-Mobile Vodafone to communicate.

(4) Supplementary Trainings

Conducting of new rice growers training and new MFs training may not adequately cover all the details of rice cultivation, post-harvest techniques and land management for sustainable rice cropping. Therefore, soon after the initial training, any additional training conducted for rice growers, MFs and rural development officer will be considered as supplementary training.

Supplementary training for each local level government can be organised, planned and implemented as described for the new MFs training above.

Supplementary training are organised for the purposed of strengthening the knowledge and skills of the trainees based on the issues, skills, and new knowledge that is being introduced or disseminated; and this may include topics ranging from pest and diseases control, compost and soils improvement techniques; harvesting and post-harvesting handling techniques and others as deemed necessary.

(5) Model farmer Recognition

MFs' continuation and efforts will be reflected in the reports on the increase or decrease of the number of rice growers, the amount of rice paddy produced and milled rice recovered from each grower batch of paddy milled and the total rice production and productivity reported from each community of growers.

In this instance, local government may need to devise a system to give recognition such MFs within the community and how those recognitions can be made or given. They may come in a number of forms and this can be decided by all the stakeholders involved in promoting domestic smallholder rice production.

The following are some form recognition that can be given by local governments to the MFs who have been consistent and have continued conducting the FTFEA in their area:

- 1) Increased small grants to MF to cover costs associated with FTFEA;
- 2) Involvement of MFs as trainers for training in the province and in others provinces based on requested through the Provincial or REU office;
- 3) Other recognitions in the future would be depended on the MF and local government involved in area on how the MF can be resourced or enabled to increase or to improve his or her rice production level.

2.6 Pitfalls for Model farmer Approach (MFA) and What to Do When They Arise.

Experiences have shown that there are pitfalls or some shortcoming in the utilization of the Model farmers Approach of Rice Extension in PNG. These shortcomings were experienced when government support system for the MFs were not developed, or have not materialised and were not implemented by local governments. The following sub-sections below are the three most common shortcomings or pitfalls when MFA is used in a new area for rice extension in PNG.

(1) Use of Family Resources without Restitution

Without the government support system, the MFs will initially use family money and resources like hand-tools, seeds and time to conduct the FTFEA. It is essential that local government closely monitor and support the MF who may use family resources, as this can be the cause of family disputes and disharmony between spouses. Where MF used family resources, the local government should be able to verify and compensate the MF through a reimbursement system.

(2) Covering Very Broad Geographical Area

MFs with recent trainings may show strong enthusiasm to conduct their FTFEA covering broad geographical areas that may include several villages, road travel and boat travel. In this instance, it is important to encourage MFs to cover areas within a half-a-day's working distance and not beyond that. This may also be influence by relations, cultural similarity and communication infrastructures such as transport and cell phone contacts.

(3) MFs' Not Performing

During the course of the MFs conducting their FTFEA after the training, there would be some natural drop-out of MFs, either they become inactive or have move out from the community for any natural reason. Then the community and the local government must be notified of the situation and remedial actions can be undertaken by the local government.

Lack of communication and consultation may lead to poor or none reporting of rice production in the area and/or seriously affecting rice production through the decline in the number of growers or paddy produced. It is important the MFs must report their status to the local government for fairness and continuity of rice development work.

2.7 Advantages of Using Model farmer Approach

2.7.1 Communal Benefits and Opportunities for Community Recognitions

Experience has shown that there are number of benefits and opportunities that can be presented to the community. These benefits may include:

- (1) Improving the food security status of the people and ensuring rice grain for food is available in times of scarcity or natural disasters;
- (2) MFs bring knowledge, skills and appropriate attitudes to the community.
- (3) Community can be recognised by the local government for their rice production and may provide others services associated with rice, rice paddy milling services and general agricultural extension and other social and infrastructural development;
- (4) MFs, who may be leading-farmers, village leaders, and land-owners, can organise and lead the community into rice grower cooperative society to progress their interest in rice production to the next level.

2.7.2 Cost Effectiveness and Affordability

The use of MFs Approach for rice extensions has been due to the general lack of rice extension officers in local government throughout the country and often with fewer rural development officers in district and LLG. MFs do not cost the government in salary or wages as their involvement are basically voluntary and are community-service oriented. It is often this very high cost of conventional extension system that leads to failure in the extension delivery service or system as observed in PNG.

2.7.3 Sustainable Rice Extension in PNG

Where the MFA is used, the body of knowledge, skills and appropriate attitudes on basic rice cultivation, post-harvest techniques used for sustainable rice production, will remain with the community through the households, rice growers groupings or cooperatives societies. Successful entrenchment of this knowledge and skills in the farming community can be seen as the basis for the long-term sustainable rice production and its extension service in PNG.

2.7.4 Easy to Duplicate

A successful and sustainable MFA in rice extension can be easily replicated in other communities, LLG areas, districts and the province following as the above procedural steps are considered and utilized by any local government who may adopt these Guidelines.

3 LOCAL GOVERNMENTS' ROLES AND RESPONSIBILITIES TO MODEL FARMER APPROACH

3.1 Leadership and Management of Model farmer Approach

(1) Rice Office

Local government that has identified local rice production as a development activity and as a priority in its development budget process should create an office, staffed with a rice officer or a rural development officer. This office can be stationed at the LLG level or District Level under the newly created District Development Authority by the Government of Papua New Guinea. This is one pre-requisite for any serious and sustained effort for developing and supporting domestic smallholder rice in PNG. Without it, there will be little success and certain failure in any effort for local rice production in PNG.

(2) Training for District Officers

In an event that local governments identifies a need to establish a district rice office and have designated an officer who will become the District or LLG rice officer, and the officer lacks training on the basic rice agronomy, milling services and general extension skills, it is important that the local government should begin consultation with its province and Rice Extension Unit (hereinafter called 'REU') on the training need of the officer. This will allow REU, in consultation and liaison with other provinces to organise training for rural development officer or new rice officer recruits.

(3) Rice Development Program

Local-level Governments at the Ward and District level should have development plans in place for rice extension in their respective constituency. This can be done at the Ward level, Local-Level Government (LLG) level, or the District level. At the provincial level, only coordination and monitoring of provincial programme can be done, which is often staffed with provincial advisors and coordinators, including those of provincial rice office and/or provincial food security office.

(4) Development Budget

A well-established monitoring reporting system based on the MFA developed and attached to the Guidelines is a helpful tool for budget planning. Local governments can formulate their annual work plan and budget requirement for the following year based on the monitoring reporting system used under the MFA. The monitoring and report system follows a set of formats which can be filled by all the stakeholders and is the sources for reporting to governments, projecting clearly indicating future requirements and setting new goals and targets, which are easily measureable and achievable.

3.2 Local Governments' Support to MFA

(1) Training

Local governments are expected to budget, fund and implement training programmes identified for their constituents and this includes providing all necessary resources under the newly restructured District Development Authorities of PNG.

(2) Model Farmers' Meetings

Regular MFs' meetings are required to maintain the dialogue between the officers and rice growers and MFs. The MF meetings, their regularity, announcements, costs of the meetings, and information sharing will be the responsibility of the officer-in-charge, either the district rice officer or the rural development officer in charge of rice.

It is in the MFs' meetings that information is shared, needs analyses are made and farmers are briefed on the progress of developments within the district. It is also in the farmers meetings that MFs bring their

report to the officers on their FTFEA. Therefore, the local governments through their respective offices should take the initiative to regularly host farmers meetings in each LLG or Districts.

(3) Travel and Subsistence Grants

It is the responsibility of the rice officer or the rural development officer within the district or LLG to develop a plan to source grants for the supporting system for MF conducting FTFEA.

(4) General Grants toward MFA Activities

1) Paddy Seeds

Wards, LLGs and/or District can provide grants to MFs as costs toward producing good rice seeds for re-distribution to other rice growers and/or local governments requesting rice seeds. This can be arranged as a one-off event or on a number of occasions that can be done on a contractual basis, wherever is necessary.

2) Basic Hand-Tools

Similarly, Wards, LLGs and districts can contract MFs for a fee who have skills and ability to mass produce basic hand-tools and equipment for the rice cultivation and post-harvest handlings. Basic hand-tools can include local manufactured knives, hoes, digging sticks, rice winnowing woven trays, and rice milling wooden tong-tong (mortar & pestle) and Kisér (wooden mill).

3) Rice Milling Services

In Papua New Guinea where rice is cultivated and produced, there are no private rice milling service operators. In areas where rice has been introduced over time, government rice milling service centres may not be adequately covering the entire area or population of rice growers. Local governments are required to advise, arrange and provide logistics for rice growers and areas where there are not rice milling services.

Experiences in the PNG have been that the local governments are responsible for the provisioning of the rice milling services to the community. Information on how this can be done can be sourced from another publication by DAL called 'Guidelines for Rice Milling Service in Papua New Guinea.'

4 MONITORING REPORTING SYSTEM

Monitoring is one important role and responsibility of the Government, both at the local level and at the national level in any system. In rural and agricultural development, such as the smallholder rice development programme, all stakeholders and citizens will need to know how their development funds and tax are expended and utilized.

Monitoring in a system requires a use of standard information collection procedure and this is guided in the form of formats and manual. This formats and manuals will be used at some regularity as stipulated or guided by the monitoring agency or organisation operation. These data will need further analysis and interpretation, and eventually what is been monitored will need to be reported to all the stakeholders.

In monitoring related activities, persons involved in the project in each province tended to blindly take action without fully understanding what they are actually doing. Taking such a situation into consideration, the project started by reaffirming the necessity of the monitoring system before tackling its improvement measures.

This issue is regarded as the most important part of smallholder rice extension activities. Demonstration plots are utilized, appropriate rice production techniques are taught, the results are evaluated, and the cause of current problems is identified, which should lead to future activities plans to address those problem or need areas. For activities here, appropriate budget allocation (planning) and implementation become necessary, in addition to the nurturing of extension officers and capable MFs. For planning, reports showing the current status are needed; and it is necessary to gather information from actual farmers, or feedback information, on the number of farmers, cultivation area, yield volume, and the challenges to be addressed.

As shown in the Figure 1, feedback information is compiled as an annual report, based on it an activity plan can be made for the subsequent year and the year after that; leading to cyclic budgeting process and drawing down of the budget with the planned and appropriated activities implementation.

Obtaining feedback information in an appropriate manner and skilfully compiling it in an annual report is expected to result in the smooth operation of a project and for a sustainable development programme implementations in the future.

The transfer and diffusion of techniques, sharing feedback information, producing annual reports and activity plans between the extension officers and other support staff can be compared to or illustrated like a vehicle, on whose “four wheels” works on an automotive, propelling or driving forward by the engine (plan) when driven (operational implementation) and arriving at its goal (destination) smoothly and effectively (results).

