JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

DEPARTMENT OF IRRIGATION (DOI)
MINISTRY OF AGRICULTURE (MOA)
THE REPUBLIC OF MALAWI

THE STUDY ON THE CAPACITY BUILDING AND DEVELOPMENT FOR SMALLHOLDER IRRIGATION SCHEMES IN THE REPUBLIC OF MALAWI

FINAL REPORT APPENDIXES

March 2005

SANYU CONSULTANTS INC., TOKYO, JAPAN

COMPOSITION OF REPORTS

MAIN REPORT

APPENDIXES

PACKAGE

- Comprehensive Guideline
- Technical Manuals
- Posters (5 sheets of A-2 size)
- Leaflets (English and Chichewa versions)
- Picture Stories

CONTENTS

ACRONYMS AND ABBREVIATIONS

ADB	African Development Bank
ADC	Area Development Committee
ADD	Agricultural Development Division
ADMARC	Agricultural Development Marketing Corporate
AEDC	Agriculture Extension Development Coordinator
AEDO	Agriculture Extension Development Officer
AIO	Assistant Irrigation Officer
ALDSAP	Agriculture and Livestock Development Strategy and Action Plan
DADO	District Agriculture Development Officer
DDC	District Development Committee
DIFT	District Irrigation Task Force
DIO	Divisional Irrigation Officer
DOI	Department of Irrigation
EIRR	Economic Internal Rate of Return
EMA	Environment Management Act
EPA	Extension Planning Area (frontline extension office)
FAO	Food and Agricultural Organization
GOM	Government of Malawi
GVH	Group Village Headman
IFAD	International Fund for Agriculture Development
IFIC	Institute for International Cooperation (under JICA)
IO	Irrigation Officer
IPM	Integrated Pest Management
ISF	Irrigation Service Fee
IWMI	International Water Management Institutes (former IIMI)
JICA	Japan International Cooperation Agency
MASIP	Malawi Agriculture and Investment Program
MOFFEA	Ministry of Forestry, Fisheries and Environmental Affairs
MOA	Ministry of Agriculture
MOWD	Ministry of Water Development
MOLV	Ministry of Lands and Valuation
NEC	National Economic Council
NGO	Non-Government Organization
NIB	National Irrigation Board
NIPADS	National Irrigation Policy and Development Strategy
NRC	Natural Resource College
NSO	National Statistics Office
ORT	Other Recurrent Transaction (government recurrent budget)
O&M	Operation and Maintenance
PCM	Project Cycle Management
PRA	Participatory Rural Appraisal
RDP	Rural Development Project (now restructured to district office)
SHIP	Smallholder Irrigation Project
TA	Traditional Authority
TOT	Training of Trainers

UNDP	United Nations Development Project
USAID	United States Agency for International Development
VH	Village Headman
WFP	World Food Program
WRB	Water Resources Board

CURRENCY EQUIVALENTS (as at December 10, 2004)

1 US$ = 110.00 Malawi Kwach (TTB)
1 US$ = 101.50 Japanese Yen (TTB)
1 MK = 0.0091 US$
1 MK = 0.9227 Japanese Yen
1 JY = 1.0837 MK

MALAWIAN FISCAL YEAR

July 1 to June 30

UNIT CONVERSIONS

1 meter (m) = 3.28 feet
1 kilometer (km) = 0.62 miles
1 hectare (ha) = 2.47 acres
1 acre = 0.405 ha

1 cubic meter per second (m^3/s) = 35.31 cubic feet per second
1 cubic foot per second (cusec) = 28.3 liters per second (l/s)
1 cubic meter per hour (m^3/h) = 0.28 liters per second (l/s)
1 kilowatt (kw) = 1.34 horsepower (hp)
= 1 kilovoltamp (KVA)

APPENDIX-1

TEAM MEMBERS, CPs, AND OFFICERS CONTACTED

1. List of the Team Members

Mr. Kosei HASHIGUCHI	Leader / Development Planning
Mr. Syun-ichi HOSONO	Irrigation / Agricultural Infrastructure
Mr. Hideyo SHIMAZU	Rural Society / Participatory Development
Mr. Masaki MIKI	Agriculture / Agro-Economy
Mr. Tastuya IEIZUMI	Designing / Cost-estimation / Irrigation
Mr. Akihiko HATA	Project Monitoring / Financial System Management
Mr. Teodolo I. EHERA	Institutional Development
Ms. Rie TOYOSHIMA	Coordination / Grass Root Technology / Agriculture

2. List of the Counterparts

Mr. Jamus O. CHIKHUNGU	Irrigation Officer, DOI
Mr. Mattews M. NGWIRA	Irrigation Officer, DOI

3. List of the Officers Contacted

Mr. Hiroyuki ISHI	Ambassador, Embassy of Japan (in Lusaka)
Mr. Tatsuro KOGA	First Secretary, Embassy of Japan
Mr. Kenichi YUMOTO	Second Secretary, Embassy of Japan
Mr. Takashi KATO	Resident Representative, JICA Malawi Office
Mr. Tatsuya MURASE	Deputy Resident, JICA Malawi Office
Mr. Minoru YOSHIMURA	Deputy Resident, JICA Malawi Office
Mr. Kenichi MATSUMOTO	Assistant resident Representative, JICA Malawi Office
Mr. Kiyonori MATSUSHIMA	Project Formulation Adviser, JICA Malawi Office
Ms. Rie KAWAHARA	Project Formulation Adviser, JICA Malawi Office
Mr. Vincent MKANDAWIRE	AID Coordinator, JICA Malawi Office
Dr. Naoto WATANABE	Expert in Agricultural Extension & Organizing in Bwanje
Mr. Hideyo OKADA	JICA Expert, Smallholder Irrigation & Bwanje
Mr. Katsusuke NIWA	Team Leader/Senior JOCV, LOBI
Ms. Rumiko YAMAMOTO	JOCV Coordinator, JICA Malawi
Ms. Sachi YAMADA	Senior JOCV, LOBI
Mr. S.C.Y. Maweru	Director of Irrigation Services, DOI, MOA
Mr. A.T. Khonje	Deputy Director, DOI, MOA
Mr. G.M. Kachikopa	Human Resource Management Officer, DOI
Dr. Webster Sakala	Principal Agronomist, Chitedze Research Station, MOA
Dr. J.H Luhanga	Deputy Director, Technical Services & Administration
Mr. W.F Kumwenda	Chief Agricultural Engineer, Chitedze Research Station
Mr. Bright Jumbo	Post Harvest Officer, Chitedze Research Station, MOA
Mr. Rashid E. Phiri	Technical Engineer, Seed Service Unit, Chitedze
Mrs. G.D. Gambi	Technical Engineer, Seed Service Unit,
Mr. Rodrick Ndawala	Crops Storage Officer, Lunyangwa Research Station
Mr. Precious Nyasulu	Root Crops Officer, Lunyangwa Research Station, MOA
Mr. B.N Magombo	Agricultural Statistics Officer, Agro-economic Survey
Mr. Dan Lunda Yona	Chief Agri. Communication Officer, ACB
Mrs. Clodina Chowa	Ass. Communication Officer, ACB

Mr. K.M. Nyasulu	Director of forestry, Forest Department
Mr. John Milambe	Regional Manager, Lilongwe Regional Office, ADMARC
Mr. Charlie Clarke	Manager, Targeted Inputs Programme
Dr. Jose Antonio Valencia	Country Director, SASAKAWA GLOBAL 2000
Mr. Jones Wachepa	MASAF Management Unit
Mr. Dellins Phiri	Sales and Marketing Manager, MONSANTO Limited
Mr. Falyson W. Kaimila	Head Agricultural Credit Division, MRFC
Dr. Mphomeya	Agro forestry, Land Resource Center
Mr. Gibson Kauta	Project Manager, HFCDP
Ms. Susan Sikaneta	Executive Secretary, Southern Africa RO, AU
Ms. Claire E. Barrault	Information & Communication Officer, EU
Mr. Moses R. Mumba	Deputy Irrigation Manager, PWP, EU
Mr. Philippe Paulin	Head of Finance and Contracts, EU
Ms. Rose Bell	Fprestry & Irrigation Manager
Mr. Nicholaus M. Mbwambo	Senior Project Engineer, GIBB Africa
Mr. Dickxie V. Kampani	Project Coordinator, EDRP
Dr. Yan N. Soe	Small Animal Production Expert, FAO

Karonga Agricultural Development Division

Mr. Horace D. Lhumbe	Karonga ADD
Mr. I.H.S. Mwahimba	Karonga ADD
Mr. B.S.J. Mhango	Karonga RDP
Mr. W.P. Kalua	Karonga RDP
Mr. M.R. Musukwa	Chitipa RDP
Mr. M.S. Jere	Chitipa RDP
Mr. J.F.K. Manda	Chitipa RDP

Name	*EPA*	*RDP*
Mr. S.S.M. Kaunda	Kaporo South	Karonga
Mr. D.M.S. Mbeyay	Lupembe	Karonga
Mr. M.P.G. Mtika	Kaporo	Karonga
Mrs. M.H.C Phiri	Mpata	Karonga
Mr. D.S.N. Chaphuka	Hara Scheme	Karonga
Mr. W.K.A. Gondwe	Vinthukutu	Karonga
Mr. L.L.D. Lwinga	Lufita	Chitipa
Mr. M.J. Mwanja	Mwamkumbwa	Chitipa
Mr. K.L. Nyirenda	Kameme	Chitipa
Mr. L.B.D. Musukwa	Kavukuku	Chitipa
Mr. A.O. Silumbu	Misuku	Chitipa
Mr. L.R. Chima	Chisenga	Chitipa

Mzuzu Agricultural Development Division

Mr. J.J.M. Kaunda	Financial Controller
Mr. Chris Khonje	
Mr. Charles Nkuna	
Mr. A.C.M Msowoya	
Mr. G.S. Phiri	

Name	*EPA*	*RDP*
Mr. Solarsh Mwalungila	Nkhata-bay	Nkhata-bay
Mr. T.K. Kaseghe	Limphasa	Nkhata-bay
Mr. A.T. Nyirongo	Chintheche	Nkhata-bay

Mr. V.M. Gondwe	Tukombo	Nkhata-bay
Mr. M. Gondwe	Mpamba	Nkhata-bay
Mr. J.M.K. Singini	Chitheka	Nkhata-bay
Mr. J.E. Nyirenda	Chikwina	Nkhata-bay
Mr. E.S. Mkandawire	Mzenga	Nkhata-bay
Mr. Lennox W. Kisyombe	Mhuju	Rumphi
Mr. D.M. Nkhwazi	Katowa	Rumphi
Mr. E.T. Chipondo	Mphompha	Rumphi
Mr. Nab Phiri	Chiweta	Rumphi
Mr. D. Viktor Luhanga	Ntchewa-chewa	Rumphi
Mr. A.K.C. Msuku	Mpherembe	Mzimba
Mr. R.M. Mwekiwa	Bulala	Mzimba
Mr. Lonely Shaba	Bwengu	Mzimba
Mr. T.R. Phiri	Manyamula	Mzimba
Mr. B.O.C. Nyirenda	Kazomba	Mzimba
Mr. H.B. Gondwe	Mjinge	Mzimba
Mr. C.A.M. Jere	Malidade	Mzimba
Mr. H.M. Ngoma	Zombwe	Mzimba
Mr. B.E.M. Thera	Euthini	Mzimba

Kasungu Agricultural Development Division

Mr. E.C. Kanyinji	Deputy Programme Manager
Mr. Chigowo	Crops Production Officer
Mr. Kudeko	Extension Officer, Ntchisi RDP
Mr. Kachimera	

Name	*EPA*	*RDP*
Mr. S.C.D. Wella	Kalira	Ntchisi
Mr. R. Mvula	Kalira	Ntchisi
Mr. F.D Chete	Malomo	Ntchisi
Mr. A.Kokoko	Chikwatula	Ntchisi
Mr. B.C.N. Kamphandira	Chipuka	Ntchisi
Mr. G. Kabiya	Mkanda	Mchinji
Mr. M.H.B. Buleya	Mlonyeni	Mchinji
Mr. J.C. Chisoni	Mikundi	Mchinji
Mr. H. Kadaonanji	Kalulu	Mchinji
Mr. W.W. Makwiti	Chioshya	Mchinji
Mr. B.S.D.M Masebo	Madisi	Dowa
Mr. F.S. Mbulukwa	Mvera	Dowa
Mr. O.J. Chilomo	Mvera	Dowa
Mr. Kalimwayi	Mvera	Dowa
Mr. J.H Phiri	Mndolera	Dowa
Mr. L.J Nyirongo	Bowe	Dowa
Mr. A.M. Kaputa	Chisepo	Dowa
Mr. J.C. Kadongola	Mponela	Dowa
Mr. C.S. Mbowela	Nachisaka	Dowa
Mr. G.W. Maseya	Kaluluma	Kasungu
Mr. L.W.M. Nyalabvu	Chamama-DO5	Kasungu
Mr. B.E. Nyoni	Lisasadzi	Kasungu
Mr. N.A. Mbale	Chipala-DO4	Kasungu
Mr. J.J.M. Phiri	Chivala-DO7	Kasungu

Mr. C.N. Mkangala	Chulu	Kasungu
Mr. E.K. Fulezala	Mlonyeni	Kasungu
Mrs. G.E. Phiri	Santhe	Kasungu

Salima Agricultural Development Division

Mr. J.P. Nthenda	Horticultural Officer, Crops Production Department	
Mr. R.G Demba	Farm Mechanisation Officer	
Mr. D.D Kamputa	Salima RDP	
Mr. M.Z. Bodzalekani	Salima RDP	
Mr. B.G.K Banda	Nkhota kota RDP	
Mr. A.M Saka	Nkhota kota RDP	
Name	*EPA*	*RDP*
Mr. G.R. Katapa	Zidyana	Nkhota kota
Mr. B.E Nkhoma	Linga	Nkhota kota
Mr. G.Z Chiyoyola	Mwansambo	Nkhota kota
Mr. E.T.M Ndalama		Nkhota kota
Mr. A.O Shaba	Khombedza	Salima
Mr. A.M Kaunda	Chipoka	Salima
Mr. S.M Kanyenda	Chinguluwe	Salima
Mr. M.D Moloseni	Tembwe	Salima

Lilongwe Agricultural Development Division

Dr. B.C Munthali	Program Manager	
Mr. Fidelis Sindani	Extension Officer	
Mr. J.D.W.Mbale	Financial Controller	
Mr. Joshua Mphanda	Horticulture Officer	
Ms. Linda Soko	Food and Nutritional Education Officer	
Mrs. A. Mgomezulu	Chief Agricultural Extension Officer	
Mrs. Nkhono	Seed Multiplication Officer	
Ms. Khanyera	Head of Training Section	
Mr. Mwale	Assistant Irrigation Officer, LLE RDP	
Mr. Godfrey Thumba	Land Resource Reclamation Officer, LLE RDP	
Mr. Katunga	District Agric. Development Officer, LLE RDP	
Mr. T.M Mpezeni	Irrigation Officer, Lilongwe ADD	
Ms. T.W Beza	Irrigation Officer, Lilongwe ADD	
Mr. Wausanga Munyenyembe	Lilongwe ADD	
Mr. M.A Mgomezani	Lilongwe ADD	
Mr. B.F.R Mtika	Lilongwe ADD	
Mr. A.B.B.C. Cheyo	Irrigation Officer, Dedza Hills RDP	
Mr. W.W Dzonzi	Irrigation Officer, Dedza Hills RDP	
Name	*EPA*	*RDP*
Mr. N.N. Yobe	Sharpevale	Ntcheu
Mr. H.C.R	Manjawira	Ntcheu
Mr. M.D Kanyambo	Kandeu	Ntcheu
Mr. M.A Chamata	Njolomole	Ntcheu
Mr. Frank Kamanga	Sharpevale	Ntcheu
Mr. L.K Banda	Bilila	Ntcheu
Mr. F.F Kunkhanda	Sharpevalley	Ntcheu
Mr. M.L Mwachande	Kanyama	Dedza Hills
Mr. M.S.K.B Banda	Mtakataka	Dedza Hills

Mr. H.G Hladzi	Golomoti	Dedza Hills
Mr. A.M. Chipaira	Bembeke	Dedza Hills
Mr. G.M Jekapu	Kanyama	Dedza Hills
Mr. S.H Banda	Mayani	Dedza Hills
Mr. A.M Chingoka	Kaphuka	Dedza Hills
Mr. E.D Wizman	Lobi	Thiwi/ Lifidzi
Mr. F.A Mashanga	Linthipe	Thiwi/ Lifidzi
Mr. T. Chimlomo	Kabwazi	Thiwi/ Lifidzi
Mr. L.G.M Mwamutafya	Chafumbwa	Thiwi/ Lifidzi
Mr. Kilembe	Mpenu	Lilongwe East
Mr. F.F.L Zimba	Nyanja	Lilongwe East
Mr. G.M Chisunkha	Mpenu	Lilongwe East
Mr. D.P Mlima	Chitsime	Lilongwe East
Mr. D.N Nyirenda	Mkwinda	Lilongwe East
Mr. C.K Banda	Chigonthi	Lilongwe East
Mr. P. Chang'ombe	Chiwamba	Lilongwe East
Mr. H.J Msiska	Mlombwa	Lilongwe West
Mr. Mr. M.F Mnjuzi	Demera	Lilongwe West
Ms. A.B. Chikwati	Mpingu	Lilongwe West
Mr. C.C Chiusiwa	Chileka	Lilongwe West
Mr. M.D.I Mapira	Thawale	Lilongwe West
Mr. M.K Sichalwe	Mitundu	Lilongwe West
Mr. F.S Chakhaza	Malingunde	Lilongwe West
Mr. K.E Habonga	Chilaza	Lilongwe West
Mr. O.B Chikwezga	Mngwangwa	Lilongwe West
Mr. J.P.R Nyama	Chitekwere	Lilongwe West
Mr. J.B Damalankhunda	Ming'ong'o	Lilongwe West
Mr. K.B Kakunga	Ukwe	Lilongwe West
Mr. C.F Moghogho	Nthondo	Lilongwe West

Machinga Agricultural Development Division

Ms. R.C Kachuma	Machinga ADD – C.I.O
Mr. A.J Kaunda	

Name	*EPA*	*RDP*
Mr. H. Maungena	Chilipa	Mangochi
Mr. Geofrey Mahame	Mtiya	Mangochi
Mr. Stanley Guma	Mbwadzulu	Mangochi
Mr. R.P Samusoni	Nankumba	Mangochi
Mr. L.H.C Kambwiri	Nasenga	Mangochi
Mr. D.M.B Chanza	Lungwena	Mangochi
Mr. H.E Chimbali	Mnthiramanja	Mangochi
Mr. C.U Museko	Masuku	Mangochi
Mr. F. Ndemera Nkhoma	Katuli	Mangochi
Mr. A.I Shaibu	Mpilipili	Mangochi
Mr. E.B Likongwe	Dzaone	Zomba
Mr. M.M Mdala	Thondwe	Zomba
Mr. Frank M.P Mwenjemeka	Nsondole	Zomba
Mr. M.G Fitizintambira	Mpoka	Zomba
Mr. M.B Chirimbiro	Likangala	Zomba
Mr. G.H Kandoje	Chingale	Zomba

Mr. M.L Kameni	Ngwelero	Zomba
Mr. S.M M'buka	Nanyumbu	Machinga
Mr. V.K Mbewe	Chikweo	Machinga
Mr. P.H Matululu	Nyambi	Machinga
Mr. Y. Mitulo	Nsanama	Machinga
Mr. F.D Chamaza	Mbonechera	Machinga
Mr. J.B Piere	Mtubwi	Machinga
Mr. Golden Chitaukali	Nampeya	Machinga
Mr. E.S Mphepo	Ulongwe	Balaka
Mr. B.O.B Chandilanga	Mpilisi	Balaka
Mr. A.G.K Mwale	Phalula	Balaka
Mr. E.M. Malekano	Utale	Balaka
Mr. W.O Chikwamba	Bazale	Balaka
Mr. H. Tebulo	Rivirivi	Balaka

