I-L

Technical Transfer

L. Technical Transfer

L. Technology Transfer Plan

L.1 General

In the Scope of Work signed upon between the Government of the Malawi (GOM) and the Japan International Cooperation Agency (JICA) on March 18, 1999, Technology Transfer to the counterpart personnel through the Study is given a high priority as one of main objectives through in execution of the Watershed Rehabilitation in Middle Shire in Malawi (the Study). The Technology Transfer has been considered indispensable for the mutual understanding of sustainability and amplification of the important watershed rehabilitation and village natural resources management. Following this viewpoint, the JICA Study Team (the Team) will make utmost effort to transfer the necessary technology to them by means of the "on-the-job-training" throughout assignment in the Study periods in Malawi.

L.2 Subjects of Technology Transfer

The program on transfer technology will cover 4 main strains of (i) Watershed management and hydrology, (ii) Forest management and afforestation, (iii) Agriculture and Agroforestry and (iv) Socio-economy, Community participation and Income-generating activities. These 4 strains are oriented the trainees to consider by themselves, how to lead local people to participate in Watershed management plan and village natural resources management plan. The 4 strains are also composed by field investigation, concept development and planning technologies. "Trainees" who will receive technology transfer and "Technology transfer Plan" are re-arranged and adjusted in accordance with the assignment of personnel as the Team counterpart and her/his capability. This technical transfer program have been implemented through the Study to be conducted by the respective experts of the Team.

L.3 Methods of Technology Transfer

The JICA Study Team will carry out the technology transfer to the counterpart personnel assigned during the Study period in Malawi and basically applying the "on-the-job training" methods. Prior to the fieldwork, the respective experts of the Team will explain to the counterpart personnel about the purpose of the work in Malawi, its measures and analytical method how to apply the survey results to those planning.

L.4 Schedule of Technology Transfer

The Technology transfer was commenced immediately after dispatch of the counterpart personnel at each stage after the Team's arrival in Malawi, i.e. Phase-I (from the end of August 1999 to the middle of December 1999). During absence of the Team in Malawi from December 1999 to middle May 2000, trainee(s) continues field investigation regarding hydrology and watershed management for rainy season's data collection. Technology transfer in Phase II (from middle of May 2000 to the same of September 2000) will also be provided as well as the Phase I.

L.5 Adjustment Draft Technology Transfer Plan and its Commencement

Prior to the commencement of the field investigation in Phase I study, Team leader of the Team explains the schedule and procedure of the study, including confirmation of

the Study's technical subjects and a results of administrative coordination about counterpart personnel who are trainees of the Technology Transfer. In this, the technical guidance will be provided using the technical transfer plan enforced how to perform the Technology Transfer in the Study. Then the Technology Transfer will be commenced to the confirmed counterpart personnel after adjusted Technology Transfer Plan to the confirmed counterpart personnel capability. Following trainees at least one or two counterparts will be arranged assignment as counterparts and cum trainees in the Study.

Name / Position	Subjects
Mr. T.S. Zulu Senior Forestry Officer (Extension), RFO (S)	Forest management afforestation
Mr. Jones Mwampulo Senior Forestry Assistant, Blantyre, FD Mr. M. Kunje Forestry Assistant, RFO (S)	Watershed management Hydrology
Mr. Peter M. Maneya Extension Officer, Lirangwe ACU, RFO(S)	Agroforestry, Agriculture
Ms. Lyness Kapila Assistant District Forestry Officer, Blantyre, RFO(S)	Income-generating activities, Extension, Community participation
Ms. Enifa O. Banda Field Assistant, ADD, MAI	Socio-economy, Community participation

L.6 Plan of Trainers and Trainees

Following members of the Team are charged to the Technology Transfer under team leader's conduct during her/his field investigation period. Each trainer is charged to basic scope for technology transfers below and will proceed the duty with tight communication with each other.

David M. Kamweti:	Agroforestry and afforestation
IKEWADA Hisashi:	Agriculture
GOTO Michio:	Watershed management and Hydrology
WATANABE Masami:	Socio-economy, Community participation
KUDO Toshinori:	Income generating
OGAWA Harue:	Education and Extension

L.7 Planned Training Subjects by the Fields

(a) Watershed management and Hydrology

1) Field Survey technology

Trainee(s) for the Watershed management and Hydrology received technology transfer on-the-job-training regarding listed below during 1st survey period from August to November 1999. Trainee(s) will continue(s) field survey for technology transferred subjects during rainy season from November 1999 to April 2000 after the Team will be absent at site for 1st work in Japan.

- Soil Erosion Survey
- Suspended Solid and Soil Loss survey for estimation of siltation in the tributaries and of soil loss from cultivated and sloped land.

2) Analysis and planning technology

Soil erosion survey will be provided for analysis and clarify their mechanism of the targeted area and planned protection and/or reduction measures of soil erosion. The protection and/or reduction measures will be provided anticipated subjects and volume such as agricultural farming methods from a view of National budget and local participation to the measures.

(b) Forest management and afforestation

1) Field survey technology

Field survey technology for forestry and concerning survey for development afforestation plan is purposed to clarify current natural and technical condition through survey regarding listed below. The survey methods will be provided adapting trainees' capability and sustainability for furthers their activity after completing the Study.