The important and relevant points to consider when developing the monitoring reporting system that includes technical matters can be based on the following:

- 1) The utilization of demonstration plots that is based on upland rice cultivation techniques (rain-fed, non-irrigated rice cultivation) for the transfer and diffusion of technology to other farmers and new growers;
- 2) The data gathering by MF should be simplified, focusing on the number of farmers, cultivation

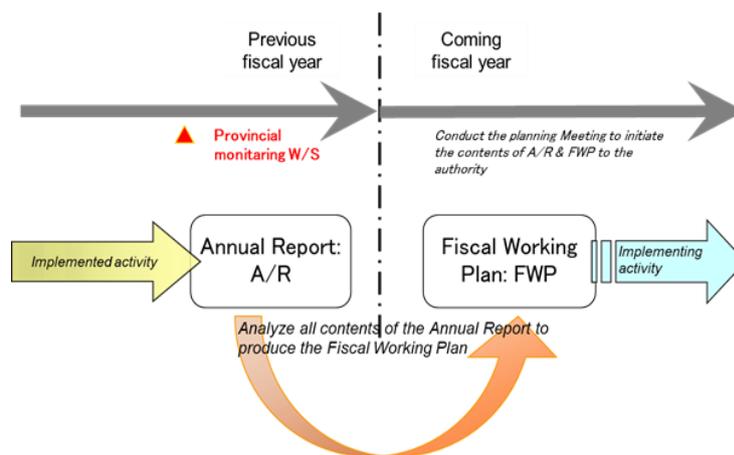


Figure 1. Schematic illustration of monitoring reporting system

area, yield volume or weight, seed distributed freely or sold, the paddy milling recovery performance, and any information that requires noting. Data management, including collecting, storing and retrieving should be made easy, simply and consistently over time so that comparative analysis based on time and space can be made easily. Easily read and understood data will make reporting easier. At each district, provincial, or REU level, the format of the report should be unified and made easy to compile;

- 3) The monitoring reporting system can be described and explained through the supplemental trainings and when monitoring activities are conducted to allow users of the monitoring reporting system to have a full understanding of the system. This aspect of monitoring can also be utilized by MF at the demonstration plots and field-days for training of other farmers within his or her community;
- 4) It is important to train and build the capacity of rice extension officer and MFs together periodically over time so as not to allow the knowledge and skills on monitoring and reporting to degenerate and not get passed on to the new cadre of extension officers or MFs;
- 5) MF-selection criteria can be reviewed after training and how the demonstration plots are utilized for extension and FTFEA purposes can be improved. The establishment and utilization of demonstration plots is a basic practice for MFs. In addition, before the PDAL provides training and other support services to the MFs, a rice grower or MF should have had experience in utilizing demonstration plots for training purposes before he or she can be considered for any supplementary training in the future. Each district or provincial rice officer can monitor and report on the number of demonstration plots created by model farmers by using the Format 8 (See APPENDIX J).

4.1 Monitoring Parameters

(1) Rice Growing Population and Its Distribution

District can obtain statistics and data from MFs, and rice milling service centres the rice population of rice growers, localities and communities where rice is seriously grown or cultivated. This information can be obtained through the monitoring and reporting formats attached to this Guidelines document.

(2) Rice Production Areas and Its Land-Use Practice

Another important statistics and information that needs seasonal or regular collection would be the land area under rice production. Data on land area by each rice grower and the land-used practices such as soil fertility management employed by MF can be collected. This data can be collected by each Ward, LLG and District over the time period and is useful an information for determining the trend of the production for a geographical area (metric ton per season) and productivity (Kg per hectare of land) for each season. New provinces and districts can collect this data in the first year of rice development as it baseline data for future trend comparison.

(3) Rice Paddy Production Level, Yield and Recovery Rates Records

Local governments can utilize the monitoring reporting system devised under the MFA to accumulate and maintained records of rice paddy production, yield and recovery rate of all their rice milling facilities from both the private and public owned and operated. This is one responsibility local governments can manage through the rural development officer, or by district rice officer. The information gathering, maintained over the prolonged number of years, can prove to be invaluable for future planning and development initiatives.

(4) Monitoring Formats

The monitoring formats are the sheets of papers used to record MFs' and LLG/District/Provincial Extension Officers' activities and their outputs/outcomes. MFs specifically need to record his/her daily activities, number of rice farmers in his/her village area, the areas and amount of their rice production, seed purchase and distribution among others. The data collected through the monitoring formats need to be

given to or collected by LLG/DDAL extension officer at the end of each 6 months (1st week of May and November); those data serve as the core data of smallholder rice production in the country.

There are different monitoring formats for LLG/District/Provincial Officers can use for monitoring local rice development programme through the data that MFs provide and the support the government given to MFs' activities. It is important for all the MFs, LLG/District/Provincial officers to use the standardised monitoring formats so that comparative analysis can be made among the provinces and get the true picture of smallholder rice production in the country. The monitoring formats are described as stated below:

1) Monitoring Format No.1

The number one user of the Monitoring Format 1 is the MF. This is the first and the very foundation of the model-farm approach of smallholder rice programme monitoring reporting system developed by DAL. This monitoring format No.1 will be filled in the MF based on the daily implementation of FTFEA and is at the fore-front of monitoring the smallholder rice development in each local government area or constituency. Rural Development Officers and/or ideally Rice Officers from each LLG, District or Province should ensure that the MF are contacted on regular basis, either on fortnightly or monthly basis, to correct and avoid pitfall of MFs not reporting correctly their activities. See APPENDIX B.

2) Monitoring Format No.2

The Monitoring Format 2 is for all rice seeds sourced and distributed within the local government area, either all Ward, LLG, District or Provincial level. The rice seeds can be purchased through local government contracting advanced and experienced rice growers and re-distributing them to other local government areas or by MFs or rice growers giving rice seeds at no cost to new and interested farmers or growers. The Monitoring Format 2 must be filled in by all rice growers who sell or give out rice seeds to others; and by RDO or RO at LLG, District and/or Provincial level. See APPENDIX C.

3) Monitoring Format No.3-1

The Monitoring Format 3 will be filled in MFs to record all the rice growers within the community or area in which the FTFEA is conducted. In an area where there is no MF in existence but there are number of rice growers, the RDO or RO responsible for the area will be responsible for filling in the format 3. Rural Development Officers and/or ideally Rice Officers from each LLG, District or Province should ensure that the MF are contacted on regular basis, either on fortnightly or monthly basis, to correct and avoid pitfall of MFs not reporting correctly their activities. See APPENDIX D.

4) Monitoring Format No.4

The RDO or RO for the LLG or the District is responsible for filling in this format. This format 4 will record and list all the MFs within the area under the LLG of District. In the LLG or District where there are no RDO or RO present, this role or responsibility can be taken up the District's Technical Manager until such time a RDO or RO is employed. See APPENDIX E.

5) Monitoring Format No.5

The monitoring format 5 contains all the data and information are submitted and containing in the above monitoring Formats No. 1 – 4 and must be compiled by the district officer responsible and is used for the biannual (six months) or half-year-term presentation by District or LLG responsible the Provincial Monitoring & Review Workshops. See APPENDIX F.

6) Monitoring Format No. 6.1

The Format 6.1 will be filled by the RDOs responsible at the LLG or District level; and the Program Manager (hereinafter called 'PM') at the Provincial level for all the data and information

on rice seeds produced, purchased or acquired from contract farmer or rice growers, seed producers or institutions. The Provincial PM or District PM will compile one unified format for all the Province or District, respectively, at and after the PM&R Workshops. This Format 6.1 will be produced and presented as the biannual (six months) or half-year-term presentation and reporting by the District or Province. See APPENDIX G.

7) Monitoring Format No.6.2

The Format 6.2 will be filled by the RDOs responsible for the LLGs and District for all the rice seeds distributed to growers who have requested rice seeds for cropping. The PM at the provincial level will compile one unified Format 6.2 after the PM&R workshops. See APPENDIX H.

8) Monitoring Format 7

This Format 7 will be filled in by all the officers at the Ward, LLG, District and Provincial level and will contain data and information on all the supports and grants given to the MF in conducting the FTFEA and other MFA activities that may be directed by the local government official from time to time. See APPENDIX I.

9) Monitoring Format 8

The monitoring Format 8 will and must be used for recording all the details of the Demonstration Plots developed maintain by the active Model Farmers in each district. This format must be filled in the rural development officers responsible for each LLG or district jurisdiction and should be filled in to reflect the level of activity created by the demo plots. Demo plots used for training and cultivation of rice plant for producing high quality seeds. From the districts, the provincial rice officer or coordinator, then, compiles all the district data into one, unified, provincial data on the number of demonstration plots developed and maintained by MF. See APPENDIX J.

10) Monitoring Format 9

The monitoring Format 9 is to be filled in by the District Rice Officer or the Rural Development Officer responsible for the LLG or the District. This format will have input data and information on the rice garden or rice farming land area of the Model Farmer or rice growers and the production achieved. This information on the length and breadth of the rice garden, the production in Kg and the yield from it is different from the Demonstration Plots where the MF uses as described in Format 8. See APPENDIX K.

11) Monitoring Format 10.

The Monitoring Format 10 should be used to register all the material support given by the local government, REU or by a external aid donor or organisation toward assisting the Model Farmer conduct their farmer-to-farmer extension activities. The materials support in kind will includes hands tools, equipment and simple instruments, and print materials given to aid the smallholder rice extension at the local government area level. These print materials may include handbooks, guidelines, technical bulletin and newsletters. See APPENDIX L.

4.2 Reporting Parameters

The reporting methods devised under these Guidelines follows the three tiers of government system PNG has and based on the monitoring report formats as described above. Reporting procedures described under this section has three levels of data collection for monitoring and reporting purposes. New district or province may follow this and adopt the formats to suit their circumstances and situation.

(1) LLG Area Reporting

The reporting methods under the LLG area will begin with the Ward where there is significant population of rice growers and there are number of MFs within the entire district. However, in the districts where the rice grower population is small and with fewer MFs, the basic level of farmers meetings and reporting can be done at the district level. Reports are collected as reported by a MF from the Ward, LLG or District. Where there is more than one Ward, the number of MFs operating within the Ward can combine the reporting to the District Rice Officer through the Ward councillor. A Ward Councillor can present information on rice growers to the district where there are no MFs.

The frequency of reporting can be done quarterly and bi-annually, prepared just before the start of the months of May and November, each year, where the District are required to receive and report to the Province through the Provincial Monitoring and Reviewing workshops.

(2) District Reporting

District Rice Development Office will collect all MFs reports representing each Ward and LLG, together with each District activities implemented in preceding six months, can used the reporting formats attached to this document on Guidelines for reporting purposes. District reporting workshops can be conducted in consultation with the Provincial Coordination Office and the cost of hosting the reporting can be borne both by the district and provincial DAL in cost-sharing arrangement and with mutual consent.

