

REORGANIZATION OF AGRICULTURAL EXTENSION SERVICES IN PAPUA NEW GUINEA

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ABSTRACT

The need to reorganize agricultural extension services in PNG is discussed. The background of agricultural extension services, past and present and the constraints in the system in PNG are briefly outlined. The future extension management issues and existing reports and recommendations on extension services are highlighted. Policy implications in terms of urgency to re-define extension policy and consistent plans in order to achieve government's desire to improve the quality of life of the farmers is highlighted in the paper.

Key words: Constraints, extension management, recommendations, policy implications, consistent plans.

INTRODUCTION

The Papua New Guinea (PNG) economy is predominantly agricultural. It provides income and employment for about 540,000 households or 85% of the population. Even though the mining sector provides 60% of the total export earnings, agriculture is traditionally the most important sector of the PNG economy and it will be so for a long time. At present Agriculture contributes 25% of GDP and 24% of export earnings.

Despite the importance of the agriculture sector, its performance since independence in 1975 has been disappointing. Its proportional contribution to GDP has declined over the years, partly because of the expansion of mining and other sectors; declining world commodity prices resulting in declining output and the lack of private sector investment in agriculture.

The agricultural sector is characterized by low productivity partly due to lack of skilled manpower, poor infrastructure, poor management and accountability, lack of credit facilities, poor markets and farmers lagging behind adopting changing crop technology. These constraints result in poor extension at the farmer level.

Besides, agriculture in PNG is predominantly subsistence, though most farmers heavily depend upon a few exportable cash crops to meet their family needs. Food crops are mainly grown for

home consumption and cash crops like coffee are for family income.

Cocoa, coconut, oil palm, rubber and spices are grown for meeting family cash requirements. Most village farmers are self sufficient in food crops, but this may not be so in the future, unless food production can increase faster than population growth. The same is true with the cash crop sector, where productivity of farmers has stagnated for many years.

These fundamental constraints to the whole agricultural sector need to be addressed before the country could face food shortages and a reasonable disposable income is obtained by the farmers from cash crops in order to provide decent living conditions for his family.

It is crucial for policy makers to investigate the present extension delivery system and improvements should be made in order for the farmers to respond to government's various initiatives.

BACKGROUND OF AGRICULTURAL EXTENSION IN PNG

Prior to 1977, agricultural extension was the responsibility of the Department of Agriculture, Stock and Fisheries (now Department of Agriculture and Livestock), operational from Port Moresby with the help of four regional officers (controllers). The Agricultural Extension Service was well disciplined, funded, staffed and managed. The Organic Law of

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1977 led to the creation of 19 Provincial Governments and was also delegated the responsibility for extension activities to Provincial Governments. Agricultural Research, Education and Quarantine Inspection remained the national responsibility. Those activities remaining under the national DAL had been well staffed with qualified nationals and expatriates. The establishment and maintenance of a provincial departmental administration, with additional functions of development, planning and provincial ministries, absorbed a high share of staff capacity, funds and time previously devoted to extension. This coincided with the exodus of experienced expatriate officers resulting in a sharp decline in the availability of staff for extension services. Contacts with the farmers and links with research stations, particularly those located outside the provincial capitals and remote areas became minimal. Younger and less experienced extension officers also had the difficulty in being accepted by the villagers.

The problem was further aggravated by the fact that many officers worked in areas where they had kinship ties, which also adversely affected their performance. The provincial extension services deteriorated rapidly over the period. The service continued to suffer, among others, from lack of direction due to dearth of experience, lack of finance, poor planning and inadequate organisational structure, poor information, inadequate links with research and insufficient training.

PRESENT AGRICULTURAL EXTENSION SERVICES

The following four types of extension services are provided in PNG;

- (1) national extension,
- (2) privatised extension,
- (3) combined national and provincial extension, and
- (4) managing agents.

The national extension has been provided to special rural development projects that receive foreign assistance from organizations such as the Asian Development Bank and World Bank. The projects are implemented with the assistance of project management units from DAL. One major difficulty faced by this approach has been the lack of continuity, once the project funds have been used up. The newly formed Industry Corporations of Coffee and Oil Palm are providing privatised extension for

specific cash crops.