Blantyre Agricultural Development Division

Mr. M.H Dzumani	Blantyre ADD	
Mr. Mose Changata	Blantyre ADD	
Mr. V.Y.W Makata	Chradzulu RDP	
Mr. F.J Ndekha	Mulanje RDP	
Mr. O Tsoka	Mwanza RDP	
Mr. J. Mumbuza	Phalombe RDP	
Mr. G.H Malata	Blantyre ADD	
Mr. T.N Tembo	Blantyre ADD	
Mr. D.F.C Kamwendo	Thyolo RDP	
Mr. O. Tsoka	Mwanza RDP	
Name	*EPA*	*RDP*
Mr. M.K Banda	Kunthembwe	Blantyre
Mrs. A.V Mdala	Lirangwe	Blantyre
Mr. KYE Chipofya	Chipande	Blantyre
Mr. S.S Kalitsiro	Ntonda	Blantyre
Mr. P.L Dankeni	Waruma	Phalombe
Mr. J.M Malekano	Mpinda	Phalombe
Mr. B.E Chindebvu	Kasongo	Phalombe
Mr. J.A Mawindo	Nkhulamba	Phalombe
Mr. C.T Mlotha	Naminjiwa	Phalombe
Mr. T.M Lemani	Tamani	Phalombe
Mr. E.A.R Misanjo	Thambani	Mwanza
Mr. W. Dausi	Neno	Mwanza
Mr. E.F Nyozani	Lisungwi	Mwanza
Mr. S.M Manyumba	Mwanza	Mwanza
Mr. M.F Tawanya	Mombezi	Chiradzulu
Mr. W.M.B Kachigwada	Thumbwe	Chiladzulu
Mr. M.E Nkhoma	Mbulumbuzi	Chiladzulu
Mr. E.P.K Makhaza	Kamwendo	Mulanje
Mr. M.L Munthali	Thuchila	Mulanje
Mr. J.A Mangalusa	Milonde	Mulanje
Mr. A.S Kambewa	MJ/Boma	Mulanje
Mr. L.M Malombe	Msikawanjala	Mulanje
Mr. C.S.R Manyika	Thyolo Centre	Thyolo

Mr. H.B Gwembere	Khonjeni	Thyolo
Mr. P.A Makawa	Dwale	Thyolo
Mr. C.R.J Midian	Thekenani	Thyolo
Mr. S. Materechera	Masambanjati	Thyolo
Mr. E.L Litta	Matapwata	Thyolo

Shire Valley Agricultural Development Division

Mr. Kyaw Zawhla	Irrigation Technician (F.A.O) Mchachatolo Project	
Mr. M.D Cheyo	Management Unit	
Name	*EPA*	*RDP*
Mr. D.G Bvulumende	Makhanga	Nsanje
Mr. R.P Kalitsiro	Nyachilenda	Nsanje
Mr. E.S. Mkoola	Magoti	Nsanje
Mr. M.B Chimwaza	Zunde	Nsanje
Mr. F.A Nakwanje	Mpatsa	Nsanje
Mr. D.A.A Magwira	Mikalango	Chikwawa
Mr. P.W.b Chautsi	Dolo	Chikwawa
Mr. E.F Kadulira	Kalambo	Chikwawa
Mr. F.L Kondwerani	Mitole	Chikwawa
Mr. G.F.L Malota	Livunzu	Chikwawa

APPENDIX-2

SCOPE OF WORK AND MINUTES OF MEETINGS

Scope of Work

for

The Study on

The Capacity Building and Development

for Smallholder Irrigation Schemes in the Republic of Malawi

agreed upon between

The Ministry of Agriculture and Irrigation

and

The Japan International Cooperation Agency

Lilongwe, November 5, 2001

Dr. E. S. Malindi
Principal Secretary
Ministry of Agriculture and Irrigation

Mr. Yoshihiro OZAWA
Leader
The Preparatory Study Team
Japan International Cooperation Agency

I. INTRODUCTION

In response to the request of the Government of the Republic of Malawi (hereinafter referred to as "GOM"), the Government of Japan decided to conduct the Study on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as JICA), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of GOM.

The present document sets forth the scope of work with regard to the Study.

II. OBJECTIVES OF THE STUDY

The overall goal of the Study is to contribute to poverty alleviation of smallholder farmers through irrigation development.

The objectives of the Study are as follows;

(1) To establish a package of methodologies for self–help smallholder irrigation development,

(2) To enhance technical and administrative capacity in irrigation development.

III. STUDY AREA

The Study shall cover the whole country of the Republic of Malawi.

IV. SCOPE OF THE STUDY

In order to achieve the objectives above, the Study shall consist of the following items:

(Phase I)

1. Identification of potential for self-help smallholder irrigation development
   - 1.1 Review the existing projects, studies and the national / regional development plans relevant to the Study
   - 1.2 Collect and review the existing data and information relevant to the Study
   - 1.3 Formulate an inventory of irrigation schemes and sites with high potential for irrigation development

2. Formulation of draft methodologies for self-help smallholder irrigation development
   - 2.1 Classify the irrigation schemes and sites with high potential for irrigation development
   - 2.2 Conduct field surveys of the selected sites to collect information for technical, socio-cultural, institutional, economical/financial, and environmental aspects
   - 2.3 Conduct the Initial Environment Examination (IEE), if required
   - 2.4 Formulate draft methodologies for self-help smallholder irrigation development based on the following items;

(1) Formation of farmers' organization
(2) Planning and designing
(3) Implementation
(4) Operation, maintenance and management

2.5 Select some typical sites for verification studies

(Phase II)

3. Establishment of a package of methodologies for self-help smallholder irrigation development

3.1 Conduct the verification studies for typical projects on the following items;
(1) Formation of farmer's organization
(2) Planning and designing
(3) Implementation
(4) Operation, maintenance and management

3.2 Verify the rationality and effectiveness of the draft methodologies for self-help smallholder irrigation development

3.3 Finalize the package of methodologies for self-help smallholder irrigation development

4. Capacity building

4.1 Conduct On-the-Job Training through the verification studies

4.2 Produce training materials and field manuals

4.3 Conduct workshop(s) / seminar(s)

V. STUDY SCHEDULE

The Study shall be carried out in accordance with the Tentative Work Schedule attached in Annex.

VI. REPORTS

JICA shall prepare and submit the following reports, written in English, to GOM;

Inception Report:	Twenty (20) copies at the commencement of the Study
Progress Report(s):	Twenty (20) copies on the course of the Study
Interim Report:	Twenty (20) copies at the middle of the Study
Draft Final Report:	Twenty (20) copies at the end of Phase II fieldwork The GOM side shall submit written comments on the Draft Final Report to JICA in one (1) month after the receipt of the report.
Final Report:	Forty (40) copies within two (2) months after the receipt of comments on the Draft Final Report from the GOM

VII. UNDERTAKING OF THE GOM

1. To facilitate the smooth conduct of the Study, the GOM shall take necessary measures, as listed below;
   (1) Secure the safety of the Study Team,
   (2) Permit the members of the Study Team to enter, leave and sojourn in Malawi for the duration of their assignment therein, and exempt them from alien registration requirements and consular fees,
   (3) Exempt the members of the Study Team from taxes, duties and other charges on equipment, machinery and other materials to be brought into and out of Malawi for the conduct of the Study,
   (4) Exempt the members of the Study Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Study Team for their services in connection with the implementation of the Study,
   (5) Provide necessary facilities to the Study Team for remittance as well as utilization of the funds introduced into Malawi from Japan in connection with the implementation of the Study,
   (6) Secure permission for the Study Team(s) to enter private properties or restricted areas for the implementation of the Study,
   (7) Secure permission for the Study Team to take all data and documents, including photographs and maps, relevant to the Study out of Malawi to Japan, and
   (8) Provide medical services as needed. Its expenses will be chargeable to members of the Study Team.

2. The GOM shall bear claims, if any arises, against members of the Study Team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Study Team.

3. Department of Irrigation, Ministry of Agriculture and Irrigation (hereinafter referred to as "DOI") shall act as the counterpart agency to the Study Team and also as the coordinating body in relations with other governmental and non-governmental organizations for the smooth implementation of the Study.

4. DOI shall, at its own expense and in cooperation with other organizations concerned, provide the Study Team with the following;
   (1) Available data and information related to the Study,
   (2) Counterpart personnel,
   (3) Suitable office space and necessary equipment in Lilongwe and the Study area, and
   (4) Credentials or identification cards.

VIII. UNDERTAKING OF JICA

For the implementation of the study, JICA shall take the following measures;
(1) Dispatch, at its own expense, study teams to Malawi,
(2) Pursue technology transfer to the Malawian counterpart personnel in the course of the study.

IX. CONSULTATION

JICA and the Ministry of Agriculture and Irrigation shall maintain constant communication and consult with each other in respect of any matters that may arise from or in connection with the Study.

LIST OF PARTICIPANTS

Malawian side:

Ministry of Agriculture and Irrigation

Dr. E. S. Malindi	Principal Secretary

Department of Irrigation, Ministry of Agriculture and Irrigation

Dr. C. P. Mzembe	Controller of irrigation Services
Mr. A. T. Khonje	Chief Irrigation Officer
Mr. G. B. Mkwende	Agricultural Economist

Salima Agricultural Development Division

Mr. G. S. Mwepa	Chief Irrigation Officer
Mr. Chipeta	Senior Irrigation Officer
Mr. M. Z. Bodzalekami	Deputy Program Manager

Muzuzu Agricultural Development Division

Mr. C. S. Khonje	Program Manager
Mr. M. Mpitapita	Principal Irrigation Officer

Kasungu Agricultural Development Division

Mr. M. Munba	Principal Irrigation Officer
Mr. A. Tembo	Senior Irrigation Officer
Mr. B. J. Sizilande	Program Manager

Japanese side:

Preparatory Study Team

Mr. Yoshihiro Ozawa	Leader / Irrigation policy
Mr. Hideyuki Kanamori	Irrigation / Agricultural Infrastructure
Mr. Hatsuo Miyasaka	Farm management / Irrigated agriculture
Mr. Junichi Hanai	Project formulation/Evaluation

JICA Malawi Office

Mr. Hiroshi Murakami	Resident Representative
Mr. Minoru Yoshimura	Deputy Resident Representative
Mr. Kenichi Matsumoto	Assistant Resident Representative

JICA Expert

Mr. Seishi Matsuzawa	Irrigation
Mr. Naoto Watanabe	Agronomy
Mr. Masafumi Taguchi	One Village One Product Movements

Annex

TENTATIVE WORK SCHEDULE

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Work in Malawi																											
Work in Japan																											
Reports		△ Ic/R			△ P/R			△ P/R	△ It/R							△ P/R						△ P/R	△ Df/R		◎		△ F/R

(Remarks)

Ic / R	: Inception Report
It / R	: Interim Report
P / R	: Progress report
Df / R	: Draft Final Report
F / R	: Final Report
◎	: Comments on Df/R by GOM

Minutes of Meetings on the Scope of Work

for

the Study on

The Capacity Building and Development

for Smallholder Irrigation Schemes in the Republic of Malawi

agreed upon between

The Ministry of Agriculture and Irrigation

and

The Japan International Cooperation Agency

Lilongwe, November 5, 2001

Dr. E. S. Malindi
Principal Secretary
Ministry of Agriculture and Irrigation

Mr. Yoshihiro OZAWA
Leader
The Preparatory Study Team
Japan International Cooperation Agency

I. INTRODUCTION

In response to the request of the Government of the Republic of Malawi, the Preparatory Study Team headed by Mr. Yoshihiro OZAWA (hereinafter referred to as "the Team"), was sent to Malawi by the Government of Japan through the Japan International Cooperation Agency (hereinafter referred to as "JICA"), from October 28 to November 6, 2001 for the purpose of discussing and confirming the Scope of Work for the Study on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi (hereinafter referred to as "the Study"). The Team held a series of discussions with the relevant authorities of the Government of the Republic of Malawi represented by the Ministry of Agriculture and Irrigation (hereinafter referred to as "The Malawian side").

As a result of the discussions, the Malawian side and the Team agreed on the Scope of Work for the Study.

The following are the main issues discussed and agreed upon by both sides in relation to the Scope of Work for the Study. The list of participants and resource persons in the series of meetings is attached as Annex.

II. RESULTS OF DISCUSSIONS

1. Title of the Study

Both sides agreed that the title of the Study should be changed from "the Study on The Capacity Building / Rehabilitation and Development for Irrigation Schemes in the Republic of Malawi" to "The Study on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi". "Development" includes construction of new schemes and rehabilitation of existing schemes.

2. Objectives of the Study

"Self-help smallholder irrigation schemes" are those irrigation schemes fully managed, operated and maintained by smallholder farmers and are constructed by the government with full participation of the farmers during all stages of development. "Smallholder farmers" are farmers who hold farms less than two (2) hectares on customary land.

3. Study areas

The study for identification of potentials for self-help smallholder irrigation development will be carried out covering whole country. The study for formation of draft methodologies for self-help smallholder irrigation development will be carried out for the selected areas.

4. Scope of the study

Refer to the scope of the study, the contents of each item are described as follows:

(1) Formation of farmers' organization
- Identification of beneficiaries
- Agreement by the beneficiaries involved
- Formation of farmers' group
- Farmers' training
- Formation of constitution and bylaws
- Registration of organization as an association or cooperative

(2) Planning and designing
- Topographic survey
- Preliminary layout
- Design drawings
- Cost estimation
- Farm planning
- Appraisal

(3) Implementation
- Construction / rehabilitation using smallholder farmers' friendly technology with farmers' full participation

"Smallholder farmers' friendly technology" is the type of technology that can easily be operated, maintained and managed by smallholder farmers. During construction, full participation of the beneficiaries' community will be encouraged with minimal utilization of machinery.

(4) Operation, maintenance and management
- On-farm irrigation management
- Management of farmers' organization

5. Steering Committee

Regarding the item 3, "VII. UNDERTAKING OF THE GOM" of the Scope of Work, both sides agreed that it is necessary to establish the Steering Committee for the smooth and efficient implementation of the Study. The members of the Committee consist of representatives of the following organizations.

(1) Department of Irrigation, Ministry of Agriculture and Irrigation
(2) Other related departments of Ministry of Agriculture and Irrigation
(3) Water Resources Board, Ministry of Water Development
(4) Ministry of Gender, Youth and Community Services
(5) Ministry of Forestry, Fisheries and Environmental Affairs
(6) JICA Malawi office
(7) Embassy of Japan in Zambia (as observers)

6. Equipment and facilities necessary for the Study

The Malawian side promised to provide the Study team with a suitable office space within the buildings of Ministry of Agriculture and Irrigation and to make its best effort to provide desks, chairs and the use of one telephone with facsimile function in the office as required.

The Malawian side requested that the following equipments and materials for the Study be provided by JICA. The Team promised to convey the request to the JICA headquarters.

- Vehicle, fuel
- Photocopy machine
- Personal computer
- Others, if necessary

7. Counterpart personnel

The Malawian side promised to assign the necessary number of counterpart personnel to the Study team. Both sides agreed that during the course of the

conduction of verification studies, it will be necessary that counterpart personnel, especially from ADD and RDP levels, be with the Study Team on a full time basis.

8. Training of counterpart personnel

The Malawian side requested the counterpart training in Japan for effective technology transfer. The Team promised to convey the request to the JICA headquarters.

9. Report

The both sides agreed that the Final Report should be open to the public.

MINUTES OF THE MEETINGS ON INCEPTION REPORT FOR THE STUDY ON THE CAPACITY BUILDING AND DEVELOPMENT FOR SMALLHOLDER IRRIGATION SCHEMES IN THE REPUBLIC OF MALAWI

Lilongwe, Malawi
January 20, 2003

Dr. C. P. Mzembe
Controller of Irrigation Services
Department of Irrigation (DOI),
Ministry of Agriculture and Irrigation

Mr. Kosei HASHIGUCHI
Leader of Study Team,
Japan International Cooperation
Agency (JICA)

Witnessed by:

松島 恭範

Mr. Kiyonori MATSUSHIMA
Project Formulation Adviser,
JICA Malawi Office

Following the Scope of Work agreed upon between the Preparatory Study Team of the Japan International Cooperation Agency (JICA) and the Ministry of Agriculture and Irrigation (MOAI) on November 5, 2001, JICA fielded a Study Team to Malawi on January 6, 2003 for the implementation of the Study on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi (the Study). The Study Team consists of 8 members headed by Mr. Kosei HASHIGUCHI of Sanyu Consultants Inc., of which six members arrived at Lilongwe on January 7.

The Study Team submitted 30 copies of the Inception Report to the Department of Irrigation (DOI), the counterpart agency, following which the Team conducted its introductory meetings with DOI and the steering committee on January 9, 2003. Dr. C. Matabwa expressed his satisfaction on the number of participants who came to share their experiences on smallholder schemes. He also pointed out that, at the request of the Government of Malawi to the Government of Japan, the objectives of the study tie in very well with the emphasis of the Government in promoting smallholder irrigation schemes, and thanked the Government of Japan for its assistance.

After such formalities and introduction of participants, The Team had explained the contents of the Inception Report, and also discussed on the plan of approach, plan of operation and procedures for the implementation of the Study, as well as on the verification projects. The list of the participants in the meeting is shown in the attachment.

The Study Team emphasized that the basic strategies of the Study are as follows:

1. To pursue public equity/interest by irrigation development,
2. To establish a package of smallholder irrigation development,
3. To pursue capacity building throughout the study, and
4. To implement verification project, so that the lessons will be incorporated to the final package of the smallholder irrigation development.

With the above understanding and through the meeting, the Malawi Government accepted the study strategies, methods, procedures and schedules presented in the Inception Report with the following comments:

1. DOI proposed that the Study should also consider the canalization technology as one of the technologies to be assessed in order for the farmers to make use of the available water closer to the farmers fields. For this technology to be effective, crops should be established as soon as excavation is completed.

2. The Study's objectives are twofold: 1) to establish a package of methodologies for self-help smallholder irrigation development, and 2) to enhance technical and administrative capacity in irrigation development. A question was raised as to what is meant by the "package of methodologies." The Study Team clarified that

the "package of methodologies" include interventions such as participatory development, grass root technology, self-help construction, agriculture extension to be required, etc.

3. According to the Scope of Work agreed upon earlier, Self-help Smallholder Irrigation Schemes are those fully managed, operated and maintained by smallholders and are constructed by the GOM with full participation of the farmers during all stages of development. As to the term of "self-help", the Team stressed that the scheme should be those that, to the largest extent, are constructed by the farmers with the GOM technical assistance and, if needed, plus minimum level of physical assistance, and there was consensus among the participants.

4. The Study Area covers all potential areas throughout the country. According to the existing information, the Team gave a figure of 200,000 ha as the potential area, but DOI pointed out that there should be no less that 400,000 ha of the irrigation potential area. DOI has already a database of irrigation potential area which will be furnished to the Study Team.

5. DOI raised that training for Government staff should be undertaken along with the trainings for the farmers. The Team replied that training means both classroom type training and practical guided courses on the job with emphasis on the latter. The Team mentioned that trainings for the Government officers will be given including the transfer/exchange of experiences and knowledge during the verification projects, so that the officers will become able to properly facilitate the development of small scale irrigation schemes.

6. DOI emphasized that crop diversification, together with marketing, should be examined in order to raise farmers' income. The Team replied that the Study will examine the possibility of the diversification but more emphasis will be put on the stabilization of maize production which is the staple food in Malawi.

7. DOI mentioned that flooding takes place in many places and carry with them a lot of sand and silt into irrigation canals. As this siltation causes a lot of maintenance problems and shortens the life time of the schemes, DOI asked that the Team examine the rehabilitation of catchment areas during the course of the Study. The Team agreed to examine the requirement of the catchment rehabilitation.

8. DOI mentioned that there are three levels of cost sharing: 1) full payment by the Government for major facilities, 2) cost sharing, and 3) cost recovery. Cost recovery may be difficult because what farmers produce are consumed by them. The Team replied that almost full self-help irrigation projects do not need this mechanism but projects requiring certain amount of initial investment should be amortized. Both sides agreed that the Team will explore the feasibility of such a mechanism.

松島

9. DOI mentioned that smallholder farmers would hardly have enough surpluses in their production even with the irrigation. Therefore there is need to establish a Rural Development Fund. This will necessitate asking the farmers to contribute a part of their benefits for the sake of public benefit, which may be difficult to set up. The Team replied that the ones who should deicide are the farmers and concerned local authorities. DOI agreed that The Team should introduce the idea to them, and leave the decision to the smallholder farmers themselves.

10. DOI stressed that project itself cannot be sustainable without a proper capacity building mechanism. The Study therefore needs to present a mechanism to make projects sustainable and to extend to other areas. Capacity building of officers is therefore particularly important in this regard. The Team explained that it will explore the mechanism to make projects sustainable through verification projects.

11. DOI pointed out that short-term verification project does not realize capacity building since the process of capacity building requires long term implementation for it to be effective. The Team replied that capacity building is a sort of endless process, and therefore the Study will only undertake the initial process through the verification projects. The Team further asked the officers to be taking over initiative as the Study proceeds, so that the process would continue even after the Team has left.