(3) Provincial Reporting

Using the district monitoring and implementation report, the provincial coordination office can then compile all the district reports, together with the implementation and operational report of the provincial coordination office into one Provincial Rice Development and Monitoring Report for the given year. The report produced becomes the Annual Report by the province that can be presented to the Provincial Administration and the REU of the NDAL.

The Provincial Rice or Food Security Office and their coordinators would be responsible for the report preparation and its presentation.

(4) National Reporting

Provincial Rice Development & Monitoring Reports presented to the DAL Rice Extension Unit are expected in the first week of the December, each fiscal year. The REU will then be responsible for compiling all provincial annual reports on smallholder rice development, and summarizes all the provincial reports into one unified Smallholder Rice Development & Monitoring Report to the Government of Papua New Guinea. This report will be made by the Department of Agriculture & Livestock to the Department of National Planning and Monitoring and to other stakeholders for each year.

(5) Reporting Formats

Information collected through monitoring sheets can to be reviewed, summarized or interpreted into report narratives and shared among authorities within districts, provinces and at the national level to assess the progress of relevant activities and smallholder rice production and decide future actions.

Progress of activities on smallholder rice production may need to be compared with previous years as well as among districts and provinces to see the overall trend and conduct situation analysis for each province and the country in general. In order to make good comparison, all the districts and provinces need to use the same reporting format, similarly described for the monitoring formats above.

1) Reporting Format No. 1;

The reporting format 1 will be used by the districts, and in the case of Manus Province it is the LLGs, to report to the provincial coordination or management team as its biannual or six monthly reports on the smallholder rice development. This report will be compiled together with the other districts (or LLGs) by the province to produce the six monthly reports. The reports can be produced soon after the provincial monitoring and review workshops are held in the months of May and November, each year.

The reports are produced from monitoring conducted on MFs FTFEAs, rice seeds distributions, and rice milling service centres' production data. The reports are targeted for the district administration for its managers including technical managers, LLG managers, district development authority's manager; and the provincial food security officer, rice coordinator and programme manager. See APPENDIX M.

2) Reporting Format No.2;

When all the local government (District and LLGs) reports have been received, the Provincial Food Security Officer or the Programme Manager responsible will then compile all the reports into one provincial report for the six monthly reporting and, importantly, producing one unified annual report for the province. See APPENDIX N.

The biannual (six monthly) reports are due in the month June each year and will cover the reporting period of November of the previous year and ending in May the current calendar year. The next biannual report will be due in December, of the same year and will cover the reporting period of June to November.

The two six monthly reports than can be used for producing the unified annual report by the Province beginning in December of the same year and no later the February of the following year. The Annual Reports are then forwarded to DAL and other stakeholders for the record and the public benefit.

The target and the recipients of the Annual Reports are:

- a) Provincial Administration;
- b) Department of Agriculture & Livestock;
- c) District Development Authorities; and
- d) Department of National Planning & Monitoring.

When the annual reports are forwarded and accepted by the above stakeholders, copies can then be reproduced to all other stakeholders within the province, including districts, LLGs, Wards and Farmer Groups.

3) Reporting Format No.3;

This report will be made by the REU of DAL after all the provincial annual reports have been received. The Programme Manager of the Rice Extension Unit will compile all provincial reports into one unified national report on all smallholder rice development, production and processing based on the MFA of rice extension in the country. See APPENDIX O.

This report should also cover production trends, milestones and successes; and issues and challenges for the future activities.

4.3 Formulation of Annual Work Plan

The monitoring parameters described above in Section 4.1 and the reporting parameters in Section 4.2 are invaluable information sources for each LLG, District and Province to develop annual work plans, their corresponding budget components and costings for the following year. Therefore, it is very important for LLG, Districts and Provinces not to delay and neglect their monitoring and reporting responsibilities.

Monitoring and reporting activities by each local government must be costed and factored into the Annual Work Plan and the annual budget processes by each LLG, District and Province. The annual work planning activities are very important tool to secure continued policy intervention and budget support from LLG, Districts, Provinces and at national levels for all stakeholders and should be developed in consultation with all stakeholders. Complete the annual work plans within the time frame for inclusion into the budget process at the all level of governments.

1) Annual Work Planning Format Number 1

This format must be used by district and LLG RDOs to plan their activities at the local level in consultation with all the stakeholders, including the MFs, technical managers, provincial programme and technical managers. See APPENDIX P.

The draft annual work plan should be prepared as part of half year report and shared at Provincial Monitoring and Review Workshop. The annual work plan should be modified with the input from PDAL and submitted to District Administration/ LLG President before the set deadline to secure necessary budget.

2) Annual Work Planning Format Number 2

This format must be used by provincial food security officer, rice programme manager or coordinators at the provincial headquarters level and must be developed in consultation with all stakeholders and after copies of each district or LLG annual work plan has been received. See APPENDIX Q.

The draft annual work plan should be prepared as part of half year report and shared at Provincial Monitoring and Review Workshop and Management Committee Meeting. The annual work plan should be modified with input from DDAL and REU and submitted to Provincial Administration before the set deadline to secure necessary budget.

3) Annual Work Planning Format Number 3

This format is used by the Programme Manager of Rice Extension Unit for nationally coordinated programme involving the provinces and the district for the implementation of nationally and/or international cooperated projects or programme. See APPENDIX R.

The draft annual work plan should be prepared as part of half year report and shared at Management Committee Meeting. The annual work plan should be modified with input from PDAL and submitted to Department of Planning and Monitoring before the set deadline to secure necessary budget.

The annual work plan formulation format templates can be extracted from APPENDIX P; APPENDIX Q and APPENDIX R of these Guidelines and can be utilized to assist all stakeholders in their AWP formulation. The following are some considerations that needs to be taken into consideration when annual work plans and budget costings are formulated

4.4 Defined Targets and Goal

Each Ward, LLG and District, and the Province will have one section in their reports mentioning the challenges and issues to resolve in the next reporting or fiscal year. In this instance, a specific target needs to be identified clearly in the reports and explaining why it's important and should be a next target or goal to achieve.

4.5 Activities and Implementation Schedule

Activities planned for the next reporting period and fiscal year should be clearly reflected in the targets and goal being identified as described above in Section 4.3 (3) 1) Activities are then identified and planned to be implemented over the period leading towards achieving this target or reaching the goal. Some targets can be achieved by conducting an activity once, while others can be achieved over the period of time such as over several months or over an year, depending on the needs, costs and availability of resources and inputs.

Given the budget release constraints and availability of public funds for implementation of budget programmes, activities needs to be implemented and spread through the fiscal year and cost are also spread evenly, and this will ensure demand for funding is not concentrated in one time of the year.

4.6 Budget and Cost Cash-flows

The skills in developing budget and cash-flow projection for the implementation of development program like smallholder rice in PNG can ensure rural development officers at the district and province have valuable assets for drawing the attention of the district and provincial planners, and this can help them in presenting a detail funding requirements and justification for the budget submissions.

The Budget and cost-flow for the LLG or district, and the province, should reflect those of the activities and implementation schedule identified above. Unreasonable underfunding of budget submissions may render some activities to be scrapped or delayed. This would affect the implementation of activities and underachievement of overall development goals and targets at the sector level and national level. In this instance, Districts will need to revise their work plans to reflect on the budget appropriated.

4.7 Procurement Plan

Provinces, Districts and Rice Grower groups may wish to procure inputs and resources relating to the promotion of smallholder rice production, processing and development in the respective constituents. In the instance, where procurement may include expert professional for training purposes, rice cultivation tools, instruments, equipment and training materials, and rice paddy post-harvest tools, instruments, equipment and training materials, a wide consultation is recommended between the local government concern and the Rice Extension Unit of NDAL.

Example of procurement plan required would be the rice milling machines, rice post-harvest tools and machines rice cultivation tools and inputs, which may not be locally available or may be retailed in distant regional centre, then, consultation and liaison with REU may require importation from other sources. This includes spare parts, specialist tools or equipment and training specialist.

4.8 Exchange Program and Public Awareness

Provinces can organise exchange programme for its rural development officers, MFs and rice growers for training and learning purposes with other districts or provinces. The selection of participants may follow the selection criteria of the MFs Training above. Exchange programmes are aimed at strengthening and building the skills and knowledge level of new or active rural development officers, MFs and rice growers.

Exchange programme are organised with the initiative of the requesting district or province and may bore the majority of cost involved in the exchange programme.

5 TRAINING, MONITORING, REPORTING and MANAGEMENT PROCEDURES

5.1 Model farmers Training

5.1.1 Selection of Model farmers

The MF is a key person to promote and teach rice production to other farmer. It is therefore very important to select and train right/appropriate MF candidates for sustainable and effective rice extension activities.

Officer from DDAL and PDAL must carefully select the candidates based on the selection criteria (See 2.4.2)

5.1.2 Selection Process

The selection criteria and the steps undertaken in selecting candidates for MF training is described in Section 2.4.2 and Section 5.1.1 above.

The selection process for new model-rice-farmers and the supplementary trainings for MF can be reviewed from time to time after each training in the future. MFs who have constructed and operationalised their demonstration rice plots should be selected over time to undergo supplementary trainings and their selection for training will be based on their regular reporting and the issues they raised in their reports to be addressed in future trainings. Model famers who have not operationalised their demonstration rice plot may find it difficult for any consideration for their participation in any supplementary training as the lack of it shows their lack of commitment and capacity to train and share information with others. The lack of demonstration plot may also make government support system to MF more difficult.

Local government officials should take rice cultivation demonstration as a requirement for MF to have before they can be considered for future supplementary trainings. As described in Section 2.3, one of the role and responsibility of the MF is to have a demonstration plot. Demonstration plot and its specification can be sourced from the Handbook on Upland Rice Cultivation in Papua New Guinea. It is recommended that MF use their demonstration plots to organise field-days for extension purposes.

The purpose of field-days is to highlight and show demonstrable benefits and positive differences in rice crop performance after specific rice cultivation techniques have been used. Examples of these would be hoeing versus no hoeing, incorporating of organic matter and utilization of composted materials versus none at all, and the only best test of effect of this would be the increased grain yield obtained or lack of it at the harvest time. It is also in the demonstration plot that MF can grow their best rice crop for seed supply only. So field-days, for this instance, can be organised at harvesting time.

The requirement is for a model rice farmer or grower, who has established a demonstration rice cultivation plot. Who must also cultivate rice crop and conduct FTFEA for a number of years using the demonstration plot beside his or her garden, before he or she can be selected to participate in a supplementary MF training. In addition, the MF candidate is also considered after candidate's skills, attitude and capacity as MF is assessed to meet the criteria as described above in Section 2.4.2. Careful selection and consideration given during the selection can help avoid mistakes and waste of resources and opportunities to other who may have attended the training if wrong people and candidates are selected to the model-farm training.