A combined national and provincial extension service currently applies to joint projects for cocoa, coconut, spices and rubber. The National DAL through its National Program Managers provides coordination, undertakes training of provincial staff, overall project administration and provides project funds, while the Provincial Governments fund the counterpart staff in implementing the projects under this system. The approach has been aimed to gradually strengthen the extension effort and is expected to provide continuity of services to smallholders and village settlements. However, this approach suffers from a lack of qualified personnel, inadequate funding, poor industry involvement and overall integration.

Private management agents represent the fourth extension approach practised in PNG. This was developed as a result of Government's Plantation Redistribution Scheme and the Agricultural Bank of PNG's credit conditions. This system was mostly for tree crops, offered little continuity, since services of most management agents were terminated, once the loan had been repaid. This system has been very costly for many plantation owning groups and has not been taken up whole heartedly by the people.

Even with the implementation of the four types of extension systems in PNG, the overall agricultural extension service remains weak in all the provinces.

CONSTRAINTS IN THE PRESENT EXTENSION SYSTEM

The following are the various constraints identified in the present extension system:

- a) Differences in extension priorities between national and provincial authorities;
- b) Too much bureaucracy, too many levels in the system and lack of clear direction to Field Extension Officers;
- c) Lack of experience and training to plan, implement and monitor at various levels in the present DPI system;
- d) Lack of coordination between research, extension and farmers;
- e) Non-availability or very little support to secure inputs, credit, markets and other support services;

- f) Irregular farmer contacts by extension workers as a result of lack of organisational support and supervision;
- g) Poor selection procedures of agricultural personnel, resulting in large number of unqualified and underqualified extension officers in the field;
- h) Lack of housing, transport and attractive terms and conditions for extension workers;
- i) Too little extension efforts directed to women, when they are the backbone of PNG agriculture;
- j) Introduction of inappropriate technologies to PNG farmers without proper training and back-up services.
- k) Lack of Agricultural Service Centres, which gather integrated management functions such as credit, extension, tractor hiring, input supply, crop storage, marketing etc, especially in remote areas;
- l) Lack of infrastructures (easy access to many areas).

In view of the above lessons learnt over the last 17 years in implementing agricultural extension, a serious thought into finding alternative methods has become unavoidable.

FUTURE EXTENSION MANAGEMENT ISSUES

In order to plan a workable, simple extension policy, it is important to divide main administration issues into:

- a) Organisational issues, involving the internal structure and management processes of the extension agency;
- b) Personnel issues, which concern the selection and training of staff, and mechanisms for dealing with the loss of morale amongst field staff;
- c) Methodological issues concerning the contact between extensionists and farmers.

EXISTING REPORTS AND RECOMMENDATIONS ON EXTENSION

In the last 20 years there were many reports and recommendations in regard to ways of improving the Agricultural Extension in Papua New Guinea.

Some of them were highlighted in the World Bank

Agricultural Sector Review of 1980. Mckillop (1976) had written on extension as early as 1976 in an article "A History of Agricultural Extension in Papua New Guinea".

The most important of these was the Agricultural Extension Improvement Study (ANZDEC 1990). It was a comprehensive report on the state of Extension in Papua New Guinea. As a result the AREP Project is being implemented to improve the Extension in Papua New Guinea.

The more recent of findings from the Workshop on Delivery of Agricultural Services has touched on important areas which need to be considered. The Working Committee recommended four major areas which need improvement. They are:

1. Research, Extension and Training;
2. Marketing and Rural Credit;
3. Plant and Animal Health Services;
4. Information Systems on Agriculture.

The Committee also highlighted that there are a number of pre-requisites to improving the delivery of services, which fall outside the jurisdiction of the Department of Agriculture and Livestock. They are:

- improvement in the current road infrastructure system.
- improvement in the terms and conditions of Government employees.
- adequate resource allocation to the agricultural sectors.

The major outcome of the workshop was that the Provincial DPIs be amalgamated with National DAL.