- Vegetation Survey
- Forestry condition (Forest condition, Afforestation, Fuel wood production)

Results of field survey will be devoted for concept developing to the objected plans for supporting local historical culture, forest management by local people, role sharing by local village and government, etc. This process is also prepared for counterparts training.

2) Planning technology

Technology transfer for planning on Afforestation Project is purposed for self-forest management and afforestation by the local people (participatory afforestation) and complimentary government support. Since the technical transfer is expected to improve trainees' ability to support the participatory afforestation by local people.

- Planning in "Watershed rehabilitation plan" and "Village natural resources"
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(c) Agriculture and Agroforestry

1) Field survey technology

Agriculture and agroforestry survey is positioned key function for reaching successful implementation of the both of plan "Watershed rehabilitation" and "Village natural resources management". Basic technical data regarding Agriculture and agroforestry will be collected through the subjected field survey. Trainee will receive field survey technology and development of technical data for protection and/or reduction land erosion, and clarify local incentives for their self-watershed management by the local people.

- Field investigation for current agriculture / agroforestry / (Agricultural /agroforestry land, farming technology, cropping type, crops including fruits, seeds / seedlings, yields, sales, labor, agri-machine / tools, chemicals, fertilizers, post harvest, market, etc.)
- Field investigation for livestock (raising condition of livestock, species, feeding, production including dairy products, sales, market, etc.)
- Collected data processing and analysis
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2) Planning technology

Agriculture / agroforestry plan will play two roles of both "Watershed rehabilitation plan" and "Village resources management plan". One is for development of technical measures for protect and reduce land erosion and the other is to support villagers to procure "food". Trainees will receive both of technology through co-work to the Study.

- Development agriculture / agroforestry plan as one of foundation sector of the Watershed rehabilitation plan and Village natural resources management plan in

the Model Area

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(d) Socio-economy, Community participation and Income-generating activities

1) Field survey technology

This field investigation will be proceeded by Socio-economical baseline survey methods (questionnaire survey) and PRA (Participated Rural Appraisal) methods for findings socio-economic conditions such as population, governmental administration, land tenure, community organizations, economic activities, gender, and others.

Following subjects are also found through the survey for development of the Watershed rehabilitation plan and Village natural resources management plan in the Model Area. Technology transfer regarding the subject will be provided through co-work during a Study period in Malawi.

- Local village people's motivation concerning development of the both of plans
- Fuel wood: Consumption (Volume, price) / Supply (Production, distribution, Sales) / Demands
- Collected data processing and analysis
- A technique of forcus group discussions through the study on VNRMC and othe committees,
- Formulation and testing of questionnaire while preparing Socio-economic Baseline Survey
- A method of strengthening the committee members through observation of extension activities.
- A method of evaluating extension system through visits of Block extension activities and model farms.

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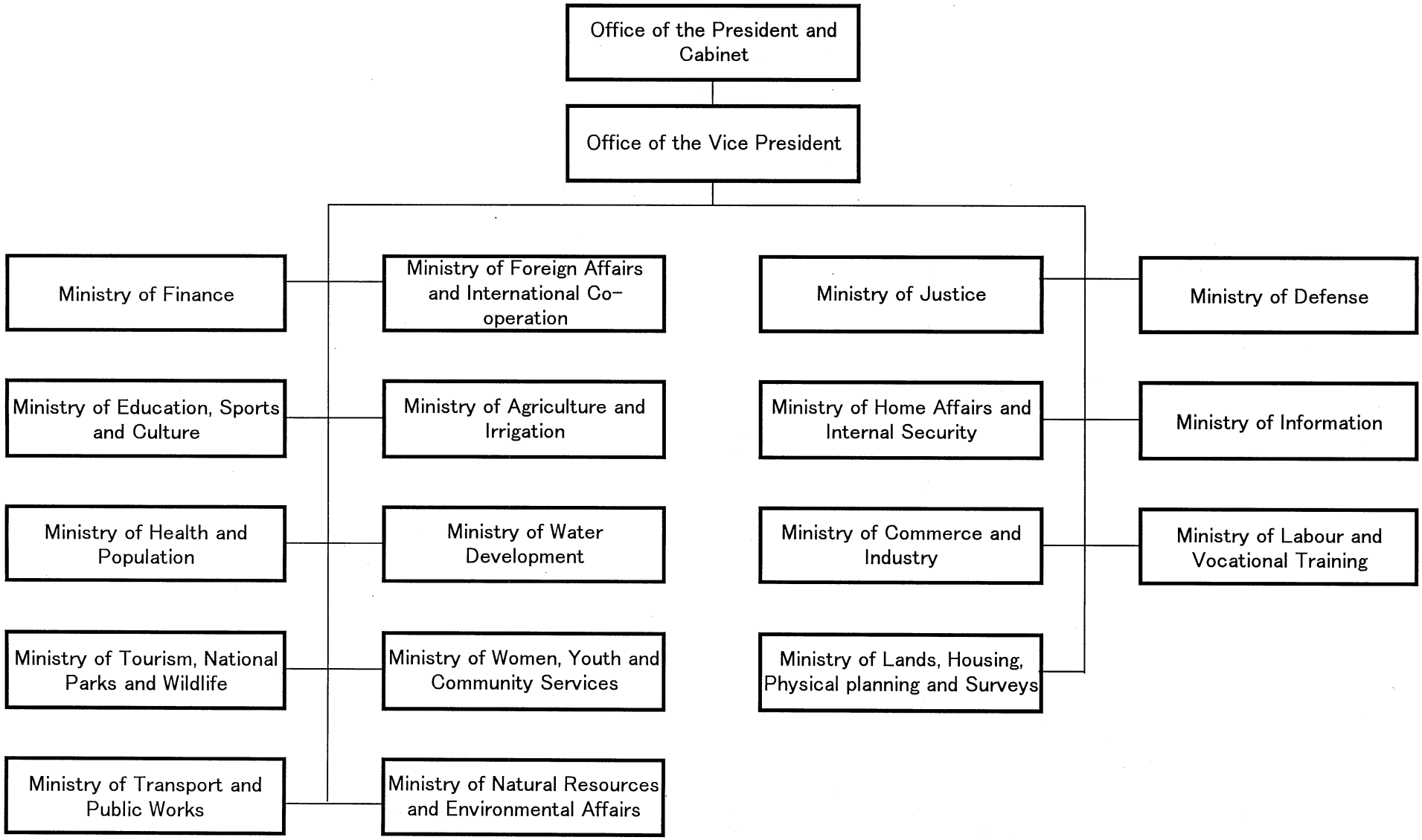
2) Planning technology