The following describes steps to ensure all potential rice growers and MF candidates in having to establish a demonstration rice cultivation plot for FTFEA purposes.

In establishing a demonstration rice plot, MF is advised to make out a plot of land measuring 5m x 5m in dimension. From the plot, the trained MFs begin by cultivating the plot by hoeing and incorporating any organic matter, both fresh and composted into the hoed soil. Not from the demonstration plot, the MF must station a composting heap for the purpose of creating composted organic matter that will be added to the demonstration plot from time to time as required.

The establishment of the demonstration plot and the compost heap must be done with the assistance and knowledge of all the members of the MF's household. The site of the demonstration plot and the compost heap must also be within the easy access and view of the community for training and observation purposes as this will allow the transfer and diffusing the technology and practice to other non-rice growing farmers of the community. The establishment of the demonstration plot and compost heap should also be done with participating from family members and the LLG/DDAL extension officers whenever necessary with reference and the use of the written resources such as Handbook for Upland Rice Farming in Papua New Guinea and the Handbook for Rice Post-harvest Techniques.

During the course of cultivation, important stages of the rice cycle such as transplanting, weeding, and insect pest control measure should be shown to interested farmers as much as possible without cumbersome preparation (extended chatting will do, for example). When the field-days are organised at harvest, inviting and witnessing by many farmers are possible will promote rice cultivation positively. As farmers see rice being harvested and milled, the results will motivate new farmers to take up rice cultivation, even if the outcome is only new farmer taking up rice cultivation seriously. This person can be mentored and considered for group work for the next season's cultivation.

For a start, the new rice growers will need to work together at the MF's demonstration plots preparing field and soil, followed by pooled labour work by all new rice growers at each other's field or garden site, moving on to the next and the next until all the group members gardens or plot area covered and worked. This can all be done within a week or two and by doing this, mentoring and guidance is given to the group on proper and improper skills and techniques.

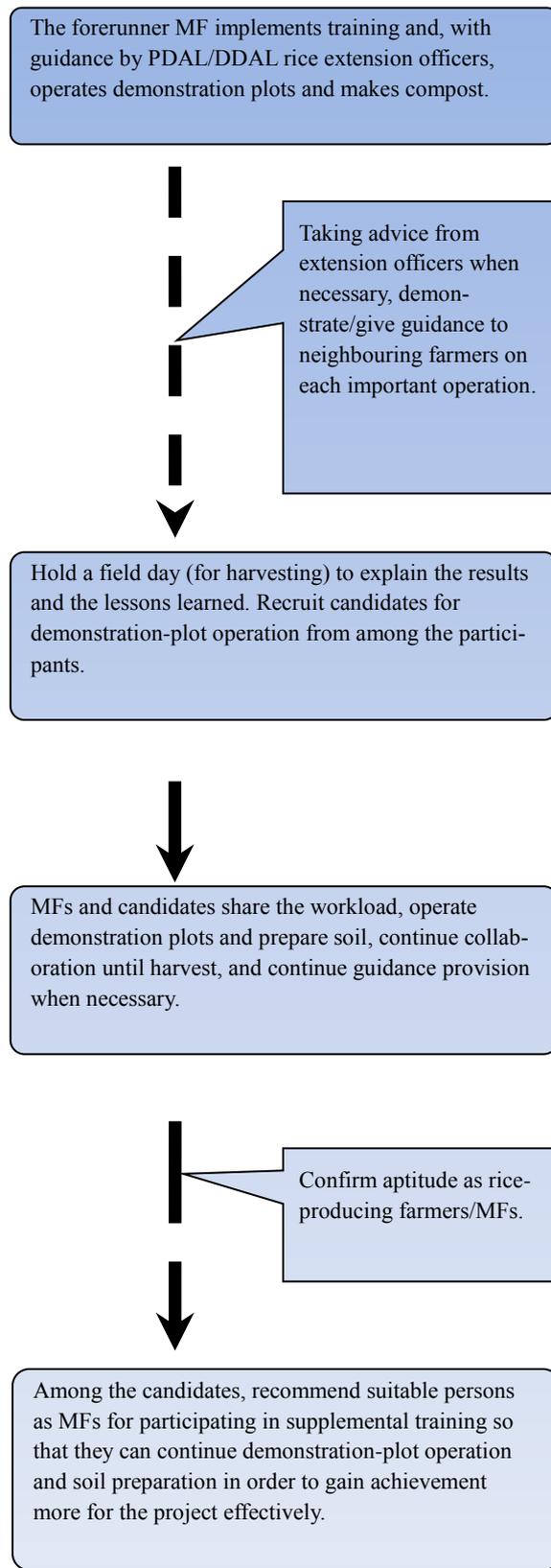


Figure 2 Selection Process of MF Candidate

Working in pooled labour or groups has the advantage of making the work easier by sharing skills and knowledge and labour inputs. It is during this activity that MF can assess and determine each participant new interest rice grower's suitability as new MFs and eventual selection for PDAL/DDAL-held supplemental training.

The following process should be taken to select MF candidates before new MFs training (See Figure 2):

- (1) PDAL and DDAL agree on priority rice extension area/communities where there is no MF, where there are some rice farmers and potential in growing more rice, and where DDAL/LLG rice extension officer can visit on a monthly basis especially during a cropping season for supervision;
- (2) DDAL identifies the potential MF candidates through consultation with and observation at community in priority area;
- (3) DDAL finalise the list of MF candidates and submits the list with the application form by MF to PDAL with detail information of candidates based on the criteria above;
- (4) PDAL conducts selection meeting to screen applicants against the list from districts and finalise/endorse candidates list;
- (5) PDAL gives feed-back to DDAL as well as NDAL about the final list of candidates and plan for new MFs training; and
- (6) DDAL gives feed-back to MF candidates about the result of selection and plan for the training.

5.1.3 New Model farmer Training

MF training candidates become MFs after the completion of the training organised by PDAL and have passed an exit –test to verify their knowledge and skills.

(1) Content of the New MFs Training

The new MFs' training covers and includes the following subject:

- 1) MFA and expected roles of MFs;
- 2) Rice Cultivation cycle based on *Handbook for Upland Rice Farming in PNG* (Rice cultivation cycle includes Land preparation, Demonstration plot, Soil preparation, Seed preparation, Nursery, Planting, Weeding, Harvesting, Threshing, Drying to right moisture content (14%), Winnowing, Milling and Seed selection and storage for next season);
- 3) How to record activities and outcomes in monitoring formats;
- 4) Monitoring and support system; and
- 5) Tools making such as manual mills, weaved basket winnowers, wooden frame threshing boxes if MFs work in the area where there is no access to milling machines.

(2) Process for Organizing New MFs Training

- 1) PDAL selects the training participants from the final list of MF trainee candidates based on the available budget in consultation with DDAL;
- 2) PDAL decides and announces the date and venue of the training based on the available budget in consultation with DDAL and REU one month before the training (Date and venue should be carefully considered in order for MF candidates to practice actual rice cultivation cycle in the field during the training). If PDAL needs support from REU or resource PDAL, PDAL needs to consult with REU and make necessary arrangement in resource, cost sharing, and outsourcing trainers;
- 3) DDAL inform selected MFs candidates about the date and venue of the training;

- 4) PDAL finalizes the training schedule and syllabus in reference to the attached example, assign trainer for each module, and prepare for training including training field, venue, accommodation, tools, materials, and logistic costs with all collaborators;
- 5) DDALs make arrangement of internal travel of MF trainee candidates within the province. DDAL also support PDAL in preparing for and conducting training upon request by PDAL; and
- 6) PDAL hold training as planned and make training report afterward not later than 30 days and share with DDALs and REU.
- 7) DDAL makes a follow up visit to the trainees after three months to assess the application of training content by MFs on their demonstration plots.

5.2 Procedures for Monitoring Reporting system

5.2.1 Preparation Stage

- (1) Appoint the person in charge of monitoring and reporting in PDAL, DDAL (and DAL officer at LLG level if there is any) ;
- (2) PDAL to ensure up-to date formats are available all times for all levels (monitoring formats 1-7);
- (3) DDAL (including DAL officer at LLG level) to ensure up-to-date formats are available for themselves as well as for MFs (monitoring formats 1-7);
- (4) DDAL to ensure their MFs understand the responsibility and know how to fill their monitoring formats;
- (5) DDAL officer agree with MFs wether DDAL officer to come and collect monitoring formats or MFs to bring their monitoring formats first week of May (records from November to April) and November (records from May to October);
- (6) PDAL and DDAL make a schedule for data/ information collection, report making, and information sharing among districts through provincial monitoring and review workshop in May and November; and
- (7) REU should make a schedule for data/information collection, report making and information sharing through management committee meeting in June and December.

5.2.2 Recording Stage

- (1) DDAL (or LLG level) officer conduct regular checks on MFs to ensure accurate monitoring records (monitoring format 1,2 and 3) are kept every time he/she visits MFs. If MFs are having difficulties in filling the monitoring sheets, DDAL officer should assist in filling and find somebody (MFs' family member) who can support filling in the monitoring sheets; and
- (2) PDAL also checks on DDAL officers to ensure accurate monitoring records (monitoring format 2 and 7) are kept on the right formats.

5.2.3 Compilation and Reporting Stage

- (1) DDAL (or LLG level) officers collect MFs records (monitoring format 1,2 and 3) of the reporting period by the 1st week of May and November of each year;
- (2) DDAL officer fill monitoring formats 2, 4, 5, 6 and 7 (fill 2 and 7 when conducting said activities and fill 4, 5, 6 by the first 2nd week of May and November based on MFs records as well as district's own records);
- (3) PDAL officer also fill monitoring formats 2 and 7 about their activities;

- (4) DDAL officers make “District Half Year/ Annual Report on Rice Production by Smallholder farmers” using the reporting template (see APPENDIX M) based on the filled monitoring formats 4,5,6, and 7 by the 2nd week of May and November;
- (5) Provincial officers organize a Monitoring and Review Workshop to collect and compile District Half year/ Annual Report and make “Provincial Half Year/ Annual Report on Rice Production by Smallholder farmers” using the reporting template (see APPENDIX N) by the 3rd week of May and November (See the section below for more details about workshop); and
- (6) REU organizes a Management Committee Meeting to collect and compile Provincial Half year/ Annual Report on Rice Production by Smallholder farmers and makes “National Half Year/ Annual Report on Rice Production by Smallholder farmers”, using the reporting template (see APPENDIX O) by the 1st week of June and December.