松島

LIST OF ATTENDANTS

Malawian side:

Ministry of Agriculture and Irrigation

Dr. C. Matabwa	Controller of Agricultural Extension and Techinical Servises

Department of Irrigation, Ministry of Agriculture and Irrigation

Dr. C. P. Mzembe	Controller of Irrigation Service
Mr. A.T. Khonje	Deputy Controller of Irrigation Services
Mr.W. M. Sataya	Senior Irrigation Officer
Mr. Flint Malunga	Irrigation Officer
Ms. J. T. Kopa	Irrigation Officer

Ministry of Water Development

Mr. Pwr Kaluwa	Chief Hydrologist
Mr. P. W. Mleta	Hydrogeologist

Ministry of Gender & Community Service

Ms. Matasi Ruth Mkwanba	Nutrisionist

Agricultural Development Division

Mr. E. P. Chingamba	Program Manager, Blantyre ADD
Mr. T. N. Tembo	Irriagation Officer, Blantyre ADD
Mr. Wellings P. Kalua	Assistant Irrigation Officer, Karonga ADD
Mr. B. J. Sizilande	Program Manager, Kasungu ADD
Mr. A. S. Tembo	Sinior Irrigation Officer, Kasungu ADD
Dr. B. C. Munthali	Program Manager, Lilongwe ADD
Mr. T. M. Mpezeni	Irrigation Officer, Lilongwe ADD
Ms. T.W. Beza	Irrigation Officer, Lilongwe ADD
Mr. A. J. Kaunda	Program Manager, Machinga ADD
Ms. R. C. Kachuma	Chief Irrigaiton Officer, Machinga ADD
Mr. C. S. Khonje	Program Manager, Mzuzu ADD
Mr. C. R. Nkuna	Principal Irrigation Officer, Mzuzu ADD
Mr. Geoffrey Mwepa	Chief Irrigation Officer, Salima ADD
Mr. C. C. Khonje	Program Manager, Shire Valley ADD
Mr. M.R. Mumba	Principal Irrigation Officer, Shire Valley ADD

Smallholder Flood Plains Development Program

Mr. J. K. Chisenga	Acting National Program Coordinator

Smallholder Irrigation Project

Mrs. Erica Maganga	Project Manager

Horticulture & Food Crops Development Project

Mr. G. J. C. Kauta	Project Manager

Japanese side:

Study Team

Mr. Kosei Hashiguchi	Team Leader/Development Planning
Mr. Syunichi Hosono	Irrigation/Agricultural Infrastructure
Mr. Hideyo Shimazu	Rural Sociology/Participatory Development
Mr. Masaki Miki	Agronomy/Agro-economy
Mr. Teodolo I. Ehera	Institutional Development
Ms. Rie Toyoshima	Coordinator/Grass Root Technology

JICA Malawi Office

Mr. Kiyonori Matsushima	Project Formation Advisor
Mr. V.A.L. Mkawdawire	Aid Coordinator

MINUTES OF THE MEETINGS
ON
PROGRESS REPORT 1
FOR
THE STUDY
ON
THE CAPACITY BUILDING AND DEVELOPMENT FOR SMALLHOLDER IRRIGATION SCHEMES
IN
THE REPUBLIC OF MALAWI

Lilongwe, Malawi
March 19, 2003

Dr. C. P. Mzembe
Controller of Irrigation Services
Department of Irrigation (DOI),
Ministry of Agriculture and Irrigation

Mr. Kosei HASHIGUCHI
Leader of the Study Team,
Japan International Cooperation
Agency (JICA)

Witnessed by:

松島

Mr. Kiyonori MATSUSHIMA
Project Formulation Adviser,
JICA Malawi Office

Following the Scope of Work agreed upon between the Preparatory Study Team of the Japan International Cooperation Agency (JICA) and the Ministry of Agriculture and Irrigation (MOAI) on November 5, 2001, JICA fielded a Study Team to Malawi on January 6, 2003 for the implementation of the Study on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi (the Study).

The Study Team has conducted the Phase I field study from January 7, 2003 to the mid of March 2003 based on the study approach, procedure and schedule as agreed in a meeting on the Inception Report held on January 9, 2003. The Study Team submitted 30 copies of the Progress Report (1), as the output of the phase 1 field survey to the Department of Irrigation (DOI), the counterpart agency.

A meeting to present and discuss the contents of the Progress Report (1) was held on March 18, 2003 at a conference room of Lilongwe ADD. After the opening remarks by Dr. Munthali, the Program Manager of Lilongwe ADD, the Team Leader gave a brief history of the Study, the objectives of the Study, and proceeded to the plenary session.

The Team explained the field survey findings made together with the counterparts and concerned officers, development constraints and potentials in promoting nationwide smallholder irrigation development (SHID), draft package of the methodologies for the SHID, tentative selection of verification project sites with preliminary design including environmental consideration.

Following are the comments raised by the participants and further comments if any will be delivered to the Study Team before the next field survey is commenced. The list of participants to the meeting is attached to these minutes.

1. There was a brief clarification on Stakeholder Analysis for the government in terms of strengths, weakness and indeed problems. On the weakness side, a question was raised on the inadequate specialized / trained person as to what measures the Study Team would do. The Team Leader answered that there have been and will be seminars and workshops during the course of the Study. He further explained that since this is a study, it cannot take as many participants as they wish for training. He further pointed out that the way-forward discussion with the JICA headquarters might give an opportunity of arranging more seminars and workshops as part of training.

2. From the summary of Problem Analysis, it was found out that low fertility of land (land degradation) was very common among the sites that the Study Team has visited. A question was raised as to what the Team was suggesting to do on the land degradation issue and the answer was given by one of the members of the Study Team that some organic manure and agroforestry practices were to be incorporated in the verification projects. Another question was raised as regards on the fertilizer, seed and pests problems. The Team Leader on behalf of the members answered that they were to propose some seed banks to reduce the

problem of seed for public equity, and on the fertility part, intensification of the use of compost manure will be encouraged.

3. The Study Team identified four potential areas which will be on the verification project. A question was raised "whether the choice of these areas was dependant on some potential areas within the vicinity of these verification project areas." The Study Team clarified that this was considered, aside from the general criteria of 1) accessibility, 2) water availability, and 3) scheme size preferably less than 20 ha, since the Team would try to implement a couple to several number of projects almost simultaneously as a cluster from the view point of reducing the government expenses for logistics.

4. A participant asked the Team to clarify the impact of Targeted Input Program. The Team answered that the program may be necessary for the subsistence farmers from the viewpoint of safety net. The Team however further stated that the beneficiaries of the program had so far been very much affected by donor's initiative as: 2.3 million farm households targeted for the first two years and reduced to 1.6 million in year 2000/01 and then to 1.0 million in year 2001/02; and also the program might have implanted a sense of dependency among the beneficiaries. The Team stressed that though it is very hard to assess the negative impact of the program, the Government should firstly pursue the way of enabling rural population stand on their own resources as the base of their sustainable livelihood. The Team therefore is to introduce such agricultural components as OPV production and compost manure making, in parallel with the irrigation development, which could enable the rural life stable within their locality.

5. A participant pointed out that high lending interest rates of MRFC could be a constraint rather than extensive network of MRFC's field offices being a development opportunity. The Team recognized the high interest rate, about 50% per annum, is actually a constraint for the farmers, but still maintained that with the extensive network the farmers could operate their own revolving fund on a saving account that could be opened in the vicinity of their locality; that is a development opportunity.

6. A question was raised by a participant "why maize seems to be dominant?" The Study Team clarified that the emphasis is not on maize only. It was further emphasized that within this Study the component of strategic marketing activity which would include record keeping, gross margin analysis, farm budgeting etc will be incorporated and this will mainly involve cash crops. The sites that are close to the roads would have an added advantage on the diversification of crops in terms of cash crops.

7. A question was also raised on what the Team would do to market problem. The Team answered that on the strategic marketing there would be forcing / retarding

culture, contract farming and shipping adjustment. Especially for sites located vicinity of national road, there is a possibility to promote contract farming, while in rural areas the farmers would have to try forcing / retarding culture with a good storage arrangement.

8. On environment, Environmental Impact Assessment (EIA) guidelines of 1997 mentioned that an Irrigation Project with service area of more than 10 ha may require EIA. On this, since this smallholder scheme will mainly cater for smaller hactarage, the EIA will not be applicable. However, in case where the hactarage is greater than 10 ha such as Msambaimfa and Chikhasu sites for the prospective verification project, the EIA may be required and in any such case, a Project Description Document should be submitted to the Director of Environmental Affairs. The Team has already prepared the Project Description Document together with Initial Environmental Examination, and requested DOI to forward all relevant information to the Director for proper screening if these two sites need EIA or not. The DOI promised to forward such information to the Director of Environmental Affairs.

9. A draft package was also presented and clarified to the participants. This included Rationale, Development Objectives and Strategy, Implementation Arrangement & Procedural flow, Participatory Planning, Organizing Process, Organizational Internal Set-up, Irrigation Type, Facilities and Cost Estimate, Cost Sharing Arrangement, Construction, Participatory Monitoring and Evaluation, Operation (Irrigation Scheduling), Maintenance, Appropriate Farming in Irrigated Agriculture, Public Equity by Irrigation Development and Revolving Fund for Equipment. The Team will refine these draft package throughout the verification project and asked the concerned officers to give suggestions, advices, guidance so that the Team will incorporate these and refine the draft into the final one.

松島

ATTENDANT LIST

Malawian Side

Dr. B.C. MUNTHALI	Program Manager, Lilongwe ADD
Mr. B.J. SIZILANDE	Program Manager, Kasungu ADD
Mr. N.T.W. MATAKA	Deputy Program Manager, Lilongwe ADD
Mr. A.T. KHONJE	Deputy Controller of Irrigation Services, DOI
Mr. S. MAWERU	Deputy Controller of Irrigation Services, DOI
Mr. D.D.M. KALILANGWE	CPO, Lilongwe ADD
Ms. THANDIE BEZA	IO, Lilongwe ADD
Mr. M.T. CHIGOWO	PCO, Kasungu ADD
Mr. A.S. TEMBO	SIO, Kasungu ADD
Mr. E.L. KATUNGA	ADADO, Lilongwe East RDP, Lilongwe ADD
Mr. H.A.S. MWALE	AIO, Lilongwe East RDP, Lilongwe ADD
Mr. E.W. KILEMBE	AEDC, Lilongwe East RDP, Lilongwe ADD
Mr. M.L. MWACHANDE	AEDC, Kanyama EPA, Dedza Hills RDP, LADD
Mr. P.W. KABULUZI	DADO, Dowa RDP, Kasungu ADD
Mr. J. BONONGWE	IO, Dowa RDP, Kasungu ADD
Mr. F.S. MBULUKWA	AEDC, Mvera EPA, Dowa RDP, Kasungu ADD
Mr. A. CHIRWA	DADO, Ntchisi RDP, Kasungu ADD
Mr. F.F. MZALULE	AIO, Ntchisi RDP, Kasungu ADD
Mr. S.C.D. WELLA	AEDC, Kalira EPA, Ntchisi RDP, Kasungu ADD
Mr. J. CHIKHUNGU	JICA Counterpart, DOI
Mr. M.M. NGWIRA	JICA Counterpart, DOI

Japanese Side:

The Study Team

Mr. Kosei Hashiguchi	Team Leader/Development Planning
Mr. Syunichi Hosono	Irrigation/Agricultural Infrastructure
Mr. Masaki Miki	Agronomy/Agro-economy
Mr. Tatsuya Ieizumi	Designing/Cost Estimation

JICA Malawi Office

Mr. Kiyonori Matsushima	Project Formation Advisor

MINUTES OF THE MEETING
ON
INTERIM REPORT
FOR
THE STUDY
ON
THE CAPACITY BUILDING AND DEVELOPMENT FOR SMALLHOLDER IRRIGATION SCHEMES
IN
THE REPUBLIC OF MALAWI

Lilongwe, Malawi
May 27, 2003

Mr. A. T. Khonje
Deputy Controller of Irrigation Services
Department of Irrigation (DOI),
Ministry of Agriculture and Irrigation

Mr. Kosei HASHIGUCHI
Leader of the Study Team,
Japan International Cooperation Agency (JICA)

Witnessed by:

Mr. Kiyonori MATSUSHIMA
Project Formulation Adviser,
JICA Malawi Office

INTRODUCTION

Having completed the Phase 1 of the study, the Study Team headed by Mr. K. HASHIGUCHI returned to Malawi on May 14, 2003 to commence the Phase 2 of the study with the submission of the Interim Report for the Study on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi (the Study) to the Government of Malawi (GOM) as per the procedure and schedule agreed in a meeting on the Inception Report held on January 9, 2003.

A meeting to present the Interim Report of the Study was held on May 21, 2003 at a conference room of Lilongwe Hotel with relevant officers from the Ministry of Agriculture, Irrigation and Food Security and some representation from the donor agency. The list of participants for the meeting is attached hereto.

COMMENTS FROM JICA RESIDENT REPRESENTATIVE

Prior to the presentation and discussion on the Interim Report, Mr. T. KATO, the resident representative of JICA Malawi office made a speech stressing the significance of this Study under the circumstances of world wide stagnant economy and erratic rainfall making poor people poorer and also gave the Team a go-ahead to the Phase 2 of the study, which includes the implementation of the verification projects.

OFFICIAL OPENING

Then, Dr C.J. MATABWA, Controller of Agricultural Extension and Technical Services in the Ministry made the opening remarks. The guest of honor reminded the audience on what transpired during the Inception Report presentation on the digging of Phase 1 study. He also mentioned that the GOM asked assistance to the implementation of this Program (Smallholders Irrigation Development, SHID) to donors and thanked the Government of Japan for the swift response given to this matter.

The delegates were also reminded to think of having a team to study the SHID program because of the unfavorable past experiences with large schemes. It was noted that these large schemes were operating very well only when the expatriates who were helping the schemes were still around and at the moment they had gone, the schemes collapsed because there was no sense of ownership among villagers. From this experience, the GOM thought the SHID was the only way to mitigate these issues and that the GOM expects to increase irrigated area up to about 80,000 ha in the next five years mainly using self-help methodology on small scales.

REPORT PRESENTATION

The Team presented the contents of the Interim Report including the findings on rural society and agriculture, development constraints and opportunities, interim result of the inventory survey, draft package of smallholder irrigation development, and outline of the verification project, as well as the objectives of Phase 2 of the study, which is just starting. Following are the comments raised by the participants and further comments

if any will be delivered to the Study Team before the verification project starts.

COMMENTS FROM DELEGATES

1. A participant addressed importance of catchment area conservation and inquired if the verification project includes it as a part and its budget. The Team responded that the Study does not include particular sum for the catchment area conservation due to constraints of time and staffing, however, preliminary plan/design for the catchment area conservation can be incorporated in the Study and the cost to be required for the conservation can also be planned and presented in the Study.

2. A participant suggested that options to introduce hybrid maize seed production or cash crop production should be considered apart from promoting Open Pollinated Variety (OPV) maize seeds production in rural areas. The Team explained that OPV promotion is targeted as part of cash crop promotion and for public equity realization. The Team also indicated that it needs to find out the technical capacity of farmers for producing hybrid maize seed in rural areas and that will be studied through the verification project in cooperation with Agriculture Officers of the GOM.

3. Indicated the implication of negative impact of Targeted Input Program (TIP) by the presentation, it was pointed out that a comprehensive analysis for the impact of TIP should be undertaken in order to give a true picture on the effects of TIP and a suggestion was made to include the information from pre-TIP period so that more consolidated analysis can be made. The Team responded that a further study on the issue was going to be done.

4. A participant inquired whether the technology of weaving Gabion nets locally is appropriate and whether it can be adopted. The Team explained that in many Asian countries like Nepal, India etc, people manually weave gabion wire by themselves and it will be cheaper than importing already fabricated mesh from South Africa, if people in Malawi can weave the gabion wire. The Team further stressed that, if it is being implemented in Asian countries, then there is a high likelihood that it can also easily be adopted here in Malawi thus making the mesh cheaper and affordable to many people in rural areas.

5. Clarification on problem analysis that was conducted in phase 1 was also touched, as certain points, which were not mentioned, were still considered to be problems in certain ADDs, which are supposed to be incorporated in the draft package. The Team explained the background of the analysis, such as procedure and participants of the analysis carried out during the Phase 1 study.

6. Knowing that the Study has so far identified around 10,000 ha of potential irrigable area in 5 ADDs, a participant asked if the Study could identify potential irrigable area

up to 400,000ha. The Team responded that it would be difficult to identify such area in terms of small-scale or self-help irrigation schemes only, from the viewpoint of which the Study is focusing on gravity irrigation. The Team also indicated that, if pumping irrigation, including the vast lakeshore development, were included in the self-help concept, potential irrigable area would increase considerably.

7. A participant informed the meeting that the high lending interest rate should be documented as a constraint in order to appeal to the GOM to take an action against this. The Team agreed to do so.

8. Given the proposed verification project sites in two ADDs, a participant asked if there would be no projects in other three ADDs studied during the Phase 1 study. The Team answered that due to limited staffing and schedule, the verification project sites were selected considering a criterion that the government staff in HQ could commute to the sites. The Team further mentioned that GOM should take action to implement the project in many more areas and the Study will assist GOM by formulating the package for the irrigation development and also preparing a leaflet to distribute to smallholder farmers.

9. A participant questioned if the verification project sites would give good representation of irrigation development even for other ADDs. The Team answered that in the verification sites some type of irrigation methods will be examined and applicability of the methods to other ADDs will be studied during Phase 2 study.

10. A participant suggested the idea of providing farmers a sort of starter pack, in other words, seed money rather than establishing revolving fund. The Team explained that the strategy of the Study is to start up with temporary weirs and after gaining some benefits from the previous irrigation season, the money accrued will be available for the next season for other activities like buying fertilizers, constructing permanent weirs, etc. The participant further inquired how farmers could get fertilizers while the project is implementing in their farms and the Team recommended the promotion of compost making as its countermeasure.

11. A participant asked if the project would be dealing with marketing in this phase. The Team answered that the Study puts priority on food security but if there are opportunities, like the project site is located near main road for example, crop diversification for marketing will be promoted.

12. A participant asked if domestic production of pumps would be examined in this Study. The Team answered that motorized pump would not be sustainable for smallholder irrigation development due to high fuel cost thus no further study for motorized pump would be undertaken. However, the possibility of domestically producing Treadle

pumps will be studied in this phase.

13. A participant advised the meeting not to overemphasize of maize, but consider other crops like Irish potato and, further explained that the technical cooperation for diversified crops will be valuable since the field of diversified crops promotion is a bit weak in Malawi. The Team responded that it will consider promoting diversified crops.

14. A participant remarked consideration on profitability of the crops and marketing aspect like demand estimation, as farmers would be anxious to buy hybrid maze seeds under uncertainty of over production. The Team replied that it will consider the aspect.