DAL Functions and Boundaries

Even though Department of Agriculture and Livestock is the main thrust to Agricultural developments in Papua New Guinea, it has its limitations to implement policies and programmes on various aspects due to past political decisions. The main areas are:

i) Extension

The major extension function is carried out by the Provincial DPI's, thus National DAL could not enforce policies pertaining to Agricultural Extension. DAL's inputs are basically through

joint programmes and funded projects. However these types of inputs are only in selected provinces. Different provinces have different priorities and it has been difficult to implement effective extension at farmer level due to two layers of Extension policies and implementation. It is evident from the results that Provincial extension is ineffective.

ii) Research

It has been recognised that the Agricultural research activities in the country need to be streamlined to meet the farmer's needs. Most research in Papua New Guinea is carried without any thought of the benefits to be accrued, and to whom. Research should be based on what is needed for farmers to improve his crop output. There is a lack of co-ordination between research and extension. Even there is a lack of contact and co-operation between various research institutes in the country. The recommendation that a Crops Research Institute should be established to undertake all Government Agricultural Research needs to be studied. The link must be established with such institutes together with the present commodity based research institutes who can also assist in many ways to improve the extension - research link.

iii) Training

Training has been and is still the most talked about subject in Agriculture. Training for extension officers, farmers etc is an on-going activity. The present situation is that there is a neglect on the part of the government in ensuring that funding is provided to improve the capabilities of the training institutes, above all the ability to impart knowledge by the trainers to the extension officers and farmers. Again co-ordination is vital to draw up curriculum for the needs of the recipients rather than running courses for the sake of running a programme or course. Various recommendations suggested the need to be taken further in this seminar.

iv) Marketing and Credit

For successful Agricultural Extension, these two areas are vital. My other colleagues will elaborate in detail about the importance of it. Here, I like to mention that internal marketing services are poor, particularly in remote areas

of many provinces. DPLs are short of funds, private operations are few, thus resulting in the farmer losing interest in production.

Credit continues to be a major constraint. Small farmers are unable to get any form of credit to improve his quality of life though this subject has been raised in many Seminars such as of today. We have yet to find simple and effective credit facilities for farmers.

The key to small farmer credit lies in the linkage between various functions. Above all we need qualified extension officers who could liaise between credit institutions and farmers.

The present system of credit serves only exportable cash crops, but what about farmers' of food crops? Food security is more important to a farmer and the nation as a whole. If he has the credit facilities, to buy inputs, even our forests will be saved from being depleted by stopping him from practising, shifting cultivation!

Linkages between Institutions, DPLs and DAL

The present linkages between various departments and institutions are weak. It is not surprising to see at farm level that there is no basic support to farmers from important institutions. The major setback is the lack of regular contacts. Remote farmers are always the victim.

The Provincial DPLs have little resources to undertake trials and research, nor they are able to direct research institutes to concentrate research on crops which their farmer grows.

The Commodity Corporations are carrying out specific crop research in isolation. Linkages between other research and even Provincial DPLs and DAL are minimal. Such resources should be redeployed to optimise delivery of services to farmers.

Various other NGOs in this country also are working in isolation. Every organisation in this country is targeting the same farmer. This warrants proper linkages from all those involved in the delivery of services. This seminar should look into ways to establish these links.

POLICY IMPLICATIONS

There is an urgent need to re-define the extension policy. There must be long term and consistent plans in order to achieve government's desire to improve the quality of life for the farmers.

The main weakness at the moment is too many recommendations and continuous change of policies. This should be addressed. Extension means change. It cannot be realised in a year, it takes 5 - 10 years before some changes could be observed. What is needed is a well defined, simple to implement type of policy, which is well understood by all, from the top administrators to the extension officers who contact the farmers.

The idea of Integrated Extension is important. DAL and Corporations need to identify each other's boundaries in extension. The Corporations must provide services other than cash crop extension services. Since the officers are in regular contact with their farmers, the farmer's other crops and needs must also be attended by corporate extension officers.

EXTENSION APPROACHES TO ADOPT

In order to implement an effective extension approach, options existing around the world should be investigated.

Types of Extension Approaches and their Characteristics

i) Conventional Agricultural Extension Approach

- Generally aims at increasing national agricultural production, including food crops, export crops and animal production.
- Due to its general aims and objectives, it is usually difficult to prioritise objective of farmers with the national objectives which causes conflict in the policy of the organisation.

ii) Training and Visit System

- Aims at improving the *effectiveness* of conventional agricultural extension organisations. Successful in many third world countries.