5.2.4 Information Sharing Stage

- (1) The purpose of monitoring and report making is to share the information among implementers and authorities about achievement and challenges of smallholder rice production and prepare for future actions. Therefore, it is important to send the completed reports to relevant authorities as indicated above immediately after the completion of report for necessary and timely actions to be taken;
- (2) DDAL officer need to share their district report with District administrator, chairman and LLG President in addition to PDAL to report on the achievement and challenges of smallholder rice production to secure the budget and seek for further support;
- (3) PDAL need to share their provincial report with Provincial administrator in addition to REU to report on the achievement and challenges of smallholder rice production to secure the budget and seek for further support;
- (4) REU needs to share their national report with Secretary and Deputy Secretary of NDAL, Department of Planning and Monitoring and other authorities to update current status of smallholder rice production in the country to secure the budget for necessary activities as well as to plan for further direction. REU also needs to share their national report with PDALs so that each PDAL know where they are compare with other provinces and learns from lessons learnt in other provinces; and
- (5) Apart from report sharing, PDAL and REU need to organize provincial monitoring and review workshop and management committee meeting to discuss achievement, challenges and outstanding issues and develop annual work plan. DDAL can also organize MFs meeting to share the achievement and challenges among MFs within the district.

5.2.5 Provincial Monitoring and Review Workshops

The Monitoring Review Workshop should be held six-monthly (every May and November) by each target province and must be initiated and budget for by the PDAL.

- (1) Purpose
 - 1) To share the information on activities conducted, outcomes and its achievement made and the challenges faced in regards to smallholder rice production in districts including about personnel and budget allocation in the province;
 - 2) To learn from districts’ experiences or lesson learnt;
 - 3) To provide necessary advice to district representatives;
 - 4) PDAL to compile and prepare provincial report based on the districts’ reports, presentations and discussions; and
 - 5) PDAL to prepare the province’s draft annual work plan in consultation with the district representatives.

- (2) Participants
 - 1) PDAL Advisor (Chair/organiser);
 - 2) PDAL Coordinator/PDAL Food Security Officer/ PDAL Rice Officer (Chair/ organiser);
 - 3) DDAL officers in charge of rice extension;
 - 4) Observer from REU; and
 - 5) Observers such as MFs, Provincial Administrator, District Administrators and chairman, LLG President when PDAL deems their participations necessary.

- (3) General Outline of Programme
 - 1) Presentation by all the target districts;
 - 2) (There should be Q&A session and discussion of achievement and challenges after each presentation);
 - 3) Review and clarification of data;
 - 4) Discussion about overall outstanding issues; and
 - 5) Discussion and preparation of the draft annual work plan.

5.3 Management Procedures

The National Management Committee meeting can be held six-monthly (every June and December) with the initiative of REU.

5.3.1 Purpose of the Management Committee

- (1) To share the activities conducted, outcome, achievement and challenges in regards to smallholder rice production among provinces including about budget and personal allocations;
- (2) To learn from provinces' experiences or lesson learnt;
- (3) To provide necessary advice to provincial representatives;
- (4) REU to compile and prepare national report based on provincial reports, presentations and discussions; and
- (5) REU to prepare the draft national annual work plan in consultation with the provincial representatives.

5.3.2 Member of Management Committee

- (1) The Secretary to the NDAL as Chairman;
- (2) The Deputy Secretary of NDAL;
- (3) The Director of Food Security Branch, NDAL;
- (4) The Coordinator of Rice Extension Unit, FSB/NDAL as Organiser;
- (5) Representative of Department of National Planning and Monitoring;
- (6) PDAL Advisers (Target and interested provinces);
- (7) Provincial Food Security Coordinator (Target and interested provinces); and
- (8) Other persons deemed necessary by REU.

5.3.3 General Program

- (1) Presentation by all target provinces and stakeholders including Q&A session and discussion of achievement and challenges after each presentation);
- (2) Review and clarification of data;
- (3) Discussion about overall performance indicators, outstanding issues; and
- (4) Discussion and preparation of the draft annual work plan.

5.4 District Rice Development Committee

The district Rice Development Committee or its equivalent should be established to oversee district rice development programmes and should be held on regular intervals at the initiative of the district planner and rice development office. It can be held on need basis and/or as directed by the District Development Authority.

5.4.1 Purpose of the Management Committee

- (1) To share the activities conducted, outcome, achievement and challenges in regards to smallholder rice production within the district including about budget and personal allocations;
- (2) To learn from district's experiences or lesson learnt;
- (3) To provide necessary advice to LLG officers and Ward Councillors and MFs;
- (4) District will compile and prepare district reports based on LLG and MFs reports, presentations and discussions held during MF meetings; and
- (5) District will need to prepare the district's annual work plan in consultation with the provincial management team and other stakeholders.

5.4.2 Member of Management Committee

- (1) The District Administrator as Chairman;
- (2) The Agriculture Technical Manager;
- (3) District Rice Officer;
- (4) The District Rural Development Officers;
- (5) Rural Development Officers responsible for each LLGs; and
- (6) Other persons representing stakeholders and deemed necessary by chairman.

5.4.3 General Program

- (1) Presentation by all the LLGs and MFs Reports including Q&A session and discussion on level achievement and challenges after each presentation);
- (2) Review and clarification of data;
- (3) Discussion about overall performance indicators, outstanding issues; and
- (4) Discussion and preparation of the draft annual work plan.

5.5 Provincial Rice Development Committee

The Provincial Rice or Food Security Management Committee or its equivalent is required to oversee rice programme coordination, planning, and implementations in the province. The frequency at which the committee convenes a meets is dependent on their needs and can be organised on quarter-of-year basis. The management meeting must be initiated by the provincial rice development manager or coordinator in consultation with all the stakeholders.

5.5.1 Purpose of the Management Committee

- (1) To share the activities conducted, outcome, achievement and challenges in regards to smallholder rice production among provinces including about budget and personal allocations;
- (2) To learn from provinces' experiences or lesson learnt;
- (3) To provide necessary advice to provincial representatives;
- (4) REU to compile and prepare national report based on provincial reports, presentations and discussions; and
- (5) REU to prepare the draft national annual work plan in consultation with the provincial representatives.

5.5.2 Member of Management Committee

- (1) The Director or Principal Advisor for Agriculture in the Province as Chairman;
- (2) The Provincial Food Security Officer;
- (3) Provincial Rice Programme Coordinator;
- (4) District Technical Manager for Agriculture or DRDOs; and
- (5) Other persons deemed necessary by the Province.

5.5.3 General Program

- (1) Presentation by all targeted districts and stakeholders including Q&A session and discussion of achievement and challenges after each presentation);
- (2) Review and clarification of data;
- (3) Discussion about overall performance indicators, outstanding issues; and
- (4) Discussion and preparation of the draft annual work plan.

6 REU' ROLES AND RESPONSIBILITIES IN THE MODEL FARMER APPROACH

This section describes the role and responsibilities of the Rice Extension Unit of the DAL. The Rice Extension Unit does overall coordination and the facilitation in the implementation of the smallholder rice production system in PNG. It is the main stakeholder in smallholder rice development due to its past and current role as the national contact point and is the repository of information, publications and reports on smallholder rice development programme, rice milling services, monitoring reporting system devised out of the DAL/JICA Promoting of Smallholder Rice Project in both Phase I and Phase II over the period of eleven years.

The following describes the area of responsibility and the role of REU

6.1 Liaison, Selection and Collaboration with LGs

REU will play a primary role as the main contact-point for smallholder rice development in PNG, beginning with the four provinces of East Sepik, Madang, Milne Bay and Manus, and ending with any new province that may wish to adopt the MFA on rice extension in PNG. This liaison will include the following:

(1) Awareness and Invitation

REU will promote the MFA for Rice Development Extension through public awareness and other media it may use. This awareness may include the benefits and working with REU and learning from the four provinces mentioned above, their experiences and benefit it may reap in adopting the MFA.

Awareness may result in provinces or district seeking advice and developmental assistance from REU. This may result in REU organising developing workshops and forum with invitation to all possible candidate provinces or districts.

(2) Process of Consultation

Provinces and districts that response and attend development forum or workshops organised by REU may need more consultation and information. In the process, provincial and districts will be further informed of the smallholder rice development experience and the MFA that REU advocates for adoption by district and provinces in PNG.

(3) Memorandum of Understanding

Positive and fruitful consultations may results in REU and provinces or districts developing and agreeing on a unified or individualised memorandum of understanding or memorandum of agreement for further consultation and planning to develop the province's or the district's smallholder rice development programme.

The MOU or MOA may cover a broad range of issues from geographical area covered, to budget and cost-sharing, commitment of officers, office space, logistic and travel within the target area, and information sharing.

(4) Technical Cooperation

Where there is third party such as the foreign donor or government aid agency, REU through the DAL and may develop a more broader MOU/MOA for technical cooperation in developing smallholder rice production in PNG and the province or district requesting technical cooperation and assistance.

6.2 National coordination of MFA and its Implementation

The Rice Extension Unit within DAL will play an important role of national coordination of development initiative by Provinces and their respective district for the development of smallholder rice programme in the future. Hence, the REU national coordination role will include two major areas of training and procurement for any province and district, seeking assistance on training in smallholder rice extension based on the MFA; and/or procurement of technical inputs, services and specialist machinery, can liaise with REU.

(1) Training

REU will provide coordination and general advisory service on the implementation of the Model farmers Approach of rice extension, rice milling services, and others including the following:

- 1) Basic Rice Cultivation Training for new rice growers;
- 2) MF Training for new districts and provinces; and
- 3) Rice Officer Training on the above and general management practices for successful implementation of Smallholder rice extension in the respective local government areas.

(2) Procurement

REU will also provide coordination and advisor role on the districts' or provinces' need for the procurement of:

- 1) Experts;
- 2) Trainers;
- 3) Rice Machinery, Equipment and Tools; and
- 4) Spare-parts and services for all rice cultivation and milling service equipment.

6.3 National Repository of Reports, Publications, and Data

Other important role and function for REU will be the National Repository of all smallholder rice development working documents, publications, and data for national programme and national food security interests. This includes the following:

(1) National Rice Development Policy

The National Rice Development Policy for each succeeding term is developed by DAL and this document will need to be housed in the unit within DAL where its main role and function is on promoting, managing and overseeing all development initiatives and efforts nationally on rice development. Otherwise specified elsewhere within DAL, the REU is the only unit that is well positioned and endowed with past project experiences to be the custodian of rice policy document.

Therefore, REU is main stakeholder for the National Rice Development Policy. Provinces and districts who wish to obtain copies this document can always consult and liaise with REU for it, and for any assistance in its interpretation and translations into the development programmes, projects and activities.

(2) Provincial Monitoring and Special Reports

Following the Monitoring and Reporting mechanism as described above, REU would be the recipient of all provincial and district rice development and extension service monitoring reports. Therefore, REU will received, store, summarize and report all provincial reports and data into one unified database and report to relevant national government agencies. It may also provide storing-and-retrieval system for all reports and data-bases for all the provinces that participate in this system.