ATTENDANT LIST

Malawian Side

Dr. C. J. MATABWA	Controller of Agricultural Extension and Tech. Services
Dr. J.H. LUHANGA	Deputy Director, Agriculture Research
Mr. A.T. KHONJE	Deputy Controller of Irrigation Services, DOI
Mr. K.M CHAVULA	Director of Crop Production, Dep. of Crop Production
Mr. C.C. KHONJE	Program Manager, Shire Valley ADD
Mr. C.S. KHONJE	Program Manager, Mzuzu ADD
Mr. A.J. KAUNDA	Program Manager, Machinga ADD
Mr. T.Z CHUNGA	Program Manager, Karonga ADD
Mr. E.P CHING'AMBA	Program Manager, Blantyre ADD
Mr. E.C KANYINJI	Deputy Program Manager, Kasungu ADD
Mr. N.T.W. MATAKA	Deputy Program Manager, Lilongwe ADD
Mr. M.Z BODZALEKANI	Deputy Program Manager, Salima ADD
Ms. P.C.C. NEGECE	Irrigation Officer, DOI
Mr. GEOFFREY MWEPA	Chief Irrigation Officer, Salima ADD
Mr. M.M.E MHANGO	Irrigation Officer, Machinga ADD
Mr. D.A JUMA	Irrigation Officer, Machinga ADD
Mr. H.D LHUMBE	Irrigation Officer, Karonga ADD
Mr. M.D CHEYO	Irrigation Officer, Shire Valley ADD
Mr. A.C.M MSOWOYA	Irrigation Officer, Mzuzu ADD
Mr. T.MPEZENI	Irrigation Officer, Lilongwe ADD
Mr. A.MALUNGA	Irrigation Officer, DOI
Mr. C.K JANA	Irrigation Officer, DOI
Mr. T.N. TEMBO	Divisional Irrigation Officer, Blantyre ADD
Mr. D.L.YONA	CACO for DAES
Mr. M.C. LUHANGA	EM / TM, GOM/EU PWP
Mr. G.J.C. KAUTA	Project Manager, HFCDP
Mr. JIMMY KAWAYE	Program Manager, DFID
Mr. J. CHIKHUNGU	JICA Counterpart, DOI
Mr. M.M. NGWIRA	JICA Counterpart, DOI

JICA Malawi Office

Mr. T. KATO	Resident Representative
Mr. K. MATSUSHIMA	Project Formation Advisor
Mr. V.A.L MKANDAWIRE	AID Coordinator

The Study Team

Mr. K. HASHIGUCHI	Team Leader/Development Planning
Mr. T. IEIZUMI	Designing/Cost Estimation
Mr. A. HATA	Project Monitoring / Financial Management System

Apologies

Mr. J.K CHISENGA	Deputy National Coordinator, SFPDP

MINUTES OF THE MEETING
ON
PROGRESS REPORT (2)
FOR
THE STUDY
ON
THE CAPACITY BUILDING AND DEVELOPMENT FOR SMALLHOLDER IRRIGATION SCHEMES
IN
THE REPUBLIC OF MALAWI

Lilongwe, Malawi
August 1, 2003

Mr. A. T. Khonje
Deputy Controller of Irrigation Services
Department of Irrigation (DOI),
Ministry of Agriculture and Irrigation

Mr. Kosei HASHIGUCHI
Leader of the Study Team,
Japan International Cooperation
Agency (JICA)

INTRODUCTION

The Study Team headed by Mr. K. HASHIGUCHI commenced the Phase 2 field survey on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi (the Study) on May 14, 2003. A meeting to present the progress of the Phase 2 Study, as per the procedure of the Study, was held on August 1, 2003 at a classroom 5&6 of Natural Resources College with relevant officers from the Ministry of Agriculture, Irrigation and Food Security. The list of participants for the meeting is attached hereto.

Prior to the meeting, a two-day study tour to visit the sites of verification projects, which have been implemented as the major activity of the Phase 2 Study, was carried out for the respective EPA and RDP officers who are working on the implementation of the verification projects. The officers visited the sites, which were supervised by their fellow officers and exchanged their impressions and opinions.

OPENING REMARKS

The Deputy Controller of the Department of Irrigation thanked the Study Team which is formulating methodologies for Smallholder Irrigation Development. He also thanked all the participants for taking part in the work because a JICA advisory team from Tokyo who came to monitor the progress of the verification projects was very much impressed of the work done. He therefore encouraged the participants to continue working hard so that the benefits of the project can be realized.

PRESENTATION ON STATUS OF THE PROJECTS BY EPA OFFICERS

In the morning session, the representatives of each EPA presented the current status of their respective verification project sites, including number of irrigation members, number of landowners, canal length, potential area, areas developed and planted, crops planted, how farmers procured inputs, application of manure, problem, measures undertaken and lessons. The Study Team also presented the problems, measures and lessons from its view point. The contents of the presentation are shown in the attached tables and the following are the comments from the presentations:

1. Kanyama EPA, Dedza Hills RDP, Lilongwe ADD

It was inquired about the decrease of river flow on Mchiku site. The AEDO in charge explained that the farmers may have given false information about the river flow driven by expectation of free handout of seed and fertilizer and the possible solution would be to plant early maturing varieties, to use treadle pumps and to reduce the service area. A participant gave an opinion that treadle pumps may be difficult to apply due to the location constraint. The Team also suggested to lower the canal bed, so that less water depth of the storage in the dam could contribute to lessening the leakage and thereby more water could be available for irrigation.

A participant inquired for the reasons of drop-out in some site. The AEDO in charge

answered that the most beneficiaries were used to free handouts and since the concept of the project was self-help as clearly told to the farmers by the Study Team, some of them felt they could not continue with the project.

A question was raised to clarify the relationship among extension workers, local leaders and beneficiaries in this verification project. The AEDO explained that the relationship was good but sometimes the presence of external aid agency, regardless its intention, will call forth the habit of free issues and hinder the development.

2. Mpenu EPA, Lilongwe East RDP, Lilongwe ADD

A participant asked why the spacing of crop was not relevant in Duwu site and whether it meant no posting of AEDO in the area. The AEDO in charge of Duwu site was present and he explained that the main cause was the fact that the landowners refused to make proper beds because it would cause them inconvenience when making ridges during the wet season.

There was a remark on finding solution of problems that translating the officers' problem into farmers' problem would hinder making proper solutions. A comment was also made to AEDC not to allow drop-outs at once but talk to them and convince them to benefit from the project by being a part.

3. Bembeke EPA, Dedza Hills RDP, Lilongwe ADD

A participant introduced his observation on Namanolo site that the farmers looked imposed to implement the project because the farmland was not being used, although the weir was well constructed and water was flowing in the canal. The AEDO in charge answered that there was no fact of imposition, but some farmers were reluctant to participate in the work because they were not sure whether they would get the land or not.

A participant advised that in any irrigation site, land was a problem and that the AEDO should be working closely with local leaders. A participant also commented according to his experience that timetable for work made by farmers themselves could be feasible and even if the officers gave farmers such timetable, they would not follow it unless the officers were present to supervise.

There was a question if there was a communication breakdown between RDP and EPA officers. A participant from RDP told the meeting that there was no such problem and in most cases the DADO was represented by irrigation officer and that any major problem arise could easily be handled by RDP.

4. Karila EPA, Ntchisi RDP, Kasungu ADD

A participant asked a question on how the HIPC fund was used for buying seeds. It was answered that HIPC fund could be provided for the poor, but it should be also used as a source of revolving fund to avoid implanting bad habit to the farmers through free handouts.

A participant inquired why the farmers in Gontha were not planting though the land had been prepared. The AEDO in charge answered that the farmers knew well about when to plant in the area and because the weather was still cold, they were waiting for a good timing, which will be late August.

5. Mvera EPA, Dowa RDP, Kasungu ADD

A participant asked about the possibility of the project regarding the farmers in the concerned sites not planting by their own but waiting for the government TIP. The AEDC in charge answered that it was already agreed with the farmers that the free handout would be only this year.

There was a remark on the issue of soil and water conservation that the project might destroy trees along the riverbank. The AEDC in charge accepted that it was an oversight to the officers there and they would plan to adopt some measure for the conservation.

6. Study Team

A participant questioned if the project implementation might have been rushed and it was so sudden for farmers to know that the project would not provide free inputs. But all the frontline officers in charge of verification projects clarified that before any work had been done, the Study Team always clearly mentioned of no provision of free inputs during kick-off meeting. A participant also made a comment that it was not only lack of inputs that caused drop-outs but also internal conflict etc. and the causes should be researched.

PRESENTATION ON PROGRESS REPORT (2)

In the afternoon session, the Study Team presented the contents of the Progress Report (2) which consists of the profile of the verification project sites, implementation procedure and principle, current status of the verification project sites, issues and concerns, dissemination materials, and nationwide irrigation potential areas by a participatory survey.

In the presentation, the Team Leader especially emphasized the issues and concerns that have been picked up from the experiences of the verification projects so far such as how well Smallholder Irrigation Schemes can be disseminated, how much irrigation water is required, which irrigation method is suitable, basin or furrow irrigation, how equity between Haves and Not-Haves can be sought, how cluster development works, and how study tour works as a venue of learning. These are the way forward for the sustainable smallholders irrigation development.

The Team Leader also presented the draft technical manual and leaflet to be used by the relevant officers and farmers and requested the officers to give feedback to refine and improve the contents of the manual and leaflet. Following are the questions and comments raised by the participants:

1. A participant suggested if JICA could provide fuel cost in advance instead of reimbursement upon the submission of receipts, since the officers had to use their own pocket money until they got the reimbursement. The Team Leader answered that fuel coupon would be provided for the concerned RDPs, and the amount of provision would further be discussed referring to the mileage estimation.

2. There was an inquiry of status of the spare parts provision to the RDP vehicles. The Team explained that the budget was already in the country and the personnel in JICA Malawi office were going to order the spare parts very soon.

3. There was a request to JICA for facilitating the study tour for farmers to see other site. The Team Leader answered that the Team could facilitate the study tour for farmers, as long as the budget allowed.

4. A participant suggested to the government officials that during the study tour, the HIPC fund should facilitate the lunch for farmers since the Team would only provide the transportation. An ADD officer said there is need to consult with program managers of ADDs to facilitate fund for the activity. One officer however remarked that if the activity was in the annual plan, the fund could be available otherwise it will be difficult.

5. The Team Leader, in connection with issue 4 above, pointed out that farmers could prepare lunch for the study tour and actually did in some cases. Implementation principal of the verification project was recalled; that is minimal physical input from outside, so that the Team has been providing only transportation and water but no lunch.

6. A participant commented that the verification project should not leave out the traditional leaders, since the issue of the land was well handled by the leaders. The Team Leader commented that the role of the traditional leader is very crucial especially in case of land sharing and allocation. AEDOs in charge have actually been consulting the traditional leaders whenever needs have arisen.

7. Responding lack of technical know how felt by an EPA officer, a participant asked if JICA could make three days training on vegetable production to EPA officers. The Team Leader answered that the Study had got limited budget for such training course, but instead one of the Team member who was specialized in horticulture could work with EPA officers in the field.

8. The Team Leader emphasized that the Team was ready to provide transportation to deliver inputs whenever farmers intend to buy the inputs on their own money, but the Team would not provide any transportation for transporting free handout such as TIP. The Team Leader clarified the policy of the study, which is to be unique against free handouts.

9. The Team Leader once again stressed that though this Study shall not put off any Government program, and yet no such authority, physical input from outside,

especially free handouts, should always be minimal or preferably nil taking into account the sustainability that can be pursued even under ordinary extension activities, and therefore the Team will pursue to be unique against handouts.

ATTENDANT LIST

Malawian Side

Mr. A.T. KHONJE	Deputy Controller of Irrigation Services, DOI
Mr. A.S. TEMBO	Senior Irrigation Officer, Kasungu ADD
Mr. A.L. BANDA	Division of Crop Officer, Kasungu ADD
Mr. T.MPEZENI	Irrigation Officer, Lilongwe ADD
Mr. THANDIE BEZA	Irrigation Officer, Lilongwe ADD
Mr. PEPANI BAKALI	CPO, Lilongwe ADD
Ms. C.F. KAPOMDA	Crop Officer, Ntchisi RDP
Mr. A.K.H. KACHIMERA	ADADO, Ntchisi RDP
Mr. F.F. MZALULE	AIO, Ntchisi RDP
Mr. POUL W. KABULUZI	District Agriculture Dept. Officer, Dowa RDP
Mr. V.K.KAIMFA	Crop Officer, Dowa RDP
Mr. S.L. KHOSA	Crop Officer, Dowa RDP
Mr. W.G.NDHLOVU	DADO, Dedza Hills RDP
Mr. A.B.B.C. CHEYO	AIO, Dedza Hills RDP
Mr. H.A.S. MWALE	AIO, Lilongwe East RDP
Mr. RAKI KASAMBWE	Crop Officer, Lilongwe East RDP
Mr. R.T.O. MVULA	AEDO, Kalira EPA
Mr. F.M. KUMCHULESI	AEDO, Kalira EPA
Mr. J.M. CHABUKA	AEDO, Kalira EPA
Mr. G.W. MBEWE	Asist.AEDOC, Kalira EPA
MS. Z. LUHANGA	AEDO, Mvera EPA
Mr. L.R.M. JONAZI	AEDO, Mvera EPA
Mr. R.N.A. CHINGWALU	AEDO, Mvera EPA
Mr. M.L.L.P. KAMUONJOLA	AEDO, Mvera EPA
Mr. F.S. MBULUKWA	AEDOC, Mvera EPA
Mr. L.R.W. LINGANI	AEDO, Bembeke EPA
Mr. W.A.I. MBUGHI	AEDC, Bembeke EPA
Mr. M.L. MWACHANDE	Asist. AEDOC, Bembeke EPA
Mr. M.V. THENZA	AEDO, Kanyama EPA
Mr. B.H. W.N.MALIASI	AEDC, Kanyama EPA
Mr. G.M. JEKAPU	Asist. AEDOC, Kanyama EPA
Ms. C.T. SOMANJE	AEDO, Kanyama EPA
Ms. NORIA KACHALE	AEDO Trainee, Kanyama EPA
Mr. M.A. MABWERA	AEDO, Mpenu EPA
Mr. J. MALUNGO	AEDO, Mpenu EPA
Mr. M. P.NJANJE	AEDO, Mpenu EPA
Mr. C.H. HARAWA	AEDO, Mpenu EPA
Mr. G.M. CHISUNKHA	AEDOC, Mpenu EPA
Mr. E.W. KILEMBE	Asist. AEDOC, Mpenu EPA

The Study Team

Mr. K. HASHIGUCHI	Team Leader/Development Planning
Mr. H. SHIMAZU	Rural Sociology/Participatory Development
Mr. M. MIKI	Agronomy/Agro-economy
Mr. T. IEIZUMI	Designing/Cost Estimation
Mr. A. HATA	Project Monitoring / Financial Management System
Ms. R. TOYOSHIMA	Coordinator/Grass Root Technology
Mr. J. CHIKHUNGU	JICA Counterpart, DOI
Mr. M.M. NGWIRA	JICA Counterpart, DOI

Problems and measures taken, and lessons learned as of end of July, 2003 (No.1)

RDP	Lilongwe East		Dedza Hills	
EPA	Mpemu		Kanyama	
	Problems	Measures taken	Problems	Measures taken
Problems and measures taken	· Land ownership constraints · Lack of input by most members · Maize streak virus · Salty soil · Dropping off of members · Mobility by supervisors · Leakage from the weir · Lack of support from supervisor	· Tour to progressive site especially for the land owners · Round table discussion (Sectional heads):Seed, Fertilizer(Manure) · Use of tolerant varieties against maize streak · Soil analysis and recommendation from the research department · Motivate the remaining farmers · Transportation should be provided · Weir maintenance	· Land owners not present at kick off meeting · Poor community participation · Fear of land being owned by gout · Leakage of brush dam · Insufficient water(Mchiku) · Beneficiaries drop-outs(expected free inputs) and allowances · Poor sensitization of site identification	· Conducted sensitizing meetings · Local leaders were involved to mobilize the community on carrying activities · Intensive civic education · T/A &G.V.H. were used to sensitize the people (farmers) on the objective of the project · More clay soil was put to minimize the leakage · Service area has been reduced from 1.3ha to 0.25ha · Local leaders were used to sensitize the community about the project
Lessons learned	· Cooperation of farmers very good especially in rural areas · Farmers are innovative and fast learners · In some sites farmers are very rigid but very cooperative · Farmers are used to free issues		· Awareness meetings to be conducted before starting any project · Farmers have been acclimatized to free issues, hence they are not willing to work hard on unpaid projects · Farmers to farmers exchange visits to be encouraged	

Problems and measures taken, and lessons learned as of end of July, 2003 (No.2)

RDP	Dedza Hills		Ntchisi	
EPA	Bembeke		Kalira	
	Problems	Measures taken	Problems	Measures taken
Problems and measures taken	· Lack of transport · Shortage of construction tools · Land belonging to a few farmers · Speculation of land snaching by government · Parts of the water bridging being eroded · Lack of transport to carry construction tools · Many villages involved in one site · Big rocks at the intake and in the canal · Violent bees in the tree at the intake · Too many funerals affecting working schedules · Few people digging the canals · Lack of seed · Canal cannot be extended beyond the designated road · Lack of material construct the carvet · Farmers refusing the canals dug through their gardens · A lot of drop outs · Inadequate knowledge on canalization and water diversion by staff and farmers · Inadequate sensitization on canalization and water diversion, weirs, and weir construction by both staff and farmers · Lack of fund to support field activities from government	· Provided with two push bikes but the EPA has no motor cycle · Lent some construction tools by JICA · Would be beneficiaries identified · Continued sensitization to land owners and leaders · Repatching with clay · Using JICA vehicles when we have joint programs · Irrigation committees erected · Burning and breaking the rocks with hammers and peaks · Burning them · Rescheduling and combining programs · Identified more would be irrigators · Encouraging farmers to source own seed · Permission was sought from the district roads Dept. and was granted on condition that we construct a carvet across the road. · JICA just promised partly assist if the farmers are to contribute/provide some construction materials. But it will be next year since the season is almost gone. · Land owners and local leaders sensitizing continued · Nothing done yet · Conducting field days to both staffs and farmers · Conducting field days to external and internal, to staff and farmers · Field staff using personal funds	· Lack of inputs: seed, fertilizer · Land conflicts · Materials (ex. Line level) · Lack of super vision	· Self supply and HIPC funds · Civic education to farmers
Lessons learned	· Farmers are willing to do the activities but lack of inputs and technical know how is limited factors · The project started late · Local leaders sensitization should be done in order to assist in explaining to farmers · Lack of fast transportation, motorcycle, and late maintenance of the RDP vehicles has contributed to delays in implementing some of the planed activities · Lack of funding to the planed activities has made some of them being implemented half hazardly · Provision of construction tools and technical knowledge by JICA team has facilitated implementation of most activities · The provision of two push bikes has alleviated the transport problem in activities implementation · The study tour has boosted farmers and staff courage · The presence and actual participation of JICA personnel in implementing field activities has boosted farmers interest and increased EPA staff moral · Farmers prefer free inputs		· Weir construction · Water bridge construction · Make and use of line levels · Canal construction · Conflict management	

Problems and measures taken, and lessons learned as of end of July, 2003 (No.3)

RDP	Dowa		Study Team	
EPA	Mvera			
	Problems	Measures taken	Problems	Measures taken
Problems and measures taken	Farmers ・Soil and water conservation ・Dependency syndrome ・Low compost manure making Staff ・Technical know how on horticultural crops not up to date ・Mobility for field staff and RDP SMSs	Farmers ・Construct marker ridges, ridge realignment, vetiver planting, and agroforestry ・Train farmers to be independent, through tours ・Manure making at sites Staff ・Refresher course on horticultural crops ・Mountain bikes for new site AEDOs ・Motor bike for RDP SMSs	・Handout input (chemical fertilizer) ・Farmers' too much confidence on chemical fertilizer ・Endless study tour ・Very limited number of RDP irrigation officer ・Water flow diminishing toward October ・Farmers who have known that JICA would not grant any inputs have dropped out from the club.	・To think about what the self-effort and thereby sustainability mean all about! ・To show a successful case of low-input farming. ・To utilize the opportunity of cluster development and allocate enough budget for the tour. ・To put the activities more on the front line, EPA level, with RDP irrigation officer being a technical advisor. ・1) Not just rely on what the farmers have said in terms of water availability during the winter, 2) Limit the service area for the first year, 3) Deepen the canal, 4) Put clay soil to reduce leakage. ・Let them go! Try to be unique for our verification projects against the handouts.
Lessons learned	・Involvement of local leaders on program implementation does assist ・Weir construction – use of local materials Field tour ・Technology on brush weir construction at Ngoni site ・Farmers are resourceful (ie. not being dependent, ex. at Balangombe site)		・Farmers are very hard workers and quick learners. ・Government officers are very eager, keen, and enthusiastic to serve the customer: the farmers. ・Seeing is believing as some sites were initiated by the villagers themselves by seeing the fellow farmers' activities. ・Village headman' leadership is very important especially in term of distributing irrigation service area to the members. ・Maximum water depth in a brush dam should be limited to 1.5 m (the bigger the water depth, the more the seepage into the ground, reducing the available water for irrigation). ・Smallholder irrig'n facilities can be constructed with local materials only (except plastic paper but it is already available in rural area). ・Very good clay can work as mortar that binds stones, thus easily constructing masonry- ・alike-structure. ・Many farmers give priority on maize production even under irrigated agriculture for food security. Therefore, in order to diversify winter crop, summer maize production must be enhanced. ・Many farmers accept the lower yield of OPV maize from the view point of: 1) can-be-recycling of the seed for three seasons, 2) high pound-ability preferable to Nsima.	