- Main focus on increasing individual farm production.
- Extension is tied with Research through the assistance of Subject Matter Specialists.

iii) Commodity Development and Production System

- Presently practised by corporations, funded projects and PIP's in the country.

iv) Integrated Agricultural Development Programmes

- In order to achieve increased agricultural output, all institutional components that affect this process must be co-ordinated and applied.

v) Integrated Rural Development Programme

- This approach reflects a broader concept of rural development, including both social and economic factors.
- Has a strong emphasis on participation of the rural people in planning, implementation and evaluation programmes.
- Increased participation is a central concern of these programmes particularly to increase self reliance and local initiatives. Rural Development Programmes also pursue objectives to improve health, nutrition and basic education.
- By aiming these programmes at the rural poor, there is a direct attempt to achieve increased equity in terms of the new or expanded rural services.
- Pilot projects are established in the target areas to workout the methodology of establishing rural development programmes.

METHODOLOGY TO ADOPT

- Mass media, such a Radio/TV must be used effectively in disseminating information to farmers.

- On-going Demonstration and Field days conducted both by Extension Officers and Research Institutes.
 - Contact Farmer Approach, Group Approach and Clan Approach should be used according to the situation (remoteness of the area and knowledge of farmers etc.).
 - Use of Subject Matter Specialists when and wherever needed to impart technical information to farmers, especially in the group or clan approach.
- i) The Extension Organisation to undertake a nation wide agricultural census to ascertain the current status of agricultural activities in the country. Important data like, number of households involved in agriculture, actual hectares of each crop, cropping patterns, inputs used, marketing, other services, etc., will give policy makers true situation and actual fund need to be diverted to particular region, crops, etc.
 - ii) The present situation of staff involved in extension both at national and provincial level. Data on their personal particulars including qualifications, training undergone to-date, facilities available to them need to be ascertained if a major reorganisation could be effected.
 - iii) The research support needs to be ascertained and their present role in agricultural development has to be studied, also the role of agricultural training and its capabilities need to be ascertained.
 - iv) There must be a bottom-up exercise to document the farmer's aspirations and should try to match it with nation's food production and export goals. No system will succeed without farmer support.

EXTENSION APPROACH TO ADOPT IN PNG

The best approach applicable to PNG is "Integrated Rural Development Approach". This approach continues to reflect a broader concept of rural development including both social and economic factors. In doing so, there is a concern that these programmes provide an income - producing component which involves new agricultural technology. At the same time there continues to be a strong emphasis on the broad based participation of the rural poor in planning, implementation, and evaluation of programmes. These efforts are also clearly designed to enable rural people to strengthen their indigenous institutions.

A WORKABLE EXTENSION SYSTEM

The idea of linking national extension with provincial extension is the right direction in today's context. A single line of command will definitely improve the farmer contact, this in turn will make the government's policy of delivering services more effective.

In order to plan an effective extension system the extension agents need information about:

- a) The goals, that an extension program intends to achieve (short term and long term)
- b) The target group
- c) The media that could be used
- d) The resources that are needed to achieve the goals.

In order to implement an effective extension to meet national and farmer goals, the following tasks are important:

Once this exercise is completed then drawing up of extension program will become more meaningful and effective. With these clear facts and figures the task of each level in the single system will be clear.

SINGLE LINE ORGANISATION CHART

The Department of Agriculture will undertake the implementation of the new extension program at all levels in the country.

Funding for the agricultural development in the country should be through the Department of Agriculture and Livestock.

The Minister for Agriculture, through his DAL Secretary will be responsible for the effective implementation of the proposed single extension program throughout the country (including the Commodity based Corporations).

The DAL will create a new Division under the

Deputy Secretary for Field Services (Appendices 1 & 2) - Extension Division, headed by a Director. He will be assisted by four regional Managers, who will be responsible for extension management in the regions. In each region the present Assistant Secretary for the province will be known as Provincial Managers (Appendices 2 & 3), who will be responsible for the direct implementation of extension programs with the assistance of District Rural Development Officers, and Rural Development Officers and Rural Development Technicians.

The Director's duty will be to ensure that the government agricultural policies are taken to the "grassroots" level by liaising with other Divisions such as Food Management, Livestock, Crop Protection, Research, Agricultural Education and Training, Export Crops, Corporation, Plantation Companies, Forestry, Fisheries and Statutory Bodies in order to ensure that extension workers are equipped with the knowledge and resources to provide effective extension to their target farmers. Other Divisions and Departments should assist the Extension Division at all levels with the subject matter specialists whenever the extension workers need his assistance to provide information to his farmers.

The Regional Managers (Appendix 4) form the key link to regional agricultural aspirations. They would ensure that all the provinces under his supervision are provided with sufficient resources for the provincial managers to carry out provincial programmes without delay. They would liaise with all other supporting departments and divisions to see that his region is well organised to provide effective extension to all his provinces.