(3) Smallholder Rice Extension Publications

REU has a number of technical reports, provincial reports and materials produced over the years relating to the development of rice programme in PNG and many of these documents are not available to the general public both internally and externally. One role for REU is the reviewing of all the past works for possible publications to the general public.

(4) National Data-Base Rice Mills and Processors

A national data-base for all rice milling units, the makes, model, types and their operational status needs to be made in order to advise the DAL and all the stakeholders on the issues of rice milling services and, operational parts and consumable needs analysis and their suitability of sustained utilization.

A significant number of rice mills have been procured outside of the guidance of REU and are often purchase by local governments, local members of Parliaments, LLG and Ward representative and private groups without adequate or proper training to its operators and manager.

REU will facilitate and take into responsibility the national data-base of all rice milling equipment in the country.

6.4 National Repository of Rice Seeds of Varieties used by MFA

Rice seeds used by farmers through the country are a important national asset for the continued development of the rice production system in the country. The development of smallholder rice will continue into the unforeseeable future and may lead to the development of rice industry through smallholder becoming commercial farmers on individual basis or at cooperative basis. It is important that a REU provide the role of a national repository of all rice varieties and the land-races used by all rice growers for now and in the future.

(1) Upland Local Land-Race

Most rice plants used by farmers and rice grower in PNG are upland rice varieties or land-races. This includes Local White, Local Red, Mekeo Red, and Finschafen White.

(2) Imported

Most imported rice varieties were brought into the country by then the Research Division of DAL in the past and those included many IRRI varieties, which are basis of what is now called NARI Rice varieties. This includes NR1, NR14, NR15, NR17 and others. Other varieties brought into the country at *ad hoc* basis included IR8, IR10, IR64 and number of Philippines Seed Boards varieties. Most of these varieties can be obtained from NARI and rice growers throughout PNG.

(3) Future Rice Seeds

Where REU is given the national role and the mandate as the national seed repository, all new rice seeds imported into PNG may needs to be documented, characterized and deposited with REU. Where individuals, organisation such as NARI and Trukai Industries Limited, import new rice cultivars into the country, the REU would require deposit the rice cultivar with it for national interest.

6.5 PUBLICATIONS

The Rice Extension Unit of the DAL has the following documents and publications for the public used.

(1) Baseline Survey

A baseline survey was conducted in year 2012 to determine the status of Rice Production and Rice Milling Service in the four provinces of East Sepik, Madang, Milne Bay and Manus. The report includes data of number of rice growers, non-rice growers and the general population, their respective constituency,

level rice production and consumption, and where rice milling units are located throughout each province and district.

(2) Final Report on the Promotion of Smallholder Rice Production – Phase II

This was the final report on the Project on promotion of smallholder rice production that was conducted between the year 2003 and 2008. It is based on this Project and its recommendations that the subsequent Phase II project was initiated.

(3) Handbook on Upland Rice Cultivation

(4) Handbook on Rice Post-Harvest Techniques

(5) Guidelines on Mechanical Rice Milling Services in Papua New Guinea

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2. DAL 2002. Draft Final Report – Part I. The Development Study of the Promotion of Smallholder Rice Production in Five PNG Provinces. Department of Agriculture & Livestock, Port Moresby. PNG
3. DAL 2004. Papua New Guinea Rice Development Policy 2004 – 2014. Department of Agriculture & Livestock. Port Moresby PNG.

APPENDICES

APPENDIX A

MODEL FARMERS ACTIVITY PLAN

MODEL FARMER'S ACTIVITY PLAN

Name		Submission Date	
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NO	PLANED DATE & TIME	MAIN ACTIVITIES	TARGET & LOATION (Number of expected beneficiaries, Village/Ward/LLG)	BUDGET/ RESOURCES REQUIRED	FUNDING SOURCE

Received by: COMMENT

APPENDIX H

HALF TERM REPORT FOR SEED PURCHASE AND DISTRIBUTED

Format 6 -2: Half Term Report for Seed Purchased and Distributed in _____ LLG/District/Province (2/2)

2. Seed Distributed to person(s) and/or Organisation for sowing and cultivation: _____ Period Covered (Month and Year: From _____ to _____ of Year

District	LLG	Name of Rice Variety	No. of Receipt or beneficiary				Quantity (Kg) of seeds issued	cost of seed K/Kg	Total in Kina	Remarks!
			Model Farmer	Rice grower	Non Rice Grower	Cluster Group				
	LLG 1 <name>	NR 1								
		NR 15								
		NR 16								
		IR 64								
		Fins White								
		Local Red								
		TSC10								
		Golden Mountain								
		IR 10								
		PSBr								
		Thai Basmati								
		others								
		others								
			LLG 2 <name>	NR 1						
NR 15										
NR 16										
IR 64										
Fins White										
Local Red										
TSC10										
Golden Mountain										
IR 10										
PSBr										
Thai Basmati										
others										
others										
	LLG 3 <name>			NR 1						
		NR 15								
		NR 16								
		IR 64								
		Fins White								
		Local Red								
		TSC10								
		Golden Mountain								
		IR 10								
		PSBr								
		Thai Basmati								
		others								
		others								
				TOTAL						

APPENDIX M

DISTRICT HALF-YEAR/ANNUAL REPORTING

District Half Year/ Annual Report

on

Rice Production by Smallholder farmers

From Month/Year to Month/Year

_____ District

1. General information
2. Rice production in the district
3. Summary of model farmers' extension activities in the district
4. Summary of rice milling services in the district
5. Summary of LLG/DDAL/PDAL support activities in the district
6. Challenges
7. Future Directions and Plans for the next term

Attachment

- ① Organizational/Operational Structure (PDAL-DDAL-LLG-MF-RF)
- ② List of model farmers (Format 4)
- ③ Half term report on model farmers activities (Format 5) compiled by DDAL
- ④ Rice milling records
- ⑤ Half term report on seed purchase and distribution (Format 6-1 and Format 6-2) compiled by DDAL
- ⑥ Report on governmental support to model farmers or other farmers (Format 7 - 10) compiled by DDAL
- ⑦ DISTRICT ANNUAL ACTIVITY PLAN

1. General information

- Location, Number of LLG, Wards, Villages and population
- Environmental characteristics (climate and land)
- Organizational/ Operational Structure (allocation of personnel in charge of rice)
- Month and year when the district started the promotion of smallholder rice production through MFA and major activities conducted in the district till the previous year
- Major rice activities conducted in the district during the reporting period including the orientation or training of DDAL/LLG officers

2. Rice production in the district by LLGs

Table 1: Provincial Summary of Rice Production by LLG

LLG	Total number of rice farmers	Total area under rice (m ²)	Paddy rice reported by MF (kg)	Name of main rice varieties
TOTAL (Current year) mm-mm, year				
TOTAL (Previous Year) mm-mm, year				

(Data source: Monitoring Format 5: Half Term report on Model farmers' Activities)

- Analysis of District Summary, whether the number of rice farmers, area, and rice production are increased or decreased compared with the previous year
- Analysis of the reasons behind of increase or decrease referring to the finding of 3. Summary of model farmers' extension activities, 4. Summary of Rice milling services, and 5. Summary of LLG/DDAL support activities

3. Summary of model farmers' extension activities

Table 2: District Summary of model farmers' extension activities by districts

LLG	Number of active model farmers (number of existing MF)	Frequency of MF extension activities	Total Number of Beneficiaries of MF extension activities	Total Number of Villages covered by MF
TOTAL (Current year) mm-mm, year				
TOTAL (Previous year) mm-mm, year				

(Data source: Monitoring Format 5: Half Term report on Model farmers' Activities)

- Analysis of District Summary, whether the number of model farmers, frequency of activities, and number of beneficiaries are increased or decreased compared with the previous year
- Analysis of the reasons behind referring to the finding of 5. Summary of LLG/DDAL support activities

4. Summary of rice milling services

Table 3: District Summary of Rice Processing by Districts

LLG	No. of operating rice mills (number of existing mills)	No. of beneficiaries	Paddy rice reported by Milling station (kg)	Milled rice reported by Milling station (kg)	Name of main rice varieties	Recovery percentage (%)
Governmental milling service						
Private milling service						
TOTAL (Current year) mm-mm, year						
TOTAL (Previous Year) mm-mm, year						

(Data source: Milling record)

- Analysis of District Summary, whether the number of rice mills, beneficiaries and rice processing are increased or decreased compared with the previous year as well as the difference between the governmental or private milling service
- Finding of milling recovery
- Analysis of the difference between Table 1: District Summary of Rice Production and Table 3: District Summary of Rice Processing if there is any
- Analysis of the reasons behind referring to the finding of 5. Summary of LLG/DDAL support activities

5. Summary of LLG/DDAL support activities

5-1. Training

Table 4: District Summary of Training

Name of training, orientation, meeting, etc.	Target number of beneficiaries in this term	Value of Support in Kina/man-hours/kina	Achievement in this term	Reasons if Planned target were not satisfied	Counter-measures
MF Fresher Training					
MF Refresher Training					

- Brief explanation of the purpose and content of the training and its outcome

APPENDIX N

PROVINCIAL HALF-YEAR/ANNUAL REPORTING

Provincial Half Year/ Annual Report
on
Rice Production by Smallholder farmers
From Month/Year to Month/Year

_____ Province

1. General information
2. Rice production in the province
3. Summary of model farmers' extension activities in the province
4. Summary of rice milling services in the province
5. Summary of LLG/DDAL/PDAL support activities in the province
6. Challenges
7. Future Directions and Plans for the next term

Attachment

- 1 Organizational/Operational Structure (NDAL-PDAL-DDAL-LLG-MF-RF)
- 2 List of model farmers (Format 4)
- 3 Half term report on model farmers activities (Format 5) compiled by PDAL
- 4 Rice milling records
- 5 Half term report on seed purchase and distribution (Format 6-1 and Format 6-2) compiled by PDAL
- 6 Report on governmental support to model farmers or other farmers (Format 7 - 10)
- 7 PROVINCIAL ANNUAL ACTION PLAN

1. General information

- Location, Number of district, LLG and population
- Environmental characteristics (climate and land)
- Organizational/ Operational Structure (allocation of personnel in charge of rice)
- Month and year when the province started the promotion of smallholder rice production through MFA and major activities conducted in the Province till the previous year
- Major rice activities conducted in Province during the reporting period including training or orientation done for provincial/district/LLG rice officers.