Planning technology is transferred for further development of watershed management and VNRM by the government after completion of the Study.

I-M

Organization of Offices / Ministries Concerned

M. Organigrams of Offices / Ministries Concermed

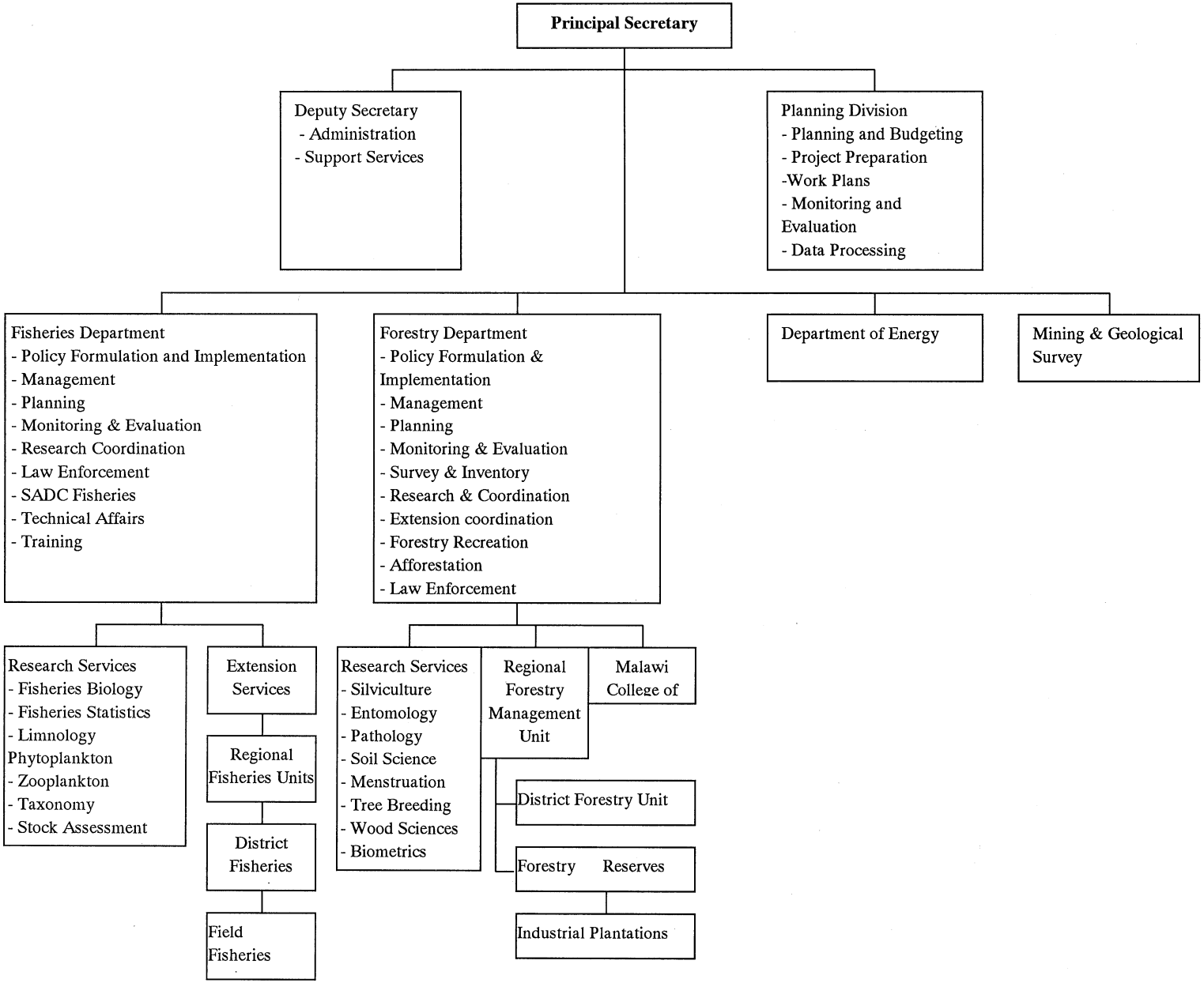


M-1 Structure of the Government of Malawi