The Provincial Manager (Appendix 4) will be fully responsible for implementing provincial extension programs. He would ensure that his farmers' goals are in line with the national goals. He would ensure that goals for food and cash crop production are quantified and targets are set for extension officers at District levels. Close supervision and monitoring is the key to successful implementation of extension at farm level.

He would ensure that he reviews monthly targets and is able to advise and assist his staff to ensure that his plans are being realised. He would see that discipline is maintained amongst his subordinates.

The District Rural Development Officers (Appendix 4) play very important role to ensure that their

extension workers are working according to plan. To-date most of the extension workers are left in the field without supervision and support by the senior field officers. This has to be addressed instead of Senior Officers becoming 'travelling tourists'. They must get out to farms to understand the farmers' problems. They should constantly give guidance to junior extension workers in order to ensure that they have the knowledge and experience to provide delivery of services to farmers.

The field extension workers who are in the "front-line" need to be motivated to ensure that all the plans are taken to farms and feed backs are discussed with senior officers to ensure that problems are solved faster. The extension workers must be provided with adequate resources for doing their jobs. The main constraints at the field level, are of poor accommodation, inadequate camping allowance, poor transport, inadequate extension tools and lack of updated extension information.

Implementation of the reorganised structure should be carried out in phases.

Phase I (1-3 Years) - The amalgamation of the National/DPI Extension Unit into one. The Director (Extension) liaises with the present A/Secretary to continue the programmes with effective linkages established with Research, and credit institutions.

Phase II (4-6 Years) - The Director of Extension could appoint Regional Managers (if need be) to assist the A/Secretary in order to ensure effective implementation at regional basis.

The Extension division needs time to show results, unless it gets such support from various institutions, including political support, it will be continuously facing the same problems.

MONITORING AND EVALUATION DIVISION

This Division in DAL should be revived to ensure that the extension programme throughout the country is monitored. They may regularly visit provinces and evaluate the actual field progress and give the necessary feedback to the Headquarters about the inadequacies. They should act as "check and balance" for the Department in order to ensure

that the government's long term policies are being implemented at all levels.

CONCLUSION

The proposed reorganisation is timely. After more than 15 years of extension "experiments", it is about time that the country plans new strategies from the lessons learnt to deliver the goods and services to the man on the land. Performance at all levels is important. Officers should be made accountable for targets and achievements. The Government has a vision, a goal for the people, that is to improve their quality of life. As the saying goes "If you have no goal, then any road is the right road". Now we have a goal and we will take the right road!