Status of the Verification Project as of end of July, 2003 (No.1)

RDP	Lilongwe East								Dedza Hills		
EPA	Mpenu						Chitekwere	Chiwanba	Kanyama EPA		
Site	Mutwanjovu	Duwu	Ngoni	Chimphonongo	Zakumva	Talira	Mgunda	Makhamba Tigwirizane	Chikhasu	Mchiku	Livizi
No. of Members	M: 25, F: 0 Total: 25	M: 16, F: 10 Total: 26	M: 35, F: 0 Total: 35	M: 16, F: 2 Total: 18	M: 21, F: 10 Total: 31	M: 21, F: 14 Total: 35	11	16	M: 10, F: 7 Total: 17	M: 7, F: 9 Total: 16	M: 12, F: 12 Total: 24
No. of Land Owners	25	4	10	18	1	3			6(Males)	1(Male)	M: 5, F: 7 Total: 12
Potential Area	5 ha	3 ha	to develop this year 10 ha total	5.2 ha	2.5 ha	2.0 ha			14 ha	1.3 ha	Not established
Area Developed as of Aug.1	1.5 ha	2.6 ha	5 ha	3.8 ha	0.8 ha	Not yet developed	0.3 ha	4.5 ha	1.1 ha	0.25 ha	Not established
As of August 1 Activities	· Weir construction on 5th July 03 · 11 of Sand bags used for weir · Canal length 525m · Area planted 1.38ha · Crops planted; Maize, Beans & S/potatoes · 1 farmer bought input by himself · 2 farmers received inputs from TIP · Manure application: 2Farmers (0.2 ha)	· Weir construction on 6th June 03 · Weir length 3m, Depth 1m · Canal length 450m · Area planted 2.4ha · Crops planted; Maize, Beans & Tomatoes · Inputs procured: by TIP, Buying and Self supply · Manure application: 3Farmers (0.3 ha)	· Weir construction on 21th - 24th June 03 · Weir length 10.5m, Depth 1m · Canal length 1,300m · Area planted 1.2ha · Crops planted; OPV ZM 521 (Maize) · Inputs procured: Self bought seed from Chitedze · Manure application: NIL	· Weir construction on 19th June 03 · Canal length 318m · Area planted 0.8ha · Crops planted; Maize 3.00ha, I/Potatoes 0.80ha · Inputs procured: by TIP and self supply · 4 farmers have applied compost (total 1.2 ha)	· Weir construction on 17th June 03 · Weir length 2.5m, Depth 1m · Canal length 170m · Area planted 0.3ha · Crops planted; Maize, Beans · Inputs procured: by TIP and self supply · 2 farmers have applied compost (total 0.2 ha)	· Not yet developed · Materials for the weir already collected	· 2 land owners · Canal length 250m · Beds not constructed	· 4 land owners · Canal length 460m · Maize planted in May · Basin construction continues.	· Weir construction on 11h July 03 · Weir length 7m, Depth 0.4m, made of stone &clay · Canal length 175m (pegging 210m) · Area planted: NIL · Crops planted; NIL · Inputs procurement: NIL · Application of compost manure: NIL	· Weir construction on 24h June 03 · Weir length 2m, Depth 1.5m, Brush Dam · Canal length 195m (pegging 250m) · Area planted: 0.2 ha · Crops planted; I/Potatoes 0.15ha, Beans 0.05 ha · Inputs procurement: Own initiative · Application of compost manure: 1 farmer (2 Wheelbarrow)	· Kick- off workshop 8th July 03 · Discharge measurement 18th July 03 · Sensitisation meeting 14th July 03 · Planning workshop 24th July 03 · Construction works have not yet done · Inputs procurement: NIL · Application of compost manure: NIL

Status of the Verification Project as of end of July, 2003 (No.2)

RDP	Dedza Hills				Dowa				Ntchisi		
EPA	Bembeke				Mvera				Kalira		
Site	Mtsetse	Kadiwa	Namanolo	Mtanda	Tikolore	Tilime	Loyi	Kambware	Msambaimfa	Gontha	Katema
No of Members	M: 10, F: 5 Total: 15	M: 7, F: 8 Total: 15	M: 16, F: 7 Total: 23	M: 7, F: 31 Total: 38	M: 59, F: 11 Total: 70	M: 20, F: 10 Total: 30	M: 35, F: 30 Total: 65	M: 32, F: 8 Total: 40	M: 37, F: 18 Total: 55	M: 43, F: 9 Total: 52	M: 35, F: 2 Total: 37
No. of Land Owners	2(Male)	M: 2, F: 6 Total: 8	M: 2, F: 6 Total: 8	6 (Females)	11	5	M: 15, F: 1 Total: 16	15	23	4	Customary Land
Potential Area	10 ha	3 ha	16	15	10 ha	5 ha	4 ha	4 ha	7.8 ha	30 ha	25 ha
Area Developed as of Aug 1	0.48 ha	0.8 ha	0.8	0.7	4.7 ha	3.1 ha	2.2 ha	1.5 ha	5.4 ha	5.2 ha	2.0 ha
As of August 1 — Activities	· Weir construction on 23rd June 03 · Weir length 4.5m, Depth 0.8m, Temporary brush dam · Water bridge construction on 23rd & 27th June 03 · Water bridge length 12.5m · Canal length 190m · Area planted: NIL · Crops planted; NIL · Inputs procured: No inputs yet · Application of compost manure: Not applied yet when canalised	· Weir construction on 11th July 03 · 15 of Sand bags used for weir · Weir length 2.4m, Depth 1.2m · Canal length 190m · Area planted; NIL · Crops planted; Not yet · Inputs procured; No inputs yet · Manure application: not yet	· Weir construction on 23rd July 03 · Weir length 5m, Depth 0.8m, Double line temporary b/dam · Canal length 401.4m · Area planted; NIL · Crops planted; Not yet · Inputs procured; No inputs yet · Manure application: not yet	· Weir construction on 11th July 03 · Weir length 10m, Depth 1m, Double line temporary brush dam · Canal length 320m · Area planted; NIL · Crops planted; Not yet · Inputs procured; No procured yet · Manure application: not yet	· Weir construction on 17th & 24th June 03 · Weir length 5m, Depth 1.5m · Canal length 2,154m · Area planted: NIL · Crops planted; Maize (OPV, 70kg) to be planted · Inputs procured: by HIPC Funds · Manure application: Compost 63 pits, 54 farmers, 2.7ha	· Weir construction on 13th June 03 · Weir length 9m, Depth 1m · Canal length 1,252m · Area planted; 3.1 ha to be planted · Crops planted; Maize, Vegetables · Inputs procured: by EU/Public Works Program · Manure application: Compost 45 pits, 30 farmers, 2 ha	· Weir construction on 11th July 03 · Weir length 6m, Depth 1m · Canal length 450m · Area planted; not yet planted · Crops to be planted; Maize, Legumes & Vegetables · Inputs procurement: Not yet · Manure application: Not yet but making has started. · 39 Pits, 18 Farmers	· Weir construction on 18th July 03 · Weir length 14m, Depth 1.5m · Canal length 130m · Area planted: Not yet planted · Crops planted; Not yet planted · Inputs procured: Not yet procured · Manure application: 26 Heaps made, 0.5ha applied, 13 Farmers	· Weir construction on June 02 · Weir length 0.6m, Depth 0.9m · Canal length 3,133m · Area planted: 3.4ha · Crops planted; Cabbage, Onion, Maize · Inputs procurement: by Self supply · Manure application: 0.3ha	· Weir construction on 16th June 03 · Weir length 2.8m, Depth 1.0m · Canal length 680m · Area planted. NIL · Crops planted; Not yet planted · Inputs procurement: by HIPIC fund · Manure application: 5.2ha	· Weir construction on16th June 03 · Weir length 8m, Depth 1.5m · Canal length 554m · Area planted: NIL · Crops planted; Not yet planted · Inputs procurement: by Self supply · Manure application: Not yet started

Status of the Verification Project as of end of July, 2003 (No.3)

RDP		Nichisi	
EPA		Kalira	
Site		Kasangadzi	
No. of Members		M: 26, F: 12 Total: 38	
No. of Land Owners		13	
Potential Area		10 ha	
Area Developed as of Aug.1		3.5 ha	
As of August 1	Activities	· Weir construction on 13th June 03 · Weir length 2.5m, Depth 0.75m · Canal length 915m · Area planted: NIL · Crops planted; Not yet planted · Inputs procurement: by Self supply (seed) · Manure application: Not yet started	

MINUTES OF THE MEETING
ON
PROGRESS REPORT (3)
FOR
THE STUDY
ON
THE CAPACITY BUILDING AND DEVELOPMENT FOR SMALLHOLDER IRRIGATION SCHEMES
IN
THE REPUBLIC OF MALAWI

Lilongwe, Malawi
November 24, 2003

Mr. S.C.Y. MAWERU
Director of Irrigation Services
Department of Irrigation (DOI),
Ministry of Agriculture, Irrigation
and Food Securities

Mr. Kosei HASHIGUCHI
Leader of the Study Team,
Japan International Cooperation
Agency (JICA)

Witnessed by:

Mr. Kiyonori MATSUSHIMA
Project Formulation Adviser,
JICA Malawi Office

INTRODUCTION

The Study Team headed by Mr. K. HASHIGUCHI commenced the Phase 2 field survey on May 14, 2003 on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi (the Study) and a meeting to present the outputs of the first batch of the Phase 2 Study was held on November 21, 2003 at a conference hall of Lilongwe Hotel with relevant officers from the Ministry of Agriculture, Irrigation and Food Security. The list of participants for the meeting is attached hereto.

OPENING REMARKS

The Director of the Department of Irrigation made opening remarks. He reminded in his remarks that the objectives of the Progress Report (3) presentation meeting were 1) to present the status of the verification projects together with problems and measures taken, and lessons learned, 2) to discuss issues and concerns that have been arising through the verification projects and have to be forwarded to the successive stage, and 3) to present draft dissemination materials.

JICA deputy resident representative, Mr. T. Murase, to Malawi made a keynote address and emphasized the importance of agriculture in the economy of the Country and its direct impact. He further urged the promotion of irrigation culture in his address and that the success of the irrigation development will depend on the management of time. Finally he thanked the officers of the government of Malawi for assisting the Study Team to carry out the Study.

PRESENTATION ON PROGRESS REPORT (3)

The Study Team presented the contents of the Progress Report (3) such as the study schedule, present status of the verification projects, results of the baseline survey and workshops, issues and concerns, technical manuals etc. by using Power Points. Upon the presentation, the participants clarified some issues and made comments toward next batch of the Phase 2 Study. Following are the comments, questions and recommendations raised by the participants as well as the answers made by the Team and further comments if any will be delivered to the Study Team before the next batch of the Study commences.

1. The Director of the Department of Irrigation requested the Study Team to undertake a training program for the AEDOs throughout the country as a way of capacity building and to disseminate the smallholder irrigation development throughout the country. The Team Leader agreed with the importance and effectiveness of such training program for AEDOs for further extending the irrigation development. He however remarked that the Scope of Work on this Study agreed between the two countries did not include such extensive training program, but he promised to convey the request to JICA headquarters for their perusal.

2. A participant asked if the literature for the low cost technology such as quick making compost manure and botanical pesticides presented by the Study Team

would be prepared. The Team Leader responded that the Study Team prepared technical manuals which include how to make Bocashi, which is the quick making compost manure, botanical pesticides, etc. as an output of the Study.

3. A participant inquired about any measures when poles for constructing weir cannot be available due to deforestation in some regions. The Team Leader explained that the Study recommend to dismantle the weir when harvesting finishes and set aside the major materials such as poles for the next season, so that the farmers do not have to search the materials every year and can reduce the risk of deforestation.

4. A participant suggested if we could introduce more permanent structure for the irrigation system. The Team Leader responded that using concrete would be expensive for farmers. The Director of the Department of Irrigation added that the focus of the Study is to empower farmers and the Study expects that farmers should start with primitive technology and when they get benefits from it, they could invest by themselves in improving the structures and making them more permanent.

5. A participant inquired on what methodology was applied to come up with the result of the net water requirement of maize crop, since he was concerned with the fact that crops grow faster in high ET season. The Team Leader answered that the analysis was conducted with a method recommended by FAO, which is based on a simple assumption of crop coefficient, irrespective of temperature, in order just to grasp the tendency of the water requirement.

6. A participant asked to clarify how the distribution of households by income level was surveyed. A member of the Study Team answered that the data was collected by interviews to farmers and AEDO /AEDC checked the survey data. Also the member of the Team explained that the Team visited the villages, which the baseline survey was carried out, to confirm the validity of the data collected. Also the Study Team agreed with the concern of the participant, which is high probability of some error in data, but indicated that the tendency of the income levels of the farm households would have been more or less captured by the survey.

7. Another question on the baseline survey results was raised on why the yield of maize in 2002/03 summer in Dowa was so low. The Team explained that the possible reason would be hard farming condition in Loyi site, which was considered the poorest amongst the verification project sites. The Study Team told the house to further survey the reasons of low yield in Dowa with assistance of AEDOs and continue monitoring the yield of crops.

8. There was a comment raised by some participants that the Study Team should give at least a starter pack of inputs to help the poor farmers. Also a participant suggested establishing a revolving fund by using HIPC fund with the irrigation development. The Team Leader mentioned that farmers who are blessed with irrigation are still better off and if there was any fund, it should be used for those who even cannot access to irrigation. Therefore, he once again stressed the

principle of the study not giving any free physical inputs to the farmers who can access to the irrigation though this Study shall not prevent any government program inclusive of starter pack.

9. A participant asked about the promotion of cash crops. The Team Leader answered that the sites like Kadiwa and Tikolore which are located near national roads are already growing vegetables for trading. He further mentioned that though first priority has been given to food security, vegetable promotion should also be emphasized if there is marketing opportunity to boost the farmers' household economy.

10. A participant suggested to collect data on the profit of the irrigation project and therefore, the cost estimation of the project is needed. The Team Leader responded that the project cost in most of the site was nil except labors, but the cost including the labor value will be estimated in the course of the Study.

11. A participant asked the Study Team if the Study had taken into consideration some soil conservation because most of the verification project sites are on a sloppy terrain. The Team Leader answered that AEDOs have already known about the soil conservation technique and they have been already recommending farmers to apply the technique like contour ridges, stone drainage etc. He further mentioned that the main canal of the irrigation system would work as storm drain during rainy season whereby soil erosion would be trapped to some extent.

12. A participant asked if there would be any expansion of the projects in other ADDs. The Team Leader replied that given the limited assignment, there is a difficulty to extend this verification project to other ADDs within this study framework. The delegate of JICA Malawi office clarified that the on-going implementation of the projects are still on the study basis and the Governments of Malawi and Japan may discuss for any further action after acquiring the results of this Study.

13. There was a concern raised about how easily every year construction and maintenance of weir can be done and the necessity of establishing some standard for that. The Team Leader answered that because more than half of villagers and AEDOs participated in the construction of weirs in this project, they will be able to construct weirs by themselves.

14. A participant asked if the primary target of the project was only to deal with perennial stream since there are areas which have no perennial stream but high water tables where the irrigation by constructing dams can be developed. The Team Leader explained that the primary target was to divert perennial stream, but the comprehensive guideline prepared by the Study Team includes the method of dam construction. The Team Leader further explained that irrigation by impound dam was not tried as the verification project, because it takes time to construct impound dam.

15. There was also a concern raised on the work schedule of the Study, as there was no manning during the first quarter of year 2004. The Team Leader explained that the period is assumed to be still rainy season so that the irrigation mainly done in dry season may not be needed.

LIST OF ATTENDANTS

1.	Mr. S.C.Y. Maweru	Director of Irrigation, DOI
2.	Mr. Chris Khonje	Programme Manager, Mzuzu ADD
3.	Mrs. Erica Maganga	Programme Manager, Blantyre ADD
4.	Mr. M.Z Bodzalekani	Programme Manager, Shirevalley ADD
5.	Mr. E. P Ching'amba	Programme Manager, Karonga ADD
6.	Ms. Getrude Kalinde	Deputy Programme Manager, Machinga ADD
7.	Mr. C.R Nkuna	Principal Irrigation Officer, Mzuzu ADD
8.	Mr. M.T Chigowo	Principal Crops Officer, Kasungu ADD
9.	Mr. Tendai Tembo	District Irrigation Officer, Blantyre ADD
10.	Mr. Edward Fulezala	Irrigation Officer, Kasungu ADD
11.	Mr. M.N Kasawala	Irrigation Officer, Mzuzu ADD
12.	Mr. B.L Nthakomwa	Irrigation Officer, Mzuzu ADD
13.	Mr. B.A.A Sumani	Irrigation Officer, Shirevalley ADD
14.	Mr. C.B Mlowoka	Irrigation Officer, Machinga ADD
15.	Mr. J.W Kalingu	Irrigation Officer, Machinga ADD
16.	Mr. C.J Chamasowa	Irrigation Officer, Salima ADD
17.	Mr. Julia Mvula	Irrigation Officer, Blantyre ADD
18.	Mr. E.A Kayembe	Irrigation Officer, Karonga ADD
19.	Mr. O.M Mkandawire	Irrigation Officer, Karonga ADD
20.	Mr. J. Bonongwe	Irrigation Officer, Dowa RDP
21.	Mr. Lucas Banda	Irrigation Officer, Ntchisi RDP
22.	Mr. A.B.B.C. Cheyo	Snr. Ass. Irrigation Officer, Dedza Hills RDP
23.	Mr. M.R. Musukwa	Snr. Ass. Irrigation Officer Karonga ADD
24.	Mr. J. Ng'omgeyakuyera	Ass. Irrigation Officer, Shirevalley ADD
25.	Mr. F.F Mzalule	Ass. Irrigation Officer, Ntchisi RDP
26.	Mr. Humphrey Nkhulanze	Ass. Irrigation Officer, Machinga ADD
27.	Ms. M. Kadzitaye	DADO, Lilongwe West RDP
28.	Mr. W.G. Ndhlovu	DADO, Dedza Hills RDP
29.	Mr. E Katende	ADADO, Lilongwe East RDP
30.	Mr. A.K.H Kachimera	ADADO, Ntchisi RDP
31.	Mr. D.W.M Chitonya	DCO, Salima ADD
32.	Mr. S.C.D. Wella	AEDC, Kalira EPA
33.	Mr. F.E Kadiwa	Project Manager, Small Farms Irrig. Nkhatabay
34.	Ms. Tawonga Mbale	Principal Env. Officer, Dpt. Of Env. Affairs
35.	Mr. E.D Chidzungu	Project Manager, Small Farms Irrig. Nkopola

JICA MALAWI OFFICE

1.	Mr. Tatsuya Murase	Deputy Resident Representative
2.	Mr. K. Matsushima	Project Formulation Advisor
3.	Mr. V.A.L Mkandawire	Aid Coordinator
4.	Mr. T. Matenje	Public Relations Officer

JICA STUDY TEAM

1.	Mr. Kosei Hashiguchi	Team Leader
2.	Mr. Hideyo Shimazu	Rural Society/ Participatory Development
3.	Mr. Tatsuya Ieizumi	Designing/ Cost Estimation
4.	Mr. Akihiko Hata	Project Monitoring
5.	Mr. M.M. Ngwira	Counterpart (DOI)
6.	Mr. J. O. Chikhungu	Counterpart (DOI)

MINUTES OF THE MEETING
ON
PROGRESS REPORT (4)
FOR
THE STUDY
ON
THE CAPACITY BUILDING AND DEVELOPMENT FOR SMALLHOLDER IRRIGATION SCHEMES
IN
THE REPUBLIC OF MALAWI

Lilongwe, Malawi
July 27, 2004

Mr. S. C. Y. MAWERU
Director of Irrigation Services
Department of Irrigation (DOI),
Ministry of Agriculture, Irrigation
and Food Security

Mr. Kosei HASHIGUCHI
Leader of the Study Team,
Japan International Cooperation
Agency (JICA)

INTRODUCTION

The Study Team headed by Mr. K. HASHIGUCHI commenced the Phase 2 field survey on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi (the Study) on May 14, 2003, and a program to present the mid-term progress of the second batch of the Phase 2 Study was held on July 26 and 27, 2004 in Lilongwe.

On the first day, participants, who were relevant officers from the Ministry of Agriculture, Irrigation and Food Security and the Study Team visited four sites of the first generation verification project; namely, Ngoni and Mankhamba in Lilongwe East, and Tilime and Tikolore in Dowa. The participants were impressed in many aspects with the achievement of the farmers in the respective sites, and gave their evaluation according to a prescribed questionnaire (see the summarized results on the Appendix). On the second day, a session of presentation and discussion on the Progress Report (4) was held at a conference hall of Lilongwe Hotel. The lists of the participants for the field visit and presentation of the report are attached hereto.