Effective as from 16/6/1998

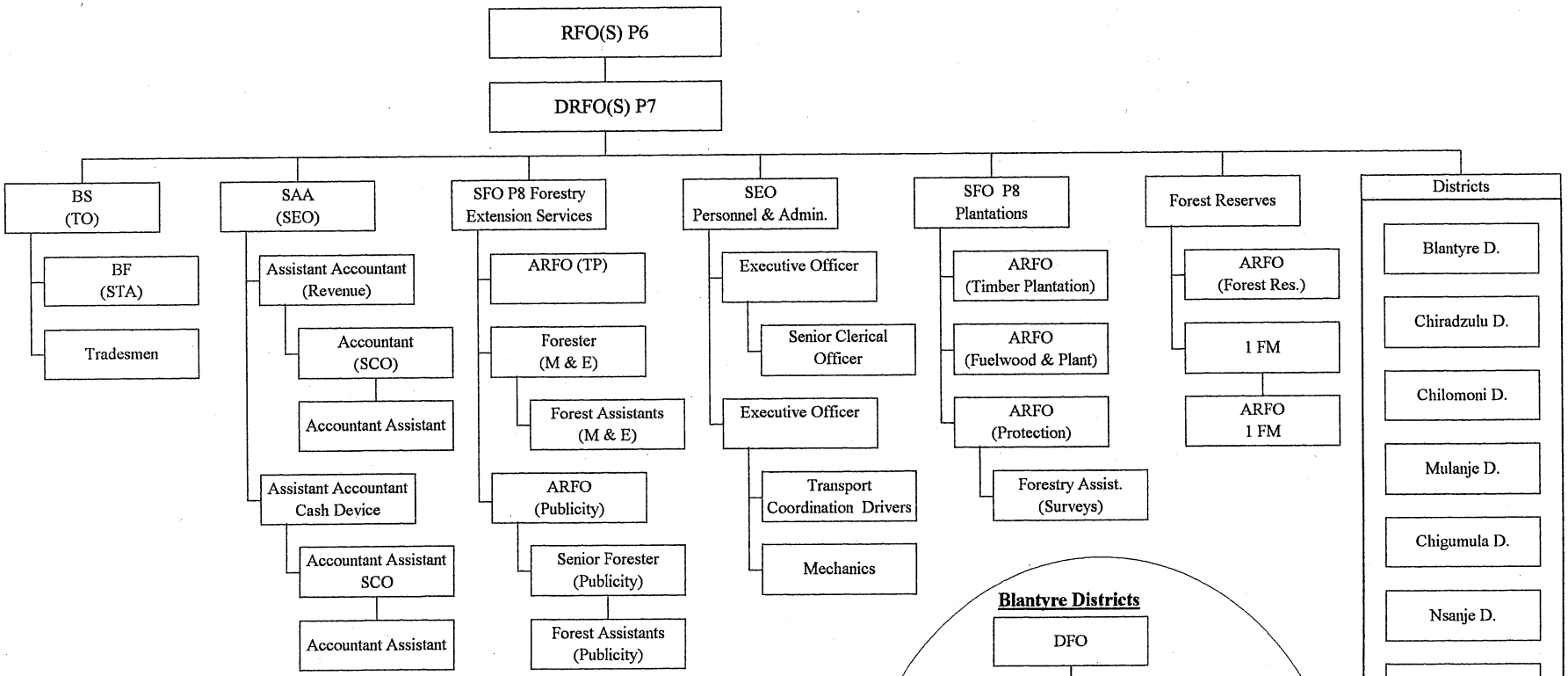
M-2 Organization Chart: Ministry of Natural Resource and Envrionemntal Affairs

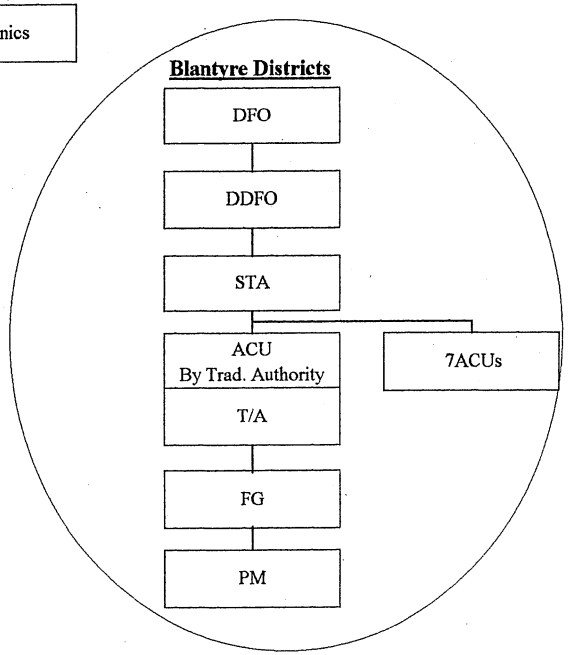
November, 1999



M-3 Organizational Chart of Forestry Department Southern Region, Ministry of Natural Resources and Environmental Affair