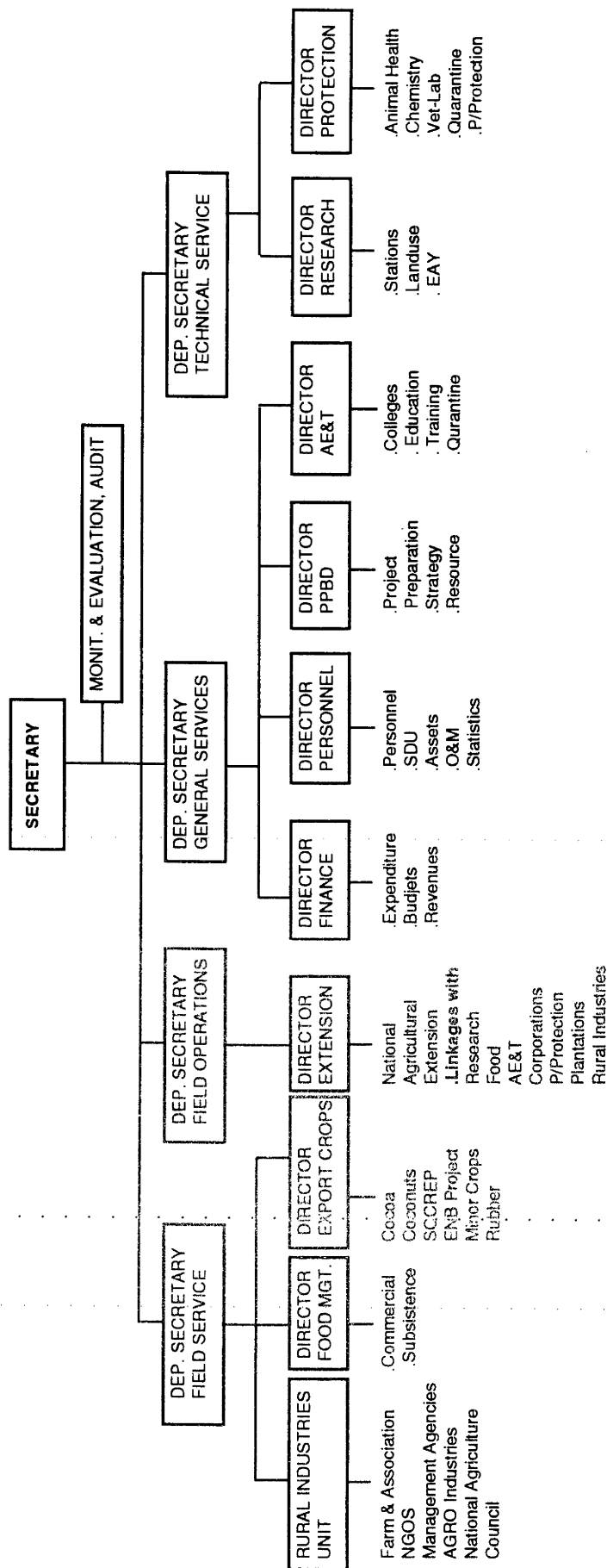
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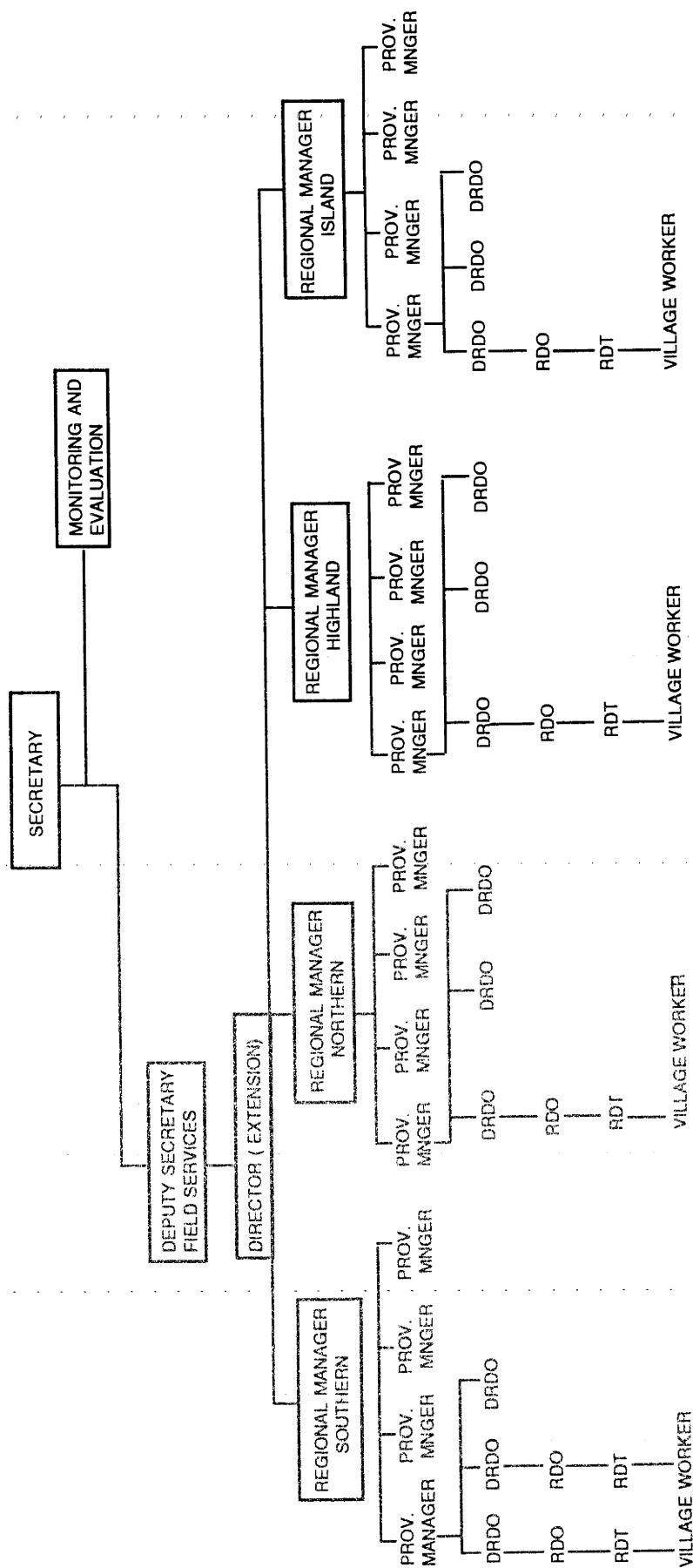
Appendix 1. ORGANISATION STRUCTURE