OPENING REMARKS

The Deputy Director of the Department of Irrigation made opening remarks. He welcomed all the participants for the presentation session. He mentioned that it is a time to see how far the verification projects have gone. He also suggested the participants to address issues concerned with the projects referring to the site visit carried out on the first day of the program. He expressed his desire that the discussion on this day was going to enrich the Study and will contribute to improving the livelihood of farmers. Finally he expressed his sincere appreciation for JICA on its activities in Malawi and hoped that JICA representative at the meeting will convey their regard to Japan.

PRESENTATION ON PROGRESS REPORT (4)

The Study Team presented the contents of the Progress Report (4) such as the study schedule, present status of the first verification projects, impacts from smallholder irrigation, dissemination mechanism and next step etc. by using Power point. Upon the presentation, the participants clarified some issues and made comments toward the rest of the second batch of the Phase 2 Study. Following are the comments, questions and recommendations raised by the participants and further comments if any will be delivered to the Study Team in the course of the second batch of the Study:

1. A participant inquired for a description on the presentation material indicating that Loyi site has been stranded by drinking. The team leader explained that there has been a problem of drinking in Loyi site and it has been observed that some men are drinking even from morning time. The team leader added that those who do not like drinking separated from the original club and made their own irrigation system on upstream reaches of the original site and AEDO is working with VH to at least

start cropping with ones who are eager to do irrigation.

2. A participant suggested that more holistic approach should be employed as to include not only irrigation but also various aspects like crop production, soil conservation etc. Reporting that the participant saw that the crop stand was not good during the field visit due to limited input from the crops specialists. The team leader agreed that the Study should include crop officers, land resource officers, extension officers etc. as far as budget allowed and told that the Team will try to include these officers for the refresher TOT of the follow up training, which will be implemented the coming September within the budget. Another participant remarked on this issue that the extension program should be a package which includes crop production, land resource, irrigation etc. and also commented that the issue should not be discussed in terms of budget but on what the government can do in order to contribute to the improvement of the lives of farmers.

3. Having presented that farmers in Dedza Hills requested AEDO to assist with land dispute, there was a question if AEDO can solve the land issue. The team leader explained that though AEDO cannot handle the issue alone, involving AEDO will make it easier to contact the TA who has capacity to solve the issue.

4. A participant suggested, concerning self-reliance of farmers, that making use of communal land would increase self-reliance of farmers. He explained that the communal land would help produce seeds or cash to purchase other inputs and if farmers can harvest in March in the communal land, they will be able to source their inputs for the following crop.

5. A participant suggested that there should be an emphasis on farm business management and farmers should be trained for it. Another participant added ideas to enhance an integrated farming activity, since irrigation is one of elements for agriculture, e.g. making improved stove beside the farmland, so that farmers can prepare food while working on the farm, and marketing activities to get further development. The team leader told the meeting that the Study is mainly focusing on irrigation but also see agriculture aspects and catchment area conservation and explained that during the follow up training, the Team will also focus on compost manure, Bocashi, and natural botanical pesticide. As for the marketing aspect, the team leader explained that AEDO is promoting marketing activities in the sites near M1 road and the agronomist who will join the Study Team will support their activities. The team leader, however, remarked that the baseline survey by the Study shows that 70% of farmers are not self-sufficient in food and thus, the Study would like to focus mainly on food security at least at the initial stage.

6. A participant suggested that we should study how farmers are going to share water between upstream and downstream. The team leader explained that the Team recommends AEDO to start irrigation development as upstream as possible so that

conflict over water would be less. He also explained that if the conflict arises, we recommend applying rotation or we advise AEDO to call farmers to sit down together with VH for mutual agreement.

7. A participant indicated that field tour should be another dissemination material. The team leader told the meeting that study tours have been carried out for farmer to farmer extension and explained about cluster approach by which AEDO can take farmers to nearby irrigation site even on foot.

8. A participant reported his observation on field visit that irrigation work has been excellently worked out but not for crop production yet. The participant, therefore, suggested that irrigation development and crop production should go together. The team leader requested DADO on this issue to bring crop officers to the field.

9. A participant inquired for the possibility of introducing permanent structure such as concrete lined canal, concrete weir and so on to reduce water loss in a long-term plan. Also the inquiry was incorporated with a question of farmers' capacity to manage such permanent structure. The team leader told that the Study is not promoting permanent structure at the first stage, but if farmers can afford, they can build permanent structures.

10. There was a question that the Department of Irrigation should explain why it is continuing procuring treadle pumps while there is plenty of pump which are not being utilized as most of them have not yet reached the farmers. The Department should instead be promoting gravity irrigation. The Deputy Director of Irrigation explained that the money which had been requested from the ADDs was for the payment of motorized pumps. He further explained that presently the Department is emphasizing on the utilization of the available treadle pumps.

11. Several participants raised issue of soil salinity problem referring to their observations during the field visit. They urged that measures such as drainage improvement should be taken into account. The team leader told that AEDO knows how to deal with salt since they were already trained, as when they see it on the farm, they advise farmers to irrigate more frequently to wash away the salt, apply a little more water than actually required as leaching amount or otherwise dig drainage if the salt accumulation still continues.

12. A participant suggested that there should be liaison between the Study Team and the Ministry of Agriculture, Irrigation and Food Security on administering AEDO follow up training. The team leader responded that the Team will to invite extension officers of the Ministry to the refresher TOT to be held in September.

13. A participant told the meeting that there is need to define what is self-reliance and the Study would need to help how much backstopping must come from AEDO to the farmers for to be the self-reliant. In this regard he further commented that the package of smallholder irrigation should be within the appropriate level where

farmers can handle themselves. The team leader replied that the comments will be incorporated in the package which will consist of a comprehensive guideline, technical manual, leaflets, posters and picture stories.

14. There was an intensive discussion on soil conservation. Some participants cautioned that soil erosion would take place and hinder the sustainability of irrigated agriculture unless soil conservation measures are employed. Ideas of putting energy dissipaters on the steep channel and using thick plastic papers for feeder canal to reduce water speed came up in the discussion and the plastic papers were requested from the Study Team to be granted for the first generation verification project sites. The team leader told the meeting that they would not bring foreign materials to the villages as a discipline of the Study, but he reminded that farmers are using vetiver grass and stone lining feeder canal for soil conservation. The Deputy Director of the DOI told the meeting that soil conservation was clearly a bottom line of the smallholder irrigation and this issue should be taken into account to the future project.

15. A participant told the meeting that farmer organization should be more emphasized to make the irrigation development sustainable. The team leader explained how this Study institutionalizes farmer organization: farmer organization should always go with physical implementation. The procedure of commencing project includes kick off workshop, physical work, and electing potential leaders. Through the physical implementation, farmers will know who will be the actual leader and they will learn how to cooperate each other, thereby strengthening their organization.

16. A participant raised an issue of gender aspect that if the Study has conducted any deliberate effort to enhance women participation and also it is indicated that it needs documenting not only the number of women participating but also the roles which they play. The team leader said that the Study looks into poorer people than just women and pursuing equity. He also introduced some examples in the verification sites: in Loyi site women made a sub club under the main club and got some plots to grow Irish potato. Loyi chairperson is also lady. In Dedza Hills women are very active, for some clubs women occupy 70% of the membership.

17. A participant reported that the compost manure was not well taken care of by farmers as no watering was done. The team leader told that AEDO is advising farmers to make compost beside canal, so that farmers can easily get water for compost.

18. A participant asked about what is Bocashi manure. The team leader explained that it is a kind of quick maturing compost which needs only two or three weeks to mature, because it incorporates virgin soil which is very abundant with microorganism.

19. A participant commented that total river impoundment seems taking place in Tilime site, which he thinks illegal. The team leader told that they always advise

farmers not to impound all of the water and leave some to downstream reaches and the temporary weir as its nature cannot totally block the stream in fact.

20. A participant commented that the weir in Tilime is not durable with flood and it needs some reinforcement. The team leader said that the farmers will be advised accordingly.

21. A participant inquired if there is any interface between the Team and Program Manager of ADDs. It was confirmed among concerned personnel that there is good communication between the Team and the ADDs implementing the verification projects, namely Lilongwe and Kasungu.

22. There was a suggestion that a summary of crosscutting issues should be included in the report such as gender, HIV, environmental conservation, etc. The team leader agreed with it and also requested the house to discuss the crosscutting issues on top of what this Study is doing.

23. Apart from the above, following general comments have been raised:

    - There should be a lot of interaction between stakeholders to implement the smallholder irrigation development and therefore the roles of DOI, ADD, RDP and EPA to it should be clarified.
    - Communal seed multiplication station should be taken into account for increasing sustainability of irrigation.
    - Crop intensification should be emphasized in order to help farmers who have got small land.
    - Regarding the syllabus of training of AEDO, the training materials should include book keeping, marketing, group dynamics, amongst other relevant modules.

The Deputy Director of the DOI summarized the discussion that all what has not been advanced in the field should be taken into account for future action. Also there is need not to isolate specialist and all crosscutting issues like environment conservation and soil conservation etc. Implementation should be dealt with in holistic approach. It is also important that training should also be integrated in various aspects of irrigation development. He however noted the Study aims to start with very simple structure and improving the status of farmers little by little. This approach contrasts with a large scale project going through feasibility study, designing and tendering, which would take 5 years before farmers get benefit and they will have lost interest by the time the project starts.

The team leader said the Study continues until December 2004 and the Study Team is always ready to receive precious comments from all stakeholders.

Mr. Matsushima on behalf of JICA representative addressed his appreciation for the participants giving precious comments to the Study and hoped that this Study will bring

fruits not only to the concerned 2 ADDs but also to the whole country.

The Deputy Director of the DOI concluded the session by thanking to Japanese government as well as participants for successful deliberation.

LIST OF ATTENDANTS

For the first day (Field visit on July 26)

1. Mr. S.C.M Maweru	Director of Irrigation Service, DOIr
2. Mr. Abel Khonje	Deputy Director of Irrigation Service, DOI
3. Mr. C.S. Khonje	Programme Manager, Mzuzu ADD
4. Mr. A.J. Kaunda	Programme Manager, Salima ADD
5. Mr. B.J. Sizilande	Programme Manager, Kasungu ADD
6. Mr. E. P Ching'amba	Programme Manager, Karonga ADD
7. Mr. J.J. Mussa	Programme Manager, Machinga ADD
8. Mr. G.J.C. Kauta	Programme Manager, HFCDP, Lilongwe
9. Mrs. Priska J. Munthali	Acting Deputy Programme Manager, Lilongwe ADD
10. Mr. Peter Chipeta	Chief Irrigation Officer, Salima ADD
11. Mr. C. Chamasowa	Senior Irrigation Officer, Salima ADD
12. Mr. Msowoya	Principal Irrigation Manager, Lilongwe ADD
13. Mr. C.H. Kayira	Irrigation Officer, Karonga ADD
14. Mr. F.K.S Simfukwe	Principal Irrigation Officer, Karonga ADD
15. Mr. Mpezeni	Principal Irrigation Officer, Kasungu ADD
16. Mr. D.A. Juma	Irrigation Officer, Machinga ADD
17. Miss. M.M.E. Mhango	Principal Irrigation Officer, Machinga ADD
18. Mr. Kopa J.T.J	Principal Irrigation Officer, Mzuzu ADD
19. Mr. A.S. Tembo	Chief Irrigation Officer, Mzuzu ADD
20. Mr. Ephraim Kayembe	Principal Irrigation Officer, Blantyre ADD
21. Mr. T.N. Tembo	Senior Irrigation Officer, Blantyre ADD
22. Mr. F.E. Kadwa	Project Manager, SFIP Nkhata-Bay
23. Mr. E.D. Chidzungu	Project Manager, SFIP Mangochi
24. Mr. S.M. Mwanzui	DADO, Dedza RDP
25. Mr. Paul W. Kabuludzi	DADO, Dowa RDP
26. Mrs. M.T.R Malumelo	DADO(Crop Officer), Lilongwe RDP

JICA STUDY TEAM

1. Mr. Kosei Hashiguchi	Team Leader
2. Mr. Akihiko Hata	Project Monitoring
3. Mr. M.M. Ngwira	Counterpart (DOI)
4. Miss. Diana Kaunda	Secretary

For the second day (Presentation on July 27)

1.	Mr. Abel Khonje	Deputy Director of Irrigation Service, DOI
2.	Mr. C.S. Khonje	Programme Manager, Mzuzu ADD
3.	Mr. A.J. Kaunda	Programme Manager, Salima ADD
4.	Mr. B.J. Sizilande	Programme Manager, Kasungu ADD
5.	Mr. E. P Ching'amba	Programme Manager, Karonga ADD
6.	Mr. J.J. Mussa	Programme Manager, Machinga ADD
7.	Mr. G.J.C. Kauta	Programme Manager, HFCDP, Lilongwe
8.	Mrs. Priska J. Munthali	Acting Deputy Programme Manager, Lilongwe ADD
9.	Mr. Peter Chipeta	Chief Irrigation Officer, Salima ADD
10.	Mr. C. Chamasowa	Senior Irrigation Officer, Salima ADD
11.	Mr. Msowoya	Principal Irrigation Manager, Lilongwe ADD
12.	Mr. C.H. Kayira	Irrigation Officer, Karonga ADD
13.	Mr. F.K.S Simfukwe	Principal Irrigation Officer, Karonga ADD
14.	Mr. Mpezeni	Principal Irrigation Officer, Kasungu ADD
15.	Mr. D.A. Juma	Irrigation Officer, Machinga ADD
16.	Mr. M.M.E. Mhango	Principal Irrigation Officer, Machinga ADD
17.	Miss. Kopa J.T.J	Principal Irrigation Officer, Mzuzu ADD
18.	Mr. A.S. Tembo	Chief Irrigation Officer, Mzuzu ADD
19.	Mr. Ephraim Kayembe	Principal Irrigation Officer, Blantyre ADD
20.	Mr. T.N. Tembo	Senior Irrigation Officer, Blantyre ADD
21.	Mr. F.E. Kadwa	Project Manager, SFIP Nkhata-Bay
22.	Mr. E.D. Chidzungu	Project Manager, SFIP Mangochi
23.	Mr. S.M. Mwanzui	DADO, Dedza RDP
24.	Mr. Paul W. Kabuludzi	DADO, Dowa RDP
25.	Mr. Alex Chirwa	DADO, Ntchisi RDP
26.	Mrs. M.T.R Malumelo	DADO(Crop Officer), Lilongwe RDP
27.	Mr. K.A. Wiyo	Agriculture Specialist, USAID Lilongwe
28.	Mr. A.G. Nkhoma	Ass. FAOR, Lilongwe FAO

JICA MALAWI OFFICE

1.	Mr. K. Matsushima	Project Formulation Advisor
2.	Mr. K. Fujiwara	JICA
3.	Mr. V.A.L Mkandawire	AIDs Coordinator

JICA STUDY TEAM

1.	Mr. Kosei Hashiguchi	Team Leader
2.	Mr. Akihiko Hata	Project Monitoring
3.	Mr. Tatsuya Ieizumi	Irrigation/ Designing/ Cost Estimation
4.	Mr. M.M. Ngwira	Counterpart (DOI)
5.	Miss. Diana Kaunda	Secretary

Appendix: Evaluation of the Field Visit by the Participants

The participants were requested to fill a questionnaire after they finished the field visit. Following are the questions asked and the questions 1.2, 2 and 3 included self-rating to the questions as well as making comments.

Questions:

1.1 Please present what you expect (or have expected) from the field visit?

1.2 Please present how much do you think the field visit has met with what you have expected? (Rating 1 to 5)

2. Please present your overall degree of the satisfaction relative to the **farmers' achievement**. (Rating 1 to 5)

3. Please present your overall degree of satisfaction relative to the **logistics (transportation, lunch, etc.)**. (Rating 1 to 5)

4. Please present comments if any for further improvement **in future**?

Hereunder summarizes the results of the evaluation by question.

1.1 What you expect from the field visit

No. answered	Expectation
5	Well lined canal
5	Good planted and well managed crops
4	Well organised farmers
2	Water diversion structures
1	To see the implementation of the JICA capacity building Programme for smallholder irrigation farmers.
1	To see the reported work in real practice, to match what is reported and what is on the ground and reach analytical recommendation of ensuring practical implementation
1	Farmers achievement using local materials
1	Farmers participation
1	Farmers surveying using water and line level as a guide
1	See the progress made in the verification sites and assess the level of impact
1	To see plot layout and crops
1	To see well crops being irrigated
1	To learn how small scale irrigation scheme with low cost can be developed
1	To see well developed small scale irrigation scheme
1	To see irrigation system that were developed and how the farmers have utilised irrigation
1	Permanent weirs with proper water management practices
1	To see weir types
1	To see functional and well adopted canalisation irrigation schemes
1	See progress being made by farmers and steps project is making in capacity building for staff and farmers.
1	Learn from other sites on how community mobilization capacity building and how technologies are being transferred and adopted and implemented
1	To see status of project activity implementation.
1	Discuss with farmers how to improve their well-being through irrigation
1	To see a conventional establishment of small-scale irrigation scheme with very outstanding infrastructure hydraulic structures.
1	To appreciate what the study team is doing in promoting small scale irrigation
1	Self help initiative
1	Use local resource
1	Knowledgeable and conversant farmers who can articulate

1.2 How much has the field visit met with what you have expected?

Rating	Comments
5	Farmers have taken up structure most very well and self-reliant coming in.
5	The only improvement to make is to include as many farmers as possible in the project
4	Farmers should be empowered to give much of the explanation activities
4	Farmers are able to produce using low cost alternative technologies.
4	Some improvements need to be made on agronomic aspects as well as water management / organisation.
4	Farmers organisation varied a lot but in general there is no empowerment to the clubs, one person dominated throughout the discussion
4	Fully satisfied but only disappointed with poor crop husbandry
4	There should be coordinating between irrigation, extension and crops. Good work is being done but it should be a package.
4	No comment
4	Development of smallholder irrigation which was supposed to be done was actually done.
4	Where necessary permanent could assist so that farmers do not come every season to build a new structure.
4	The farmers need to learn (do) more to improve the plot layout and water management. The extension services especially on the crop management is missing in most schemes.
4	Tikolore and Tilime excellent but first two had poor crop husbandry support in commercialising farming.
4	Need for improvement on capacity building technology transfer and adoption. Establishment of revolving fund required in all sites for sustainability of the project.
3	The software part of the development process has been left out
3	I have an appreciation that JICA is contributing towards irrigation development in terms of bringing water close to farmers field but there is less collaboration with other disciplines as evidenced by poor crop stand in fields
3	Its good only that farmers should be assisted with inputs to improve crop stand.
3	Plot layout were not up to the standard
3	Technical farmers have got the technology transfer, you see it on the ground, but need to institutional use into the irrigation culture that has been accepted
3	Crop development was rather poor. There is need to do farmer organisation and cropping practices.
3	No comment
3	Crops condition was very pathetic more especially considering that they did not apply fertiliser. JICA to provide fertiliser in future.
3	Anchor headworks with civil works. Channels to take trapezoidal shapes
2	The channels were okay and water was flowing but I was not impressed with the field or crops.
1	In all sites, there is no good production plan i.e. farmers can take farming as a business.

2. Overall degree of the satisfaction relative to farmers' achievement

Rating	Comments
5	Farmers need to be organised into a cohesive group. They should go through training on group dynamic where leadership will be covered.
5	Need to impart vision on the road to progress e.g. moving towards market-oriented production
4	For future projects include inputs as start ups for farmers.
4	Putting myself in the shoes of the farmers, it is really worthwhile achievement but should be no cause for complacency because a little still remain desired.
4	Better achievement in Tilime and Tikolore but for Mankhamba and Ngoni a lot more needs to be done for sustainability of the programme.
4	Farmers are united but have a spirit of dependency syndrome on requests which could be met by themselves
4	We can have an irrigation culture in our farmers in the year, good progress is being made.
4	On irrigation and water management farmers are doing good job.
4	Improve on crop management practices especially for Ngoni and Mankhamba site.
4	Some improvements particularly in organisation.
4	Farmers seemed to know or understand the concept behind the project. Just to increase the levels of sensitisation. In order for them to take farming as any other business in order to show same development.
4	The farmers seem to be dedicated but we are not fully supporting them.
4	No comment
4	The farmers secured to know or understand the concept behind the present. Just to increase the level of sensitisation in order for them to take farming as any other business in order to show same development.
4	Farmers are united but have spirit of dependency syndrome on requests, which should partly be met by them.
4	Better achievement in Tilime and Tikolole, but for Mankhamba and Ngoni a lot needs to be done for sustainability of the programme.
4	For future project include inputs as start-ups for farmers.
3	There is serious commitment on part of farmers to develop the sites. Assist them with farm inputs.
3	The schemes should not be fully utilised.
3	Though farmers are committed to irrigation there has not been much achievement in terms of yield and improved standard of living presumably due to lack of resources.
3	In most sites visited, the crops agronomy practices are not satisfactory.
3	In terms of pounding water resources, commendable work has been done but we need more than this a holistic approach to food security issues, farmers need training in FBM, group dynamic.
3	Farmers need to learn management and other institution areas to fully get established e.g. book keeping, horticulture etc.
3	There is serious commitment on part of farmers to develop the sites. Assist them with farm inputs.
2	In terms of canal they have achieved something but the crop stand is not impressing.
2	Farmers have poor crop stand and in future design of similar projects farmers should be provided with start up inputs in form of revolving fund.
1	Farmers are still depend on external assistance, farmers are disorganised because of the lack of collaboration among different department or section.