October, 1999

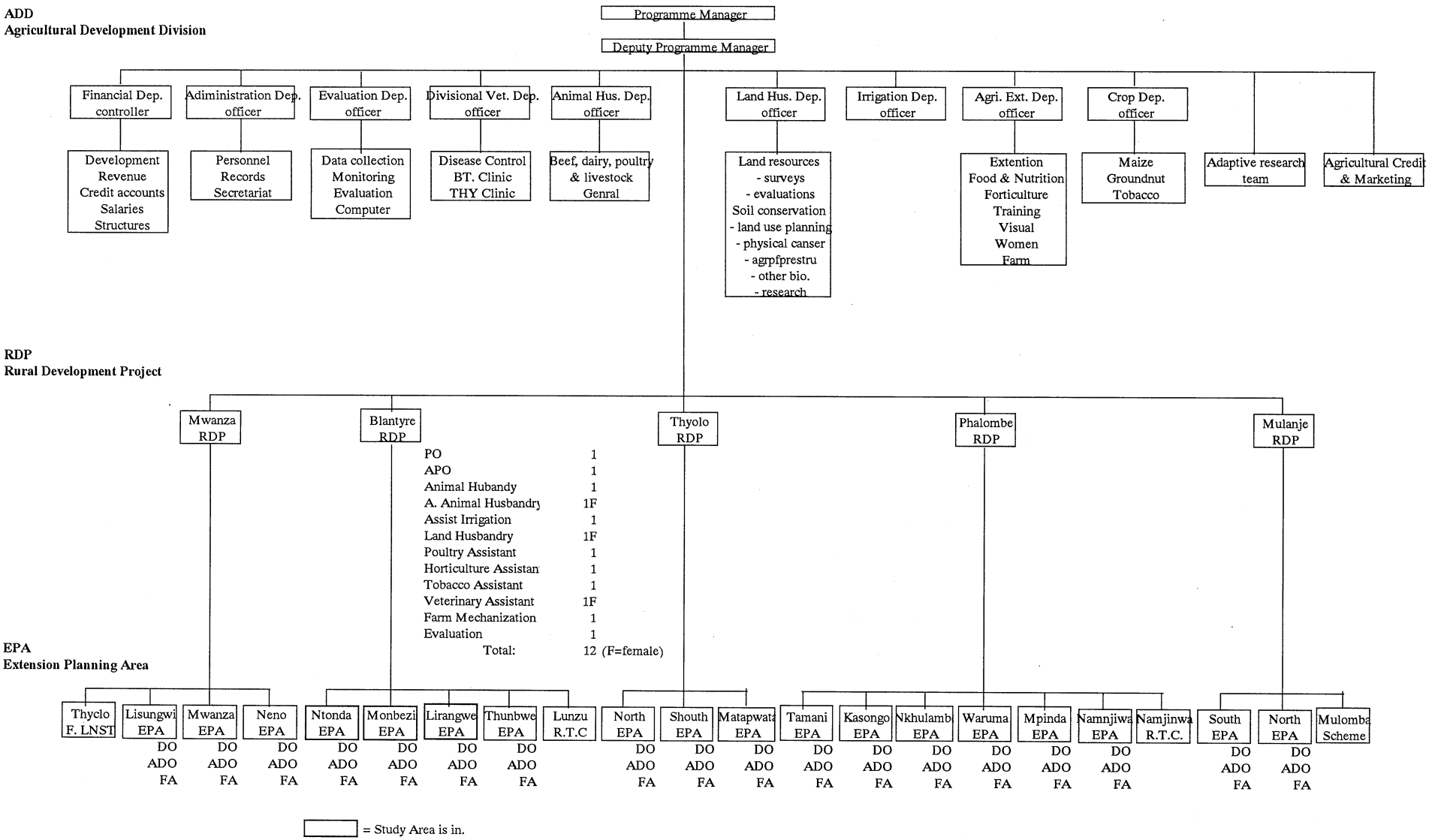




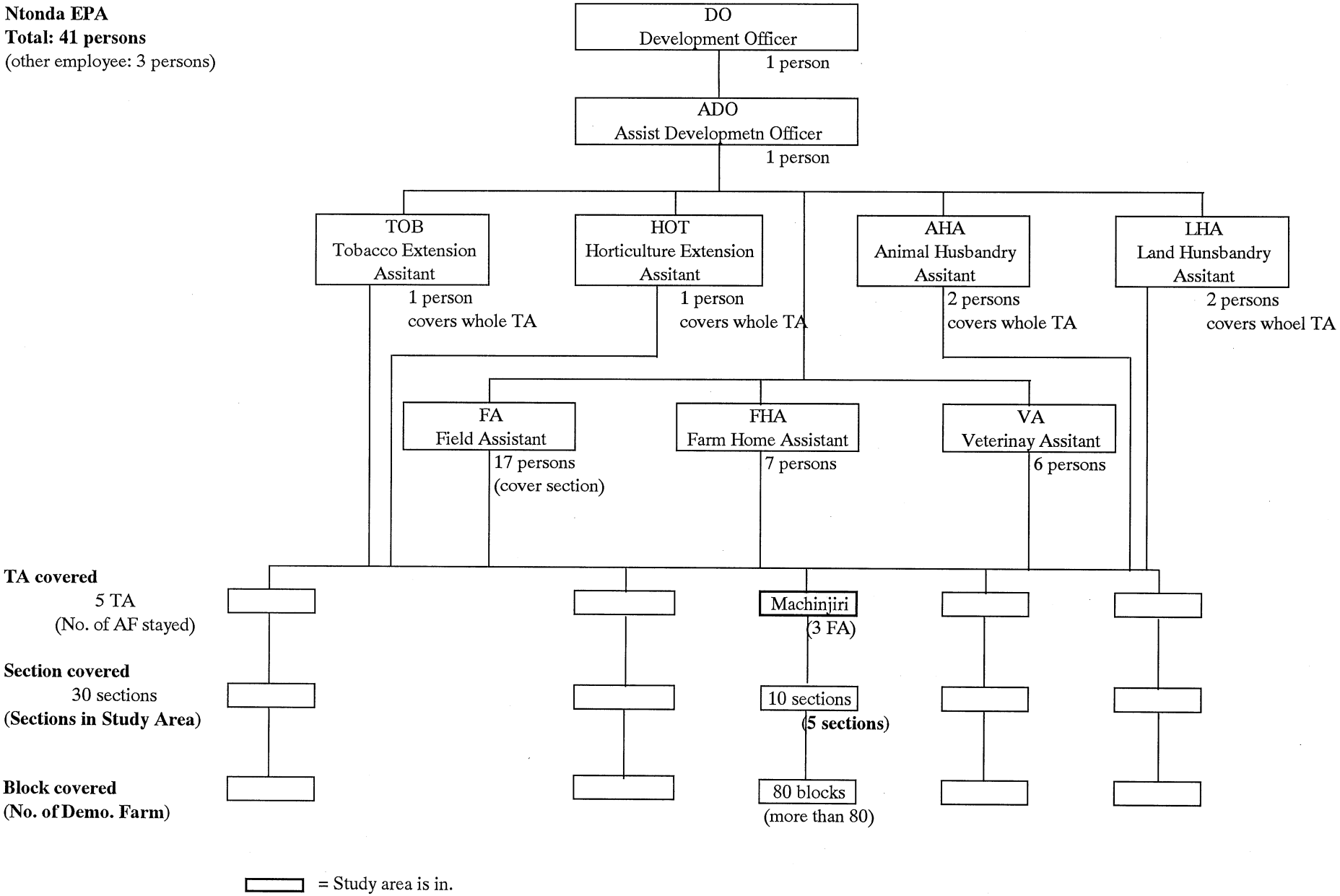
Abbreviations

ACU:	Area Control Unit (by Tradutional Authorit	RFO(S):	Regional Forestry Officer (South Region)
ARFO:	Assistant Regional Forestry Officer	SAA:	Senior Assistant Accountant
BF:	Building Fuelman	SCO:	Senior Clerical Officer
BS:	Building Supervisor	SEO:	Senior Executive Officer
(D)DFO	(Deputy) District Forestry Officer	SDFO:	Senior District Forestry Officer
DRFO:	Deputy Regional Forestry Officer	SFO:	Senior Forestry Officer
FG:	Forestry Guards	T/A:	Techinical Assistant
FDD:	Forest Development Department	TO:	Technical Officer
FM:	Forest Manger	TP:	Tree Planting
M & E:	Monitoring & Evaluation	PM:	Patrol Men (approx. 400)