DEPARTMENT OF AGRICULTURE AND LIVESTOCK



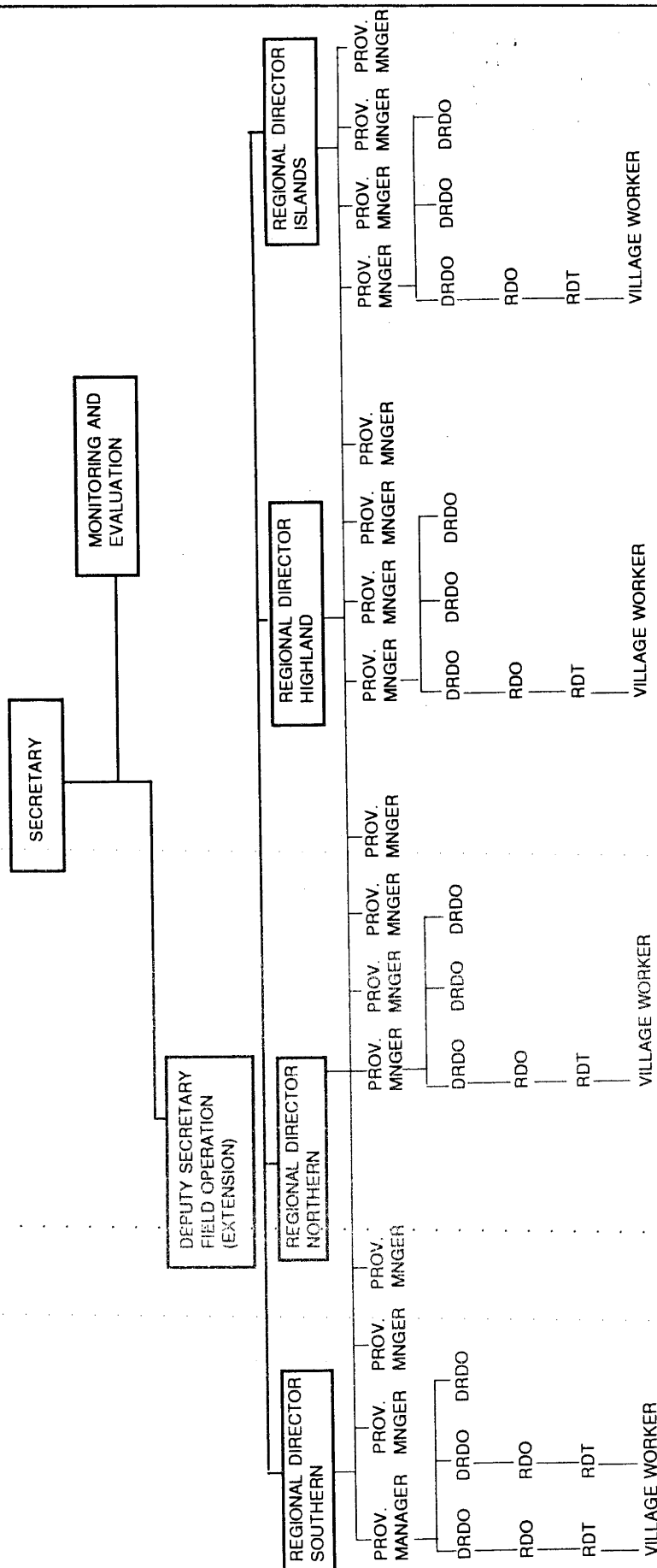
Appendix 2. SINGLE AGRICULTURAL, EXTENSION ORGANISATION CHART

OPTION 1



Appendix 3. SINGLE AGRICULTURAL, EXTENSION ORGANISATION CHART

OPTION 2



Appendix 4. BROAD RESPONSIBILITIES OF EXTENSION OFFICERS