3. Overall degree of the satisfaction relative to the logistics

Rating	No. answered	Comments
5	14	Excellent
5	1	The route used was one way and easy to follow
5	1	Drivers need to be disciplined on logistics to follow order
4	5	Reduce number of the vehicle.
4	1	Need to have lunch at a place where there are toilets
4	1	No comment
4	1	Logistic were okay except for one area needing improvement. On transportation, there was no justification for using all those vehicles when the six cruisers would do.
3	1	No comment
2	1	There should be no mini – buses
1	1	Participants should use their own vehicle and refund fuel

4. Comments for further improvement

No. answered	Comments
4	Involvement of other departments either at director level or divisional heads so that holistic approach is built in from the start.
2	Serving drinks in presence of the farmers should discourage where farmers have not been considered for the same. Otherwise, this is not good extension practice.
1	Plan the field visit when the schemes are in full production to appreciate their potential production.
1	Travelling in town should be improved (CONVOY)
1	Use all RDP staff on agronomic practices improvement management
1	Develop sites from each ADD at least one site per EPA.
1	Integrated planning to insure that all aspects of the project are moving together.
1	There was farmer disorganisation at Ngoni and Mankhamba site especially when it came to taking visitors around and explaining to them about what activities are taking place – farmers organisation and training would assist.
1	Help the farmers to grow crops well.
1	Advise farmers on proper plot layout in hilly areas
1	Arrange for improved seed and low cost inputs
1	Help farmers to mobilized saving and operate revolving funds
1	More literature to be included when going to the fields
1	Frequently visitation by the extension department
1	On site selection for visit please consult with PMs and DADOs for timely and other relevant sites so that comparison can best be done.
1	After excavation of canal, farmers should have start up package so that irrigation should be mean full to them.
1	Project package should include start up funds for inputs for the farmers to benefit otherwise it might be related as a failure of farmers do not harvest anything.
1	Field trip planning and how it should be conducted to be done hand in hand with hosting ADDs' for easy handling area of roles and responsibilities.
1	Involve other departments for better utilization of recourses land, water, crops choice and system of planting etc e.g. (land resources, crop extension, water).
1	Encourage farmers to invest to remove dependency syndrome.
1	Do more on cropping and farmers organisation so that they can open account book.
1	Need for intensive manure and fertiliser application to have the entire maize crop uniform and exploit full variety potential.
1	I hope marketing will be dependable and non-exploitative to enrich farmers.

MINUTES OF THE MEETING
ON
PROGRESS REPORT (5)
FOR
THE STUDY
ON
THE CAPACITY BUILDING AND DEVELOPMENT FOR SMALLHOLDER IRRIGATION SCHEMES
IN
THE REPUBLIC OF MALAWI

Mponela, Malawi
December 10, 2004

Mr. S. C. Y. MAWERU
Director of Irrigation Services
Department of Irrigation (DOI),
Ministry of Agriculture

Mr. Kosei HASHIGUCHI
Leader of the Study Team,
Japan International Cooperation
Agency (JICA)

INTRODUCTION

The Study Team headed by Mr. K. HASHIGUCHI commenced the Phase 2 field survey on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi (the Study) on May 14, 2003, and a program to present the end-term of the Phase 2 Study was held on December 9 and 10, 2004 in Mponela, Dowa district.

Participants were the irrigation officers of Lilongwe, Dedza Hills, Dowa and Ntchisi RDPs, and AEDO / AEDCs from five EPA, namely Mpenu in Lilongwe RDP, Bembeke and Kanyama in Dedza Hills RDP, Mvera in Dowa RDP and Kalira in Ntchisi RDP. On the first day, the participants visited two smallholder irrigation sites in Dowa RDP, which were developed after the AEDO training on smallholder irrigation development undertaken by this Phase 2 Study.

On the second day, an evaluation workshop of the first-generation verification projects, which were commenced in 2003, was held at Mbolembole hotel in Dowa district. The workshop included status reporting of the sites by respective AEDOs, discussion on common issues such as land renting, equity amongst villagers, and leadership, and rating of the verification projects by the participant government officers.

Also the Study Team presented during the workshop the contents of the Progress Report (5), which consists of the status of the first-generation verification projects, AEDO trainings carried out in this 2004 dry season, and evaluation and conclusion of the verification projects. The list of the participants for the program is attached hereto.

OPENING REMARKS

The guest of honour, Mr. C. K. Jana, the Senior Irrigation Officer of the Department of Irrigation made opening remarks. He said that he was pleased to be here to officially open the workshop. He highlighted on the activities taken during this period of the Study. He welcomed the group to the workshop where they were going to share experiences in their respective areas, problems and solutions.

He also said that Extension Officers as well as Irrigation Officers are to assist farmers to take irrigation seriously to alleviate hunger, which is a problem in the rural areas and hoped that the farmers in the respective areas are to take irrigation as a culture. Lastly he stressed that AEDCs and AEDOs are the best tools in implementing continuously growing dry season cropping for farmers to have enough food and to gain income to assist their families.

WORKSHOP

1) Presentation of Status of the First-generation Verification Projects

AEDOs and AEDCs worked on summarizing the current status of the first-generation verification projects in their station. Through the work, the participants shared the status and experiences of each site and common issues were identified. Also the

summary of the status indicated that most of the farmers engaged in the smallholder irrigation development increased their food security status and showed very positive attitudes towards the future. The summary of the status is attached hereunder as Attachment-1.

2) Discussion on common issues

As common issues arising in many sites would be challenges for smallholder irrigation development, the participants intensively discussed those issues, which are relative to land distribution, equity amongst villagers and leadership. The participants elaborated the actual problems happening on the ground, e.g. land issues are caused by jealousy, non-clearance of land after harvest, rate of rent, and soil erosion. The participants also discussed to figure out the solution. The result of the discussion is summarized in Attachment-2.

3) Rating of the Verification Project

In conclusion, the participants evaluated the two years of implementation of the verification projects. The participants identified the indicators to evaluate the project and rated the degree on each indicator by EPA level. The degree was taken as 5 for much better than before irrigation, 4 for better, 3 for same as before irrigation, 2 for worse, and 1 for much worse. Average rating for all the EPAs was 4.00, better than before irrigation was introduced (see the results in Attachment-3). There is only one indicator which was evaluated worse than before irrigation was introduced; that is equity amongst the villagers. This is very much interrelated with land issue. The mitigation measures were discussed and the recommendations are: study tours including land owners to well-organized sites, sensitization in such way that only one man cannot develop the whole village, for love is required as human beings and no need to be afraid of thefts, give landowners larger part and let the rest cultivated by others, etc. as summarized in the aforementioned Attachment-2.

PRESENTATION ON PROGRESS REPORT (5)

The Study Team presented the contents of the Progress Report (5) such as the study schedule, outputs, outcome and impacts from smallholder irrigation, and next step, etc. by using Power Point. Upon the presentation, the participants clarified some issues and made comments toward the draft final report preparation. Following are the comments, questions and recommendations raised by the participants:

1. A participant questioned if the interviews with farmers covered all of the first-generation verification project sites. The Study Team answered that only farmers in selected sites were interviewed due to time constraints. But the Study Team added that the interviews covered both members and non-members, so that the impacts of the smallholder irrigation must have been clearly grasped.

2. A participant inquired if gravity irrigation makes difference from treadle pump irrigation. The Study Team explained that gravity irrigation does not eliminate

treadle pump irrigation and it is observed in the field like Ngoni that farmers are rather combining gravity irrigation and treadle pump according to the topographical condition of the farms.

3. A participant questioned if the unit yield of the dry season maize measured by the Study Team was compared to the national statistics, since the unit yield of maize estimated by the Study Team is much higher than the national average (more than 4t/ha of the study result while the national average is around 2t/ha). The Study Team answered that the national statistics does not show the data of dry season crop but rainy season crop only and the average unit yield of the national statistics would cover the farm lands at which the crop resulted in nil harvest, leading the average low. The Study Team further explained that the unit yield of dry season maize was estimated by sampling survey and it indicates that if the maize is grown well with adequate inputs and water, the yield can be as high as 4t/ha or more. The Study Team added that the better sunshine during dry season would also contributed to the high yield of maize.

4. With regard to dissemination mechanism the Study Team presented, a participant suggested that study tours for dissemination of smallholder irrigation development should include the government officers as well. The study Team explained that in addition to the farmers and local leaders, the government officers have also been considered in the proposed plan for the dissemination of smallholder irrigation development.

5. A participant inquired about what are the recommendations after the study terminates. The Study Team explained that the Government of Malawi has already requested to the Government of Japan to extend the study into the genuine implementation of the project throughout the Country and at present preparatory work for the project implementation is on going as Mr. H. OKADA has arrived for the preparatory work. The Study Team also indicated that the implementation requires discussion and agreement between the two governments once again on the Scope of Work.

LIST OF ATTENDANTS: For the second day (Presentation on July 27)

MALAWIAN Side

1.	Mr. C. K. Jana	Senior Irrigation Officer, DOI
2.	Ms. J. T. K. Mlethima	Irrigation Officer, Lilongwe RDP
3.	Mr. S. M. Mwanzui	Irrigation Officer, Dedza RDP
4.	Mr. J. Bonongwe	Irrigation Officer, Dowa RDP
5.	Mr. Lucas Banda	Irrigation Officer, Ntchisi RDP
6.	Mr. G. M. Chisunka	AEDC, Mpenu EPA, Lilongwe RDP
7.	Mr. B. H. Maliasi	AEDC, Kanyama EPA, Dedza RDP
8.	Mr. W. A. Mbughi	AEDC, Bembeke EPA, Dedza RDP
9.	Mr. F. S. Mbulukwa	AEDC, Mvera EPA, Dowa RDP
10.	Mr. S. S. D. Wella	AEDC, Kalira EPA, Ntchisi RDP
11.	Mr. E. S. Kilembe	Assistant AEDC, Mpenu EPA, Lilongwe RDP
12.	Mr. G. M. Jekapu	Assistant AEDC, Kanyama EPA, Dedza RDP
13.	Mr. M. L. Mwachande	Assistant AEDC, Bembeke EPA, Dedza RDP
14.	Mr. S. B. Mkandawibe	AEDO, Mpenu EPA, Lilongwe RDP
15.	Mr. J. M. Malonga	AEDO, Mpenu EPA, Lilongwe RDP
16.	Mr. M. P. Njanje	AEDO, Mpenu EPA, Lilongwe RDP
17.	Mr. M. A. Mabukra	AEDO, Mpenu EPA, Lilongwe RDP
18.	Mr. C. H. Harawa	AEDO, Mpenu EPA, Lilongwe RDP
19.	Ms. J. M. Chavula	AEDO, Mpenu EPA, Lilongwe RDP
20.	Ms. C. T. Somanje	AEDO, Kanyama EPA, Dedza RDP
21.	Mr. M. V. Thenza	AEDO, Kanyama EPA, Dedza RDP
22.	Mr. L. R.W. Lingani	AEDO, Bembeke EPA, Dedza RDP
23.	Mr. M. S. Z. Luhanga	AEDO, Mvera EPA, Dowa RDP
24.	Mr. L. R. M. Jonazi	AEDO, Mvera EPA, Dowa RDP
25.	Mr. M. L. P. Kamuonjola	AEDO, Mvera EPA, Dowa RDP
26.	Mr. R. N. A. Chingwalu	AEDO, Mvera EPA, Dowa RDP
27.	Mr. F.M. Kumchuleso	AEDO, Kalira EPA, Ntchisi RDP
28.	Mr. J. M. Chabuka	AEDO, Kalira EPA, Ntchisi RDP
29.	Ms. N. O. Kachale	AEDO trainee, Kanyama EPA, Dedza RDP

JICA MALAWI OFFICE

1.	Mr. Hideo OKADA	Smallholder Irrigation Development Advisor

JICA STUDY TEAM

1.	Mr. Kosei HASHIGUCHI	Team Leader
2.	Mr. Hideyo SHIMAZU	Rural Society/ Participatory Development
3.	Mr. Akihiko Hata	Project Monitoring/ Financial Management System
4.	Mr. James Chikungu	Counterpart (DOI)

Attachment-1 Status of the First-generation Verification Project Sites Summarized by AEDC / AEDO

RDP	Lilongwe					Dedza		
EPA	Mpenu					Kanyama		
Site	Mtuwanjovu	Duwu	Ngoni/Miteme	Chimphonongo	Zakumva	Chikhtasu	Mchiku	Livizi
Present Status of First-generation Sites								
1 Membership (Total, (male, female))	13 (11,2)	24 (17,7)	23 (17,6)	15 (11,4)	13 (8,5)	13 (5,8)	17 (3,14)	33 (15,18)
2 Landowner (Total, (male, female))	13		10 (10,0)	12 (11,1)		2 (1,1)	1 (0,1)	19 (13,6)
3 Weir construction	Same as last year	Not done	No change	Minor repairs on July 18	No change	Self-support without advice	weir is changed to a lower part (water seepage at old location)	self-support technical advice on maintenance of the weir was
4 Canal length 2003 (m)	670	450	1,200	240	370	165	215	365
5 Canal length 2004 (m)	500		1,200	240	370	386	95	700
6 Irrigation area 2003 (ha)	2.20	1.56	3.38	1.92	1.00	0.64	0.65	0.78
7 Irrigation area 2004 (ha)	2.11		4.00	0.13 per capita	1.00	0.80	1.02	1.91
8 Major crops	maize, vegetables	no harvest	maize, leafy vegetables, tomato	maize, beans, vegetables	leafy vegetables and beans	Irish potato(0.5ha), beans(0.25ha), maize(0.05ha)	Irish potatoes, maize, beans	maize, beans (intercrop)
9 Harvest	good		Better in 2004	Poor	Very poor harvest	Better		beans better maize not yet
10 Problems during implementation	nil	Problem of water shortage	1) Crabs attacking the weir 2) Vandalism 3) Stalkborers 4) Non-cobing 5) Advice given to reduce service area in the second cultivation	some old members dropped inputs were scarce	nil	1) To buy inputs from sales of beans, maize, and potatoes for rainy fed crops 2) Construction of weir /one person late cultivation	insufficient water garden owner refused to his land	advised them to buy inputs from the money realized from bean sales
11 Positive impact	Farmers will have food and cash after selling their crops.	1) Food security 2) Increased income 3) Reduction of burden of work	1) Managed to purchase inputs 2) More income generated 3) Easy watering 4) Raised tree nursery	Re-organized committee has leadership	1) Food security 2) Increased income 3) Reduction of burden work	1) Sales become no problem 2) Farmers bought inputs from dimba sales for rain fed crops	farmers bought inputs for rain fed crops from money realized from dimba sales	farmers bought seeds and fertilizers for rain fed crops employed labor treed were conserved vetiver planted along the canal
12 Negative impact, if any	nil	no negative impact	Competition for water among farmers	The channels was not renewed.	No negative impact	None	none	Water competition among the villages (farmers) due to little rain in 2003/04
13 Contents of constitution, unwritten rule	Farmers should help each other, if one gets sick.	1) Contribute to buying inputs 2) Any member from the village should have a plot	1) Non-members have to pay MK350 for water. 2) Lending rates fine of MK50 3) Group work	Inputs were to be purchased by members on group basis.	1) Members to assist to sick member 2) Members who do not participate in group work should be removed from club	1) Name of group and address 2) Erections yearly 3) Membership fee MK50/head 4) Penalty fee MK20	name of group and address yearly erections penalty fee MK20 watering resume	Name and address Membership fee MK500/head Watering resume Land distribution to members
Evaluation of the sites								
1 What were especially Good/Strong?	1) Availability of water and inputs (revolving fund, MOA) 2) Cooperation of farmers	Farmers cooperation was good.	1) Strong leadership 2) Cooperative farmers	fairly good (some members left the land unused)	Farmers cooperation very good	Water supply is very good	Strong leadership participation of farmers good crop stand	Harvest was good in beans good leadership they could work independently
2 What needs to improve next year?	To construct extra canal above the old one in order to increase service area and membership	1) Start earlier 2) Use of manure	1) Improvement of Plot demarcation 2) Use of organic manure	1) Re-organize leaders on land issue 2) Source NGO inputs distribution	1) Start earlier 2) Use of manure	Early plot preparation	extension of canal and hectare early garden preparation	procurement of inputs to increase expansion of canal length and hectare to increase
3 What could be the reason if aborted?	nil	Land issues	1) Lack of group dynamics 2) Change of leadership	1) Land issue is not sorted 2) If inputs not purchased	Land issues	Landowners failing to give land to fellow farmers	lack of cooperation	The owner of the land not to give to fellow members
For the Next Year								
1 What will you do at the site?	Increase the number of demonstration of various types. E.g. compost, improved maize and other vegetables	Intensify on group organization and manure application.	No- change (advice on cropping plan, help them make annual work plan)	1) Introduce high yield maize and vegetable varieties 2) Source NGO on inputs	1) Intensify on group organization 2) Manure application	1) To encourage them to construct weir in May 2) Crop rotation to be encouraged 3) Improved variety	to continue pegging and canal digging crop rotation to be practiced farmers to be encouraged to grow improved varieties	construction of weir and canal maintenance practicing crop rotation to grow improved varieties
2 How differently will you approach new sites?	I will take all the new sites members to Mtuwanjovu to learn what their friends are doing.	The same approach	Using old leadership to the new sites	1) Organize leaders on land issue and constitution 2) Increase women members	The same approach	The approach used for old sites	the approach will be the same	same approach as used in the old site
3 Advices to your fellow officers	Work hard!! in all activities.	Farmers should be on the forefront. Extension workers should only facilitate the work	Encourage farmers to have sites in order to learn more about canalization.	Encourage more field days within and outside the area.	Farmers should be on the forefront. Extension workers should only facilitate the work	To initiate irrigation site in their work areas in order to improve on food availability (food security)	to encourage farmers to make irrigation as a culturet means to reduce famine)	encourage farmers to take irrigation as key to food security and income generating