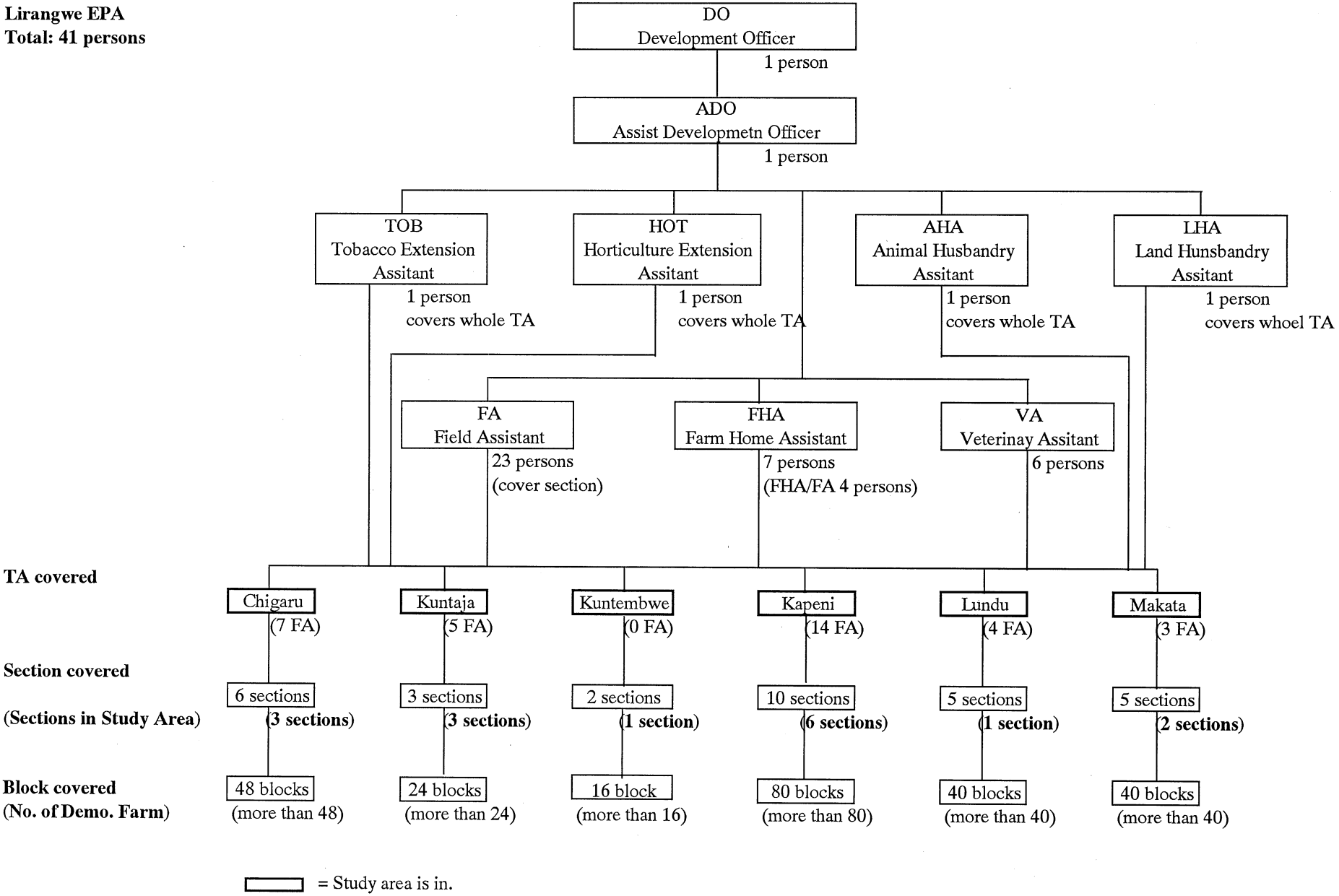
M-4 Organization Chart of Blantyre Agricultural Development Division, Ministry of Agriculture and Irrigation



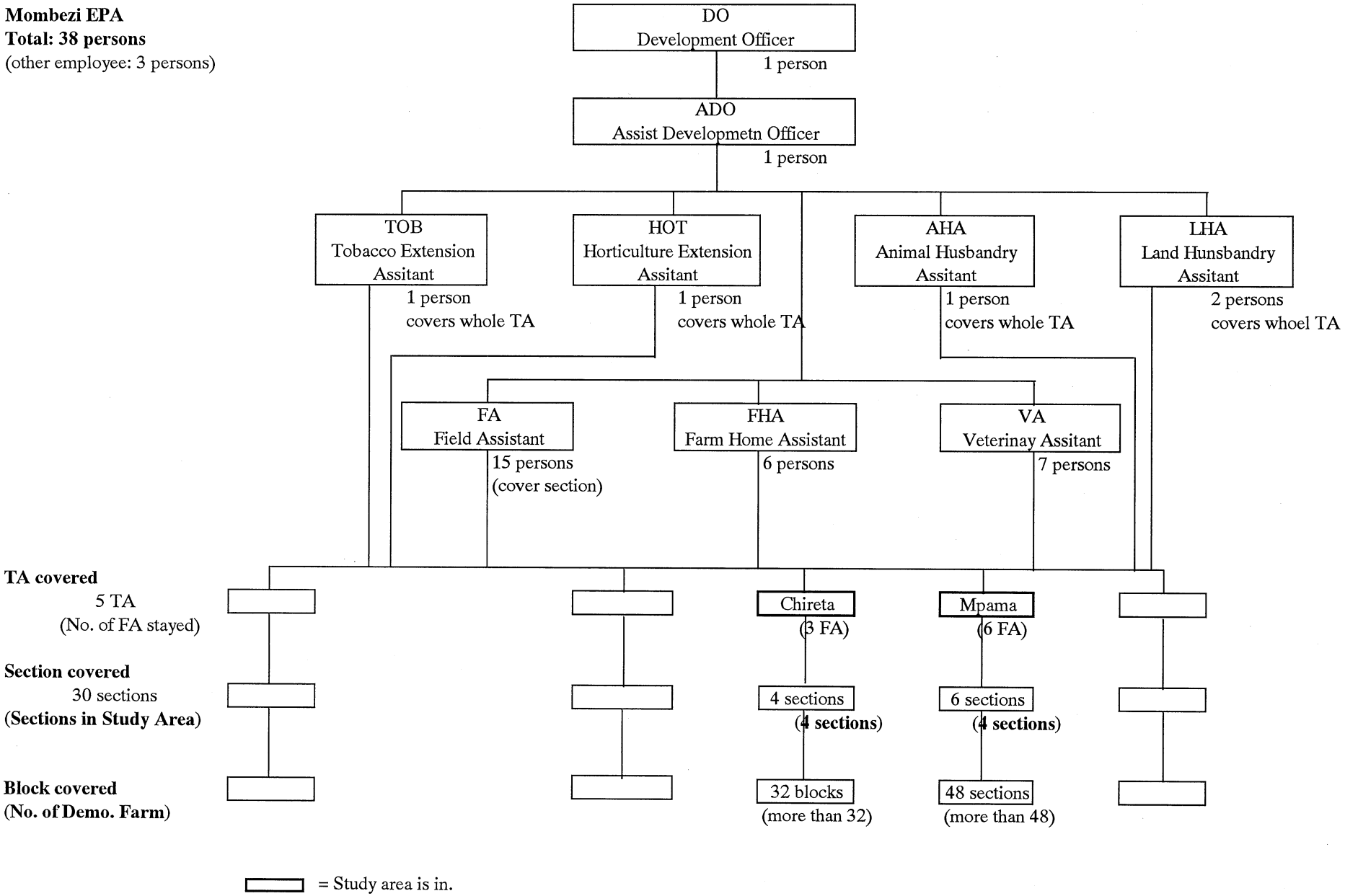
M-5 Organization Chart of Ntonda EPA under Blantyre ADD