2. Rice production in the province by districts

Table 1: Provincial Summary of Rice Production by Districts

District	Total number of rice farmers	Total area under rice (m ²)	Paddy rice reported by MF (kg)	Name of main rice varieties
TOTAL (Current year) mm-mm, year				
TOTAL (Previous Year) mm-mm, year				

(Data source: Monitoring Format 5: Half Term report on Model farmers' Activities)

- Analysis of Provincial Summary, whether the number of rice farmers, area, and rice production are increased or decreased compared with the previous year
- Analysis of the reasons behind of increase or decrease referring to the finding of 3. Summary of model farmers' extension activities, 4. Summary of Rice milling services, and 5. Summary of LLG/DDAL/PDAL support activities

3. Summary of model farmers' extension activities

Table 2: Provincial Summary of model farmers' extension activities by districts

District	Number of active model farmers (number of existing MF)	Frequency of MF extension activities	Total Number of Beneficiaries of MF extension activities	Total Number of Villages covered by MF
TOTAL (Current year) mm-mm, year				
TOTAL (Previous year) mm-mm, year				

(Data source: Monitoring Format 5: Half Term report on Model farmers' Activities)

- Analysis of Provincial Summary, whether the number of model farmers, frequency of activities, and number of beneficiaries are increased or decreased compared with the previous year
- Analysis of the reasons behind referring to the finding of 5. Summary of LLG/DDAL/PDAL support activities

4. Summary of rice milling services

Table 3: Provincial Summary of Rice Processing by Districts

District	No. of operating rice mills (number of existing mills)	No. of beneficiaries	Paddy rice reported by Milling station (kg)	Milled rice reported by Milling station (kg)	Name of main rice varieties	Recovery percentage (%)
Governmental milling service						
Private milling service						
TOTAL (Current year) mm-mm, year						
TOTAL (Previous Year) mm-mm, year						

(Data source: Monitoring Format 5: Half Term report on Model farmers' Activities)

- Analysis of Provincial Summary, whether the number of rice mills, beneficiaries and rice processing are increased or decreased compared with the previous year as well as the difference between the governmental or private milling service
- Analysis of the difference between Table 1: Provincial Summary of Rice Production and Table 3: Provincial Summary of Rice Processing if there is any
- Analysis of the reasons behind referring to the finding of 5. Summary of LLG/DDAL/PDAL support activities
- Finding of milling recovery

6. Challenges and countermeasures

- Brief Explanation of the challenges identified in above in the area of rice production, MFs' extension activities, rice milling services, and LLG/DDAL/PDAL support activities.
- When stating challenges, feasible countermeasures need to be stated clearly for each challenge.

7. Future Direction and Plans for the next term

- Specific actions for the next term (next 6 months for the half year report, next 1 year for annual report) to overcome challenges identified above.

APPENDIX O

NATIONAL HALF-YEAR/ANNUAL REPORTING

National Half Year/ Annual Report
on
Rice Production by Smallholder farmers
In Papua New Guinea
From Month/Year to Month/Year

1. General information
2. Rice production in the country
3. Summary of model farmers' extension activities
4. Summary of rice milling services
5. Summary of LLG/DDAL/PDAL/NDAL support activities
6. Challenges
7. Future Directions and Plans for the next term

Attachment

- 1 Organizational/Operational Structure (NDAL-PDAL-DDAL-LLG-MF-RF)
- 2 List of model farmers for all provinces (Format 4)
- 3 Half term report on model farmers activities (Format 5) compiled by PDAL
- 4 Rice milling records
- 5 Half term report on seed purchase and distribution (Format 6-1 and Format 6-2) compiled by PDAL
- 6 Report on governmental support to model farmers or other farmers (Format 7-10) compiled by PDAL
- 7 NATIONAL AND PROVINCIAL ANNUAL PLANS

1. General information

- Location of country, Number of provinces and population
- Environmental characteristics (climate and land)
- Organizational/ Operational Structure (allocation of personnel in charge of rice)
- Month and year when the country started the promotion of smallholder rice production through MFA and major activities conducted in the target provinces till the previous year
- Major rice activities conducted in the target provinces during the reporting period including training or orientation done for provincial/district/LLG rice officers.

2. Rice production in the country by target provinces

Table 1: National Summary of Rice Production by Provinces

Province	Total number of rice farmers	Total area under rice (m ²)	Paddy rice reported by MF (kg)	Name of main rice varieties
TOTAL (Current year) mm-mm, year				
TOTAL (Previous Year) mm-mm, year				

(Data source: Monitoring Format 5: Half Term report on Model farmers' Activities)

- Analysis of National Summary, whether the number of rice farmers, area, and rice production are increased or decreased compared with the previous year
- Analysis of the provincial differences
- Analysis of the reasons behind of increase or decrease referring to the finding of 3. Summary of model farmers' extension activities, 4. Summary of Rice milling services, and 5. Summary of LLG/DDAL/PDAL/NDAL support activities

3. Summary of model farmers' extension activities

Table 2: National Summary of model farmers' extension activities by provinces

Province	Number of active model farmers (number of existing MF)	Frequency of MF extension activities	Total Number of Beneficiaries of MF extension activities	Total Number of Villages covered by MF
TOTAL (Current year) mm-mm, year				
TOTAL (Previous year) mm-mm, year				

(Data source: Monitoring Format 5: Half Term report on Model farmers' Activities)

- Analysis of National Summary, whether the number of model farmers, frequency of activities, and number of beneficiaries are increased or decreased compared with the previous year
- Analysis of the provincial differences
- Analysis of the reasons behind referring to the finding of 5. Summary of LLG/DDAL/PDAL support activities

4. Summary of rice milling services

Table 3: National Summary of Rice Processing by Districts

Province	No. of operating rice mills (number of existing mills)	No. of beneficiaries	Paddy rice reported by Milling station (kg)	Milled rice reported by Milling station (kg)	Name of main rice varieties	Recovery percentage (%)
Governmental milling service						
Private milling service						
TOTAL (Current year) mm-mm, year						
TOTAL (Previous Year) mm-mm, year						

(Data source: Monitoring Format 5: Half Term report on Model farmers' Activities)

- Analysis of National Summary, whether the number of rice mills, beneficiaries and rice processing are increased or decreased compared with the previous year
- Analysis of the Provincial differences
- Analysis of the difference between Table 1: National Summary of Rice Production and Table 3: National Summary of Rice Processing if there is any
- Analysis of the reasons behind referring to the finding of 5. Summary of LLG/DDAL/PDAL/NDAL support activities

5. Summary of LLG/DDAL/PDAL support activities

5-1. Training

Table 4: National Summary of Training

Name of training	Province	Target number of beneficiaries in this term	Achievement in this term	Value of Support in Kina/man-hours/ kina	Reasons if Planned target were not satisfied	Counter-measures

- Brief explanation of the purpose and content of the training and its outcome

5-2. Other support activities by LLG/DDAL/PDAL/NDAL

Table 5: National Summary of Support activities

Province	Target number of support visits/ activities (target number of beneficiaries)	Achievement in this term (beneficiaries)	Value of Support in Kina/man-hours/ kina	Reasons if Planned target were not satisfied	Counter-measures
TOTAL					

(Data source: Monitoring Format 7: Report on Governmental Support to MF or other farmers)

- Brief explanation of the purpose and content of support activities and its outcome
- Analysis of Provincial differences

5-3. Financial inputs by LLG/DDAL/PDAL/NDAL

Table 6: National Summary of budget allocation

Province	Amount of input by LLG		Amount of input by DDAL		Amount of input by PDAL		TOTAL INPUT	
	Requested	Disbursed	Requested	Disbursed	Requested	Disbursed	Requested	Disbursed
					TOTAL			

Challenges and countermeasures

- Brief Explanation of the challenges identified in above in the area of rice production, MFs' extension activities, rice milling services, and LLG/DDAL/PDAL/NDAL support activities.
- When stating challenges, feasible countermeasures need to be stated clearly for each challenge.

6. Future Direction and Plans for the next term

- Explanation of National Direction or policy
- Specific actions to be taken by NDAL for the next term (next 6 months for the half year report, next 1 year for annual report) to overcome challenges identified above.

APPENDIX P

ANNUAL WORK PLAN FORMAT FOR DDAL

.....Province Administration DISTRICT ANNUAL ACTIVITY PLAN		Year:	Form:
Location (PHQ/District/LLG):DI STRICT	Sector Name:	FOOD SECURITY (RICE)
Sector Goal:			
Program Name:			Program No:
Program Objective(s):	SMALL HOLDER RICE DEVELOPMENT AND PROMOTION.		
Program Outputs (KPIs) (Quantitative, Qualitative, Timeframe – QQT)			
	(EXAMPLE)		
1	DISTRICT DEMONSTRATION PLOT ARE CONSTRUCTED/ MAINTAINED IN YEAR (####)		
2	MODEL FARMERS’ EXTENSION ACTIVITIES ARE SUPPORTED AND MONITORED (#Number) TIMES in (#) LLGS IN YEAR ####.		
3	EXTENSION ACTIVITIES IN THE AREA WITHOUT MODEL FARMERS ARE CONDUCTED in (#) LLGS IN YEAR ####.		
4	(#) NEW MODEL FARMERS ARE TRAINED IN YEAR ####.		
5	DISTRIC HALF YEAR/ ANNUAL REPORT IS PREPARED AND SUBMITTED TO PDAL and other relevant authorities and necessary budget are secured		
	MILLING SERVICES ARE ESTABLISHED IN (#) LLGs IN YEAR ####.		
	SEED PURCHASE AND DISTRIBUTION SYSTEM IS ESTABLISHED IN (#) LLGs IN YEAR ####.		

..... PROVINCIAL ADMINISTRATION ANNUAL IMPLEMENTATION SCHEDULE (AIS)															Form:	
Sector Name:		FOOD SECURITY (RICE)				Program Name:		FOOD SECURITY IMPROVEMENT PROGRAM						Year		
Activity Name:		SMALL HOLDER RICE PRODUCTION				Activity (Vote) Number:										
No.	Task	Action Officer	Implementation Schedule												Completion Indicator (milestone)	Necessary budget and resources
			J	F	M	A	M	J	J	A	S	O	N	D		
1.1	Select and prepare land for the demonstration plot		■													
1.2	Prepare soil and seeds for the demonstration plot		■						■							
1.3	Plant rice at the demonstration plot			■						■						
1.4	Manage demonstration plot (weed and pest control)			■	■	■				■	■	■				
1.5	Organize field day, harvest rice and prepare soil for next crops					■						■				
2.1	Conduct monthly field visits (# times per year) to (#) model farmers in the rice farming season		■	■	■	■				■	■	■	■			
2.2	Organize model farmers meeting and collect their monitoring sheets					■						■				
2.3	Prepare and Hold supplementary training for model farmers with PDAL										■					
3.1	Identify new/priority target area for extension activities							■							■	

3.2	Conduct Awareness activities in (#) LLGs.															
4.1	Conduct survey to identify model farmer candidates in (#) LLGs															
4.2	Make and submit final list of new model farmer candidates to PDAL															
4.3	Prepare for new model farmers training in consultation with PDAL															
4.4	Hold new model farmers training for (#) model farmers with PDAL															
5.1	Data collection on rice production/ processing (Do it together with 2.1 Monthly field visit)															
5.2	Prepare District Half Year/ Annual Report as well as next year's Annual Work Plan															
5.3	Participate and present district's report in Provincial Monitoring and Review Workshop															
5.4	Brief authorities about next year's annual plan and secure necessary budget															