RDP	Dedza				Dowa			
EPA	Bembeke				Mvera			
Site	Mtsetse	Kadiwa	Mtanda	Namanolo	Tikolore	Tilime	Loyi	Kambware
Present Status of First-generation Sites								
1 Membership (Total, (male, female))	25 (17,8)	14 (6,8)	27 (9,18)	22 (13,9)	41 (33,8)	46 (33,13)	6 (5,1)	1 (1,0)
2 Landowner (Total, (male, female))	5(2,3)	3 (0,3)	3 (3,0)	11 (7,4)	9 (6,3)	4 (4,0)	3 (3,0)	
3 Weir construction		Single line inclined	Single line inclined	Double line	Natural diversion with a big ridge	Using sand bags	Same to last year (double line weir)	
4 Canal length 2003 (m)	190	190	320	401	2,154	1,852	510	1,250
5 Canal length 2004 (m)		280	300	425	1,800	1,900	85	nil (watering Cane using residual moisture)
6 Irrigation area 2003 (ha)	0.25	0.50	0.53	0.55	3.97	1.65	1.80	0.55
7 Irrigation area 2004 (ha)	0.08	0.80	0.90	1.20	3.10	2.50	0.40	0.20
8 Major crops	maize, vegetables, beans by a few landowners	tomatoes, vegetables, potatoes, beans, onions	Beans	maize, beans, potatoes, vegetables	maize	maize, cabbage	maize, cabbage	maize
9 Harvest	Average	Yield good	Average	Good				
10 Problems during implementation	1) Leadership 2) Landownership	1) Shortage of water 2) Lack of inputs 3) Pests / diseases	1) Lack of inputs 2) Late kick-off 3) Land problem 4) Poor leadership 5) Pests	1) Leadership 2) Land disputes	1) Land dispute 2) Conflicts	nil	1) Land dispute 2) Water shortage	The owner went out and did not want other members to continue
11 Positive impact	1) Able to construct weirs 2) Able to construct an ancillary to cross the road 3) Food and money	1) Farmers able to construct weirs on their own 2) Income generation 3) food 4) Seed multiplication (beans)	1) Seed multiplication 2) Relish 3) Able to construct weir on their own	1) Able to construct weir on their own 2) Food 3) Income 4) Seed multiplication	1) Simple technology 2) Growing twice during winter 3) Increased income 4) Increased livestock 5) Increased fertilizer	1) Increased livestock 2) Increased fertilizers	Increase fertilizers	Increases food security
12 Negative impact, if any	Jealousy	1) Water conflict 2) Erosion	1) Jealousy issues 2) Soil erosion	1) Soil erosion 2) Jealousy 3) Water conflicts	nil	nil	Conflicts	Less people have enough food
13 Contents of constitution, unwritten rule	They have the written constitution (frequent absentees will be discharged from the group)	1) No written constitution 2) Only family members should participate in the site	No written constitution Only village members to participate in the site	No written constitution Participating farmers who did not prepare the land are discharged out of the group	If one is against the constitution, never attend the one's funeral	If one is against the constitution, never attend the one's funeral	1) Each member to pay MK100 for a plot 2) To assist when a member is sick	nil
Evaluation of the sites								
1 What were especially Good/Strong?	1) Farmers commitment 2) Farmers ability to learn, plan and implement quickly	1) Growing wide variety of crops 2) Farmers could peg and construct weirs 3) acquire inputs on their own 4) proximity to the market	1) Farmers commitment to implement the project despite many problems 2) Great discharge of water	1) Water availability 2) Proximity to urban market 3) Availability of a donor		1) Simple technology 2) Growing twice 3) Increase income	Strong committee	
2 What needs to improve next year?	Civic educate the village heads on the project	1) Timely sourcing of inputs 2) Improve on leadership	1) Early kick-off 2) Leadership should be good 3) Improve on sourcing inputs 4) Storage improvement	1) Farmers to be working always as a group 2) Formulate constitution	1) Continue training in group dynamics 2) Encourage them to expand as well as crop diversification	Continue training group dynamics	Members cooperation	Farmers will move to new site
3 What could be the reason if aborted?	External interference from the village heads	Poor leadership	1) Bad leadership 2) Land conflicts	1) Poor leadership 2) Lack of farmers commitment	nil	nil	none	
For the Next Year								
1 What will you do at the site?	1) Extend the canal 2) Increase the membership 3) Mobilize farmers to acquire inputs	Leadership training	1) Improve on beds 2) Leadership training	1) Accommodate land conservation issue 2) Training on leadership and group dynamics		Encourage them to expand as well as crop diversification	Encourage cluster system	
2 How differently will you approach new sites?	Firstly sensitize local leadership (GVH) on the project	Solve water conflicts	1) Sensitization of local leaders 2) Use leadership in reaching the new farmers	Consider conservation issues in irrigation	Continue doing cluster system as well as conducting field visits	Continue doing cluster system as well as conducting field visits	Involve VDCs, and GVHs	
3 Advices to your fellow officers	Use any water resource available in your area	1) Conduct early sensitization meeting 2) Early planning meeting with potential sites 3) All AEDO to use available water resources in their areas	All AEDO to use available water resources in their areas	All AEDO to use available water resources in their areas	Encourage gravity fed using locally available materials	Encourage gravity fed using locally available materials	Encourage gravity fed using locally available materials	

RDP	Ntchsi	
EPA	Karila	
Site	Gontha	Katema
Present Status of First-generation Sites 1 Membership (Total, (male, female))	17 (13,4)	56 (23,33) No. of plot (28 (17,11))
2 Landowner (Total, (male, female))	2 (2,0)	1 (1,0)
3 Weir construction	Masonry	Masonry
4 Canal length 2003 (m)	600	554
5 Canal length 2004 (m)	395	604
6 Irrigation area 2003 (ha)	3.30	1.20
7 Irrigation area 2004 (ha)	1.70	1.65
8 Major crops	maize, beans	maize, potatoes
9 Harvest	Good	First harvest good, second harvest much better
10 Problems during implementation	Landownership	1) Land issue 2) Livestock (goats 3)
11 Positive impact	Farmers / members are willing	Had food and money
12 Negative impact, if any	none	none
13 Contents of constitution, unwritten rule	They follow constitution	Have a written constitution
Evaluation of the sites 1 What were especially Good/Strong?	Strong leadership	1) Group cohesiveness 2) Crop stand
2 What needs to improve next year?	Members will have increased hectarage per person	1) Use of ancillary facilities in feeder canals 2) They should plant Irish potatoes in March - June
3 What could be the reason if aborted?	If the stream develops gully erosion	I do not think it will
For the Next Year 1 What will you do at the site?	Train farmers on crop rotation	1) Train farmers on crop rotation 2) Establish group seed bank
2 How differently will you approach new sites?	Use same cluster system	Use same cluster system
3 Advices to your fellow officers	Avoid making false promises	Avoid making false promises

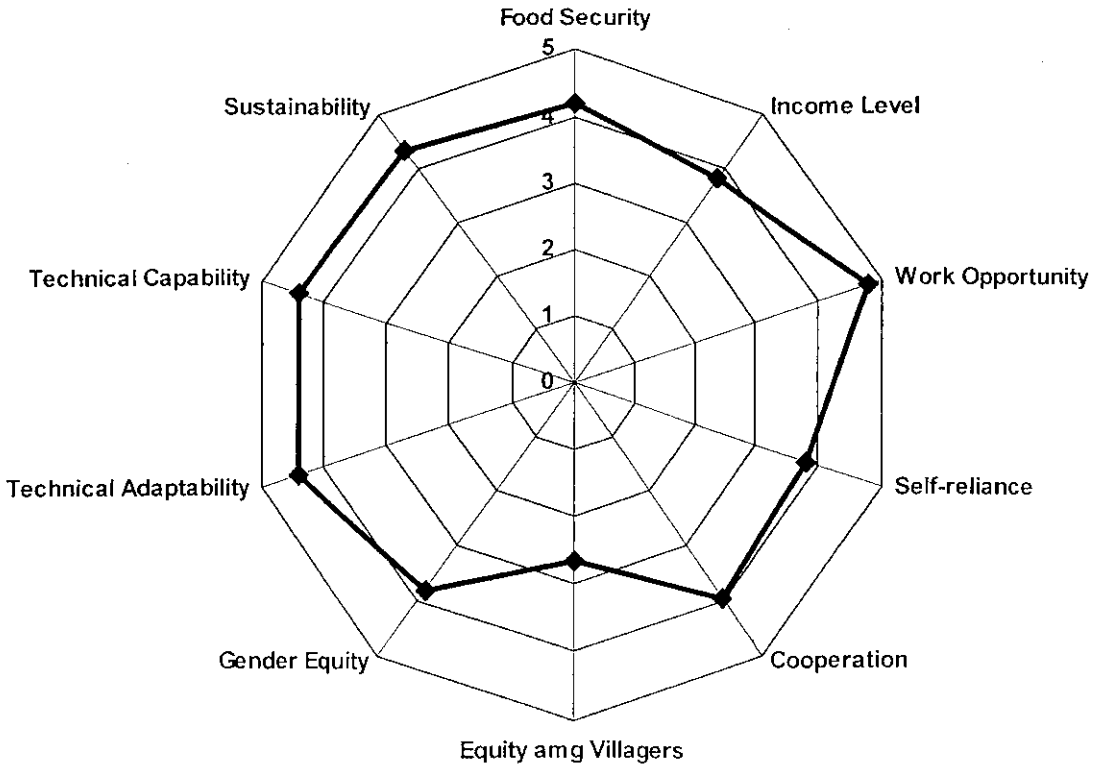
Attachment-2 Discussion on Common Issues

Common issues	Actual problems			Possible solution
1 Land issue	1 Jealousy (landownership)	1-1 Some farmers are afraid of losing land	1-1 Landowners do not have enough information	1-1 As time goes, civic education -adoption of the technology.
		1-1 Some landowners do not want anybody to use and make profit		1-1 Study tour of well-organized sites to farmers. leaders: need to target landowners (AEDO to be consulted to choose participants).
				1-1 Should talk with landowners, V.H., and local leaders before working on new sites.
		1-2 Landowners are afraid of their land loose the value	1-2 Renters do not use the land properly / not apply manure	1-2 Need to talk about land conservation (tree planting, manure etc.)
			1-2 Unlike watering cane, gravity irrigation cannot control pests.	1-2 It is always better to start earlier so that landowners know they can plant early next year.
		1-3 Some farmers are expecting inputs etc. even after full explanation.	1-3 New program; they do not know the program fully	1-3 Selection of the site should be initiated by the farmers themselves. At the same time farmers should not be forced.
			1-3 There is always expectation	1-3 Need to sensitize development structure (VDC, ADC). Only DDC is functioning.
				1-3 Sensitization on self-reliance
2 Equity Issue	2. Monopoly	2-1 Farmers do not want to share the benefit	2-1 After two years they know the benefit is very high	2-1 Sensitize: A man cannot develop village / love for / as human beings / afraid thefts
			2-1 Most of the work has been done and they know the technique	2-1 Each and every farm gets harvest, there is no thief
				2-1 Give landowners larger part and let the rest cultivated by other members.
3 Leadership	3 Role of Village Head	3-1 A V.H. is trying to interfere the club led by farmers.	3-1 Local politics: one village is suddenly divided into five	3-1 Leadership training for committee members
				3-1 Leave out V.Hs and let the committee decide.

Attachment-3 Rating of the Verification Projects

Aspect	Mpenu	Kanyama	Bembeke	Mvera	Kalira	W. Average
Food Security	4	4	4	5	4	4.2
Income Level	4	4	4	4	3	3.8
Work Opportunity	5	5	4	5	5	4.8
Self-reliance	4	4	3	4	4	3.8
Cooperation	3	4	4	4	5	4.0
Equity amg Villagers	3	2	2	3	3	2.7
Gender Equity	4	4	4	3	4	3.8
Technical Adaptability	4	4	4	5	5	4.4
Technical Capability	4	4	5	5	4	4.4
Sustainability	4	5	4	4	5	4.4
Average	3.9	4.0	3.8	4.2	4.2	4.0

Note: as compared to before Project, 1: much worse, 2: worse, 3: no change, 4: better, 5: much better



Following are free comments given by AEDOs who have been working since 2003 with the JICA Study Team. These comments were given on an occasion of PR5 presentation.

To/about the Approach:

- The approach has been good because it has targeted the rural farmers. The approach has also instilled a spirit of self-reliance than ever before where farmers depended on government/NGO handouts.
- JICA's approach has been very excellent and this is the best approach I have ever experienced.
- JICA's approach for smallholder irrigation development has been a very nice one since it didn't involve handouts although there were a lot of complaints from the farmers.
- The technology from JICA was very well indeed because when you used to share any handouts to farmers, they will always wait for so people will be lazy. Now farmers are hardworking because they try to work on their own and not waiting from any NGOs.
- The approach is very good as opposed to other NGOs who come in with a lot of inputs where farmers fail to take up or adopt on their own.
- Any organization approach including the government should come in like as JICA did but our government of Malawi has got some weaknesses. The government limited the resources which each and every NGO put across. As a result implementation isn't as it should be for example JICA came up with no free issues at the same time Malawi government distributes free issues. These cannot help the Malawian farmers for message linkagers.
- Malawian farmers are used to be givers of free handout yet they don't improve at all in that after NGO goes they no longer implement the activity. My view is JICA should continue in no free handout but importing technical knowledge only. This will create a sprite of sustainability in Malawian farmers.
- JICA approach to Malawian farmers was good because irrigating (watering) using cans or treadle pumps is very tiresome hard job but canalization requires less energy lost and your knowledge and not handouts will make your project sustain. Farmers are eating green maize instead of dried maize now in Malawi.
- JICA's approach for smallholder irrigation development was fantastic. It gave the farmers the whole insight of the project before undertaking it. It drills farmers to be self-independence.
- JICA's approach for smallholder irrigation development was just very good because it was going directly to people who are needed for implementation i.e. AEDOs and farmers. It has also made farmers to be self reliant because of no issuing handouts. This has made farmers to be empowered and know their problem.
- The best way of assisting Malawian farmers is to let them be aware of this JICA program and not to fund them with inputs. If anything it must be through a loan.
- Recommendation should follow the JICA's mode of approach for smallholder irrigation development, i.e. 1) discouragement of free handout which encourages laziness in farmers, and 2) carry out frequent follow up visits which most of the times are not meant for fault finding but assist.
- The approach was good and JICA personnel were very dedicated to work even in bad conditions.
- The study tour has also worked nicely due to bottom up approach.
- JICA's approach is good because it starts with problem identification protesting the problem solutions during planning workshop and then implementation. It also comes with evaluation. That's good approach. Farmers were also taken to other areas where their fellow farmers have implemented the same project.
- JICA's approach to Malawian farmers was good because JICA Team get involved in physical activities directly which farmers didn't believe and JICA and farmers planned together modus operandi for the project to be implemented. The farmers were also enticed the implementation because they learnt from their fellow implanters through study tour.

- JICA activities that are taking place are well organized in such a way that they suit the Malawian smallholder power. This is like this in the sense that: 1) extension home leant more e.g. how to case out preparations per smallholder irrigation scheme set up, 2) how to organize farmers to construct canals as a group using local materials like stones, sand bags trees (small trees like sticks) to make weirs, 3) farmers are able to grow crops twice a year hence harvesting more, and 4) farmers have greatly improved income in this respective households. By all the above important factors this means that the government is benefiting more from JICA in terms of increased crop production, food security as well as poverty reduction among Malawi rural population.
- JICA is doing a very recommendable job. Had it been Malawian were doing as JICA we could really develop i.e. by providing mode of transport teaching in a friendly way i.e. approach to farmers by not giving them handouts. JICA has taken a step ahead on irrigation development. The Government of Malawi should at least also copy what JICA as doing because without mode of transport and evaluation of whatever one has started you cannot see if you are progressing or not.
- JICA study team has made it a success on technical and material support. The approach is just good because it empowers the community.
- JICA's approach to implement project (scheme) has made me to improve much on irrigation.
- I recommend the approach by JICA telling farmers the truth about life and not just pleasing them by short-term assistance i.e. in terms of handout. Again JICA deserves credit by not very much recognizing office bosses but where these programs are implemented hence gives enough support to the fieldwork.
- JICA's approach has been very good. The approach can make irrigation in Malawi sustainable because the materials used are locally found and the technologies used before JICA came in were difficult for the farmers to practice.
- JICA can assist in making irrigation a culture in Malawi as JICA does not work with free handouts and for this fact farmer will get used to source their own inputs.
- It was a nice approach because JICA was working directly (hand in hand) with farmers as well as field staff at grass root level. JICA was also using locally available materials like grass for weir construction of which they are so cheap and readily available to smallholder farmers. JICA was also using bottom up approach in implementing various technologies in irrigation sites. JICA couldn't give handout to participating farmer hence this creates sustainability in these scheme sites we have been working with.
- JICA's approach was good to the Government of Malawi because the Government didn't know the canalization concept on irrigation to educate the AEDOs in our country to disseminate knowledge to the farmers. It is now that they have started teaching in the college of Malawi.
- Very potential areas in Malawi should start the program as a nuclear, and others should follow it.
- *Farmers had to be treated when it came to food provision during field tours.*
- *One thing I did not like was taking farmer e.g. from Dedza to Dowa on field tour without providing food.*
- *Farmers have gained most on weir construction producers, and it was supposed to be provided with startup farm inputs.*

To/about JICA (study team):

- JICA has done something wonderful to both staff and farmers in rural areas. Working equipments have been bought for farmers, and staff has been trained in various field activities on irrigation. The approach has been very excellent regardless of any assistance from Malawi government.

- JICA is really a good friend of the Malawi government and has really assisted Malawi to be food secured through smallholder irrigation.
- All in all I have benefited a lot from JICA.
- JICA Team should carry on to work with Malawi Government to further improve smallholder irrigation development.
- I thought at first that JICA is an organization, which has got its already employed staff, but I realized that JICA cooperate with the Government.
- JICA should continue taking the work ever done with AEDOs to be facilitator since the farmers know how JICA works through experiences gained.
- JICA should continue promising AEDOs and later top officials. It should not forget implementers are the key for projects success and sustainability as farmers are more important people in food security issue than even the Ministry or above.
- In new areas for its successful approach for smallholder irrigation development, it should involve the field officer who has ever worked with.
- It should not adapt Malawian Government system as senior officers who play monthly supervisory role being considered first like promotion advanced studies for being congratulated for the work done by field officers who are considered least or not.
- It should be made sure if JICA wishes to have facilitators that JICA should continue choosing on its own without advice from anywhere as it has its own principle.
- JICA should make sure that government supervisors are indeed supervising the works they are asked to do since most development works are not being successfully sustainable just because of unreliable supervisions from the government officers.
- I as an extension officer urgently do recommend JICA support in the implementation of programs technically and financially than the government reluctance to fully support field activities and where mistake taking place in that upfront.
- At the first place I must thank JICA for coming to Malawi with this program. Secondly having attended year first meeting at Lilongwe ADD 2 years ago with the Study Team you have been good partners in every thing very timely and always very ready to work with agriculture staff and farmer in all identified sites.
- The Malawi Government has benefited a lot from your programs because all levels of staff in agriculture from the ministry, ADDs, RDPs, and EPAs down to the farmer have been trained small-scale irrigation development.
- For the Malawian farmer to say the fact, all farmers where the schemes were implemented are very very happy and one already benefiting from their harvests are now assisting some farmers who need to start the new schemes.
- JICA's approach to small-scale irrigation development has assisted the government. Government agriculture staff not forgetting myself and the Malawian farmer have benefited most. Please JICA continue assisting Malawian in Agriculture.
- JICA should not work as our government does, e.g. giving incentives to top officials who do not even come to the field to assist instead it would be better if those in incentives went to the officer at the grass root level who work fourth and nail to make project successful. If incentives go to top officers and not officers at grass roots level the officers at grass roots level get frustrated that why most government project fails. Officers are only interested in money but not real work that why we see them only during meetings and workshop because they want allowances.
- I take JICA as my own college which has trained me in small-scale irrigation technology because I did not have this chance at school / college.
- The government was not able to train the AEDOs in small-scale irrigation technologies which means that JICA activities should continue in other areas throughout the Country.
- As an AEDO I have known your technologies through partially trained. Therefore I need your technical support further to train me if possible next year.

- JICA should assist in training the remaining AEDO's and assist in acquisition of transport e.g. motorcycle for some participating AEDO's.
- JICA has helped a lot in making the field staff and farmer aware of taking irrigation as our culture.
- JICA should continue working with Malawi government in promoting smallholder irrigation.
- *I was thinking that JICA would provide us with reliable transport like motorcycle.*
- *Trust as an AEDC was not provided with fuel for supervision and motorcycle either.*
- *JICA should provide fuel to AEDCs for supervision, otherwise JICA has been very cooperative and understanding.*
- *My big disappointment is on recruitment of officers to Japan on training. JICA has taken officer who was not much assisting us. My view is JICA could have taken the officer at grass root level (AEDO).*

To/about the Government:

- Government staff should get used to JICA's new ignition technologies which are cheap and of low cost.
- It should adapt the system of approach as JICA did during its period of study tour and its consideration to the main targeted officer and/or people (farmers).
- The government needs to do much than what they have done to support small-scale irrigation. More especially at supervisory level motorcycles are old to carry supervision to high heights.
- Technical know how should be at the Government level and not at the District level.
- Malawi Government should be very serious with full commitment especially in the higher offices i.e. RDP and ADD.
- The grass root level has to be appreciated for the work well done by being awarded scholarships in the near future.
- The government should avoids the system of just training the senior officer leaving behind the junior officer who are implementers with knowledge of the disseminated and trained technologies.
- The government should be considering junior officers for advanced studies and privileges of the congratulation for the work done. Such privileges should firstly be going to implementers and senior officer being the least as ways of empowering these development influential field/ junior officers.
- Supervision and implementing duties should be given to government officers according to their actual (not expressed) performance not according to seniority or junior in government organization.
- Movement of Malawi needs to give more support to AEDOs because they (our bosses) never visit and assess technical aspects in the sites. Could they follow what JICA does, the project could be more than it.
- Motorcycle should be provided on loan scheme to technical staff i.e. AEDCs and AEDOs.
- Government of Malawi must change the attitude of feeding people which perpetuates dependence of farmers.
- The approach should be proper in the government at all levels and they should be able to implement them and not verbal or office work. A good example is when we had been implementing