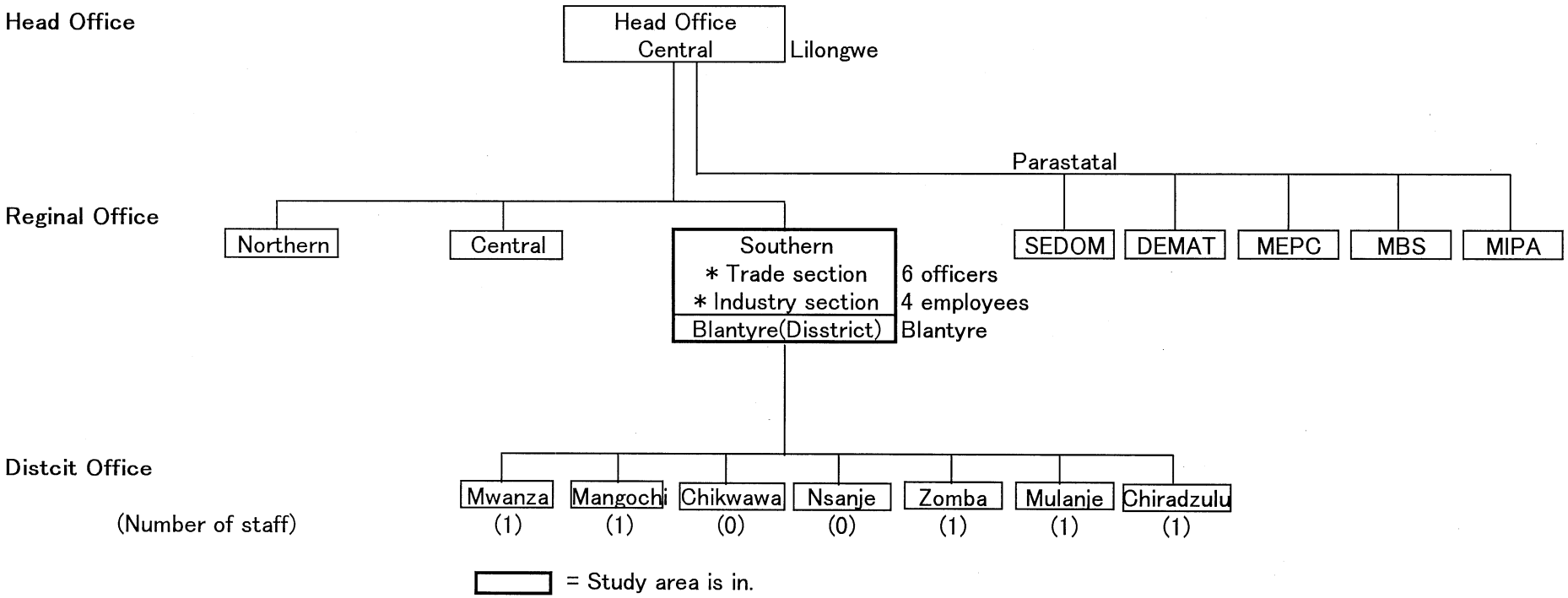
M-6 Organization Chart of Lirangwe EPA under Blantyre ADD



M-7 Orgnization Chart of Monbezi EPA under Blantyre ADD



M-8 ORGANIZATION CHART OF MCI
(MINISTRY OF COMMERCE AND INDUSTRY)



M-9 ORGANIZATION CHART OF MOWYCS
(MINISTRY OF WOMEN, YOUTH AND COMMUNITY SERVICES)