APPENDIX Q

ANNUAL WORK PLAN FORMAT FOR PDAL

.....Province Administration PROVINCIAL ANNUAL ACTIVITY PLAN		Year:	Form:
Location (PHQ/District/LL G): PROVINCE	Sector Name:	FOOD SECURITY (RICE)
Sector Goal:			
Program Name:			Program No:
Program Objective(s):	SMALL HOLDER RICE DEVELOPMENT AND PROMOTION.		
Program Outputs (KPIs) (Quantitative, Qualitative, Timeframe – QQT)			
	(EXAMPLE)		
1	PROVINCIAL DEMONSTRATION PLOT IS CONSTRUCTED/ MAINTAINED IN YEAR (####)		
2	DDAL’S ACTIVITIES in (#) DISTRICTS ARE SUPPORTED AND MONITORED (#Number) TIMES IN YEAR ####.		
3	(#) NEW MODEL FARMERS ARE TRAINED IN YEAR ####.		
4	SMALLHOLDER RICE PRODUCTION ACTIVITIES ARE COVERED AND PROMOTED BY MEDIA (TV, RADIO, NEWSPAPERS) IN YEAR ####.		
5	PROVINCIAL HALF YEAR/ ANNUAL REPORT ARE PREPARED AND DISTRIBUTED		
	MILLING SERVICES ARE ESTABLISHED IN (#) DISTRICTS IN YEAR ####.		
	SEED PURCHASE AND DISTRIBUTION SYSTEM IS ESTABLISHED IN (#) DISTRICTS IN YEAR ####.		

..... PROVINCIAL ADMINISTRATION
ANNUAL IMPLEMENTATION SCHEDULE (AIS)

Form-AIS

Sector Name:	FOOD SECURITY (RICE)	Program Name:	FOOD SECURITY IMPROVEMENT PROGRAM												Year		
Activity Name:	SMALL HOLDER RICE PRODUCTION	Activity (Vote) Number:															
No.	Task	Action Officer	Implementation Schedule												Completion Indicator (milestone)	Necessary budget and resources	
			J	F	M	A	M	J	J	A	S	O	N	D			
1.1	Select and prepare land for the demonstration plot																
1.2	Prepare soil and seeds for the demonstration plot																
1.3	Plant rice at the demonstration plot																
1.4	Manage demonstration plot (weed and pest control)																
1.5	Organize field day, harvest rice and prepare soil for next crops																
2.1	Conduct field visit to (#) districts to support and monitor their activities (#) times (including provincial coordination and facilitation visits)																
2.2	Prepare and Hold supplementary training for model farmers with DDAL																

3.1	Organize meeting to finalize the list of new/priority model farmers to be trained																
3.2	Prepare for new model farmers training in consultation with DDAL and REU																
3.3	Hold new model farmers training for (#) model farmers																
4.1	Identify activities to invite media																
4.2	Invite media for selected activities and provide necessary information																
5.1	Prepare and hold Provincial Monitoring and Review Workshop two time a year																
5.2	Prepare Provincial Half Year/ Annual Report as well as annual plan																
5.3	Participate in Management Committee Meeting in Port Moresby two times a year																
5.3	Brief authorities about next year's annual plan and secure necessary budget																

APPENDIX R

ANNUAL WORK PLAN FORMAT FOR REU

NATIONAL ANNUAL ACTIVITY PLAN		Year:	Form:
Sector Goal:			
Program Name:		FOOD SECURITY IMPROVEMENT PROGRAM	Program No:
Program Objective(s):		SMALL HOLDER RICE DEVELOPMENT AND PROMOTION.	
Program Outputs (KPIs) (Quantitative, Qualitative, Timeframe – QQT)			
	(EXAMPLE)		
1	SMALLHOLDER RICE PRODUCTION IS PROMOTED AND EXPANDED TO (#) PROVINCES		
2	PDAL’S ACTIVITIES in (#) PROVINCES ARE SUPPORTED AND MONITORED (#Number) TIMES IN YEAR ####.		
3	GUIDELINE, TRAINING AND EDUCATIONAL MATERIALS ARE DEVELOPED/UPDATED AND DISTRIBUTED TO (#) PROVINCES		
4	NATIONAL HALF YEAR/ ANNUAL REPORT ARE PREPARED AND DISTRIBUTED AND NECESSARY BUDGET ARE SECURED		
5.	National Rice Development Policy is renewed (Year 2015-2025)		

ANNUAL IMPLEMENTATION SCHEDULE (AIS)														Form-AIS		
Sector Name:		FOOD SECURITY (RICE)				Program Name:		FOOD SECURITY IMPROVEMENT PROGRAM						Year		
Activity Name:		SMALL HOLDER RICE PRODUCTION				Activity (Vote) Number:										
No.	Task	Action Officer	Implementation Schedule											Completion Indicator (milestone)	Necessary budget and resources	
			J	F	M	A	M	J	J	A	S	O	N			D
1.1	Brief activities of target provinces to non-target provinces through meetings (non-target provinces can participate in the management committee meeting as observers upon request)															
1.2	Prepare and agree on MOU about promotion of smallholder rice production with new target provinces															
1.3	Prepare and organize training for PDAL and DDAL officers in the new target provinces with the help of existing target provinces															
1.4	Develop newsletters about smallholder rice production and disseminate to all the provinces															

2.1	Support conducting model farmers training especially at the new target provinces															
2.2	Participate in Provincial Monitoring Review Workshop to give support/ advise															
3.1	Review existing guideline, training, educational materials and assess what needs to be updated/ developed															
3.2	Develop/update guideline/ educational/ training materials based on the assessment															
4.1	Prepare and hold Management Committee Meeting two times a year															
5.2	Prepare National Half Year/ Annual Report as well as annual plan															
5.3	Brief authorities about next year's annual plan and secure necessary budget															
6.1	Hold Annual national workshop to gauge stakeholders input on planning and policy matters															
6.2	Review and renew the National Rice Development Policy (2015-2025)															

TABLES

TABLE 1 LIST OF MONITORING FORMATS

Monitoring Format No.	Title	Recorder	Remarks
1)	Daily activity report by model farmer (See APPENDIX B)	MF	Officer must check MF's records,
2)	Daily Record for Seed Purchase and Distribution (See APPENDIX C)	LLG/DDAL /PDAL	District and Province need to compile data from LLG and MFs
3)	List of Rice Growers (See APPENDIX D)	MF	Officer must check and verify MF's records.
4)	List of Model farmers (See APPENDIX E)	LLG/DDAL /PDAL	PDAL need to compile data of LLG and DDAL in one format for reporting.
5)	Half Term report on Model farmers' Activities (See APPENDIX F)	LLG/DDAL /PDAL	PDAL need to compile data submitted from LLG and DDAL in one format for reporting.
6-1)	Half Term Report for Seed Purchase and Distribution (See APPENDIX G)	LLG/DDAL /PDAL	DDAL and PDAL in one format for reporting during the PM&RW.
6-2)	Half Term Report for Seed Purchase and Distributed (See APPENDIX H)	LLG/DDAL /PDAL	DDAL and PDAL need to compile MF report on distributed see into one unified format for reporting during PM&RW.
7)	Half Term Report on Governmental Support to Model farmers or other farmers (See APPENDIX I)	LLG/DDAL /PDAL	PDAL needs to compile data of LLG, DDAL and PDAL into one unified format for reporting during the PM&RW
8)	List of demonstration plots (See APPENDIX J)	LLG/DDAL /PDAL	PDAL needs to compile data of LLG, DDAL and PDAL into one unified format for reporting during the PM&RW
9)	List of MF/Grower rice garden farm area (See APPENDIX K)	MF/DDAL /PDAL	PDAL needs to compile data on all rice garden area of MFs and rice grower, production of yield for the PM&RW
10)	List of distribution for farming tools and documents (See APPENDIX L)	LLG/DDAL /PDAL	PDAL needs to compile data of LLG, DDAL and PDAL into one unified format for reporting during the PM&RW

TABLE 2 LIST OF REPORTING FORMATS

No.	Title	Writer	Remarks	The report should be distributed to
R-1	District Half Year/ Annual Report on Rice Production by Smallholder farmers (See APPENDIX M)	DDAL (District Rural Development Officer/ District Technical manager/ District Rice Officer)	<ul style="list-style-type: none"> • Compilation and analysis of the filled monitoring sheets of model farmers or LLG and DDAL • Half Year Report should cover the period of November (previous year) to April (current year) • Annual Report should cover the period of November (previous year) to October (current year) 	<ul style="list-style-type: none"> • Provincial Food Security Coordinator • District Administrator • LLG managers
R-2	Provincial Half Year/ Annual Report on Rice Production by Smallholder farmers (See APPENDIX N)	<ul style="list-style-type: none"> • Provincial Food Security Coordinator/ Provincial Rice Officer 	<ul style="list-style-type: none"> • Compilation and analysis of district reports • Half Year Report should cover the period of November (previous year)-April (current year) • Annual Report should cover the period of November (previous year) to October (current year) 	<ul style="list-style-type: none"> • National Project Coordinator • Provincial Administrator • Provincial Agriculture chairman • Provincial Food Security Officer • Advisor of PDAL
R-3	National Half Year/ Annual Report on Rice Production by Smallholder farmers In Papua New Guinea (See APPENDIX O)	<ul style="list-style-type: none"> • Coordinator (Programme Manager), REU, FSB 	<ul style="list-style-type: none"> • Compilation and analysis of provincial reports • Half Year Report should cover the period of November (previous year)-April (current year) • Annual Report should cover the period of November (previous year) to October (current year) 	<ul style="list-style-type: none"> • Secretary, NDAL • Deputy Secretary, NDAL • Director, FSB, NDAL • REU officers • Advisors and Provincial Food security coordinators of all PDAL • Provincial administrators of all provinces

TABLE 3 LIST OF ANNUAL WORK PLANNING FORMATS

Format	Title	Writer	Remarks
1	AWP by District (See also APPENDIX P)	PM; TM; ROs, DRDOs and RDOs.	Prepared as part of half year report; Presented at PM&R Workshop. The annual work plan should be modified with the input from PDAL and submitted to District Administration/ LLG President before the set deadline to secure necessary budget.
2	AWP by Province (See also APPENDIX Q)	Provincial Food Officer; PRO	AWP prepared as part of half year report; Reported in PM&RW; Input from District and REU.
3	AWP by REU (See also APPENDIX R)	PM – REU/FSB	AWP prepared as part of half year report; Shared with DAL Management Committee Meeting. AWP with inputs from PDAL. Submitted DAL for forwarding to DNP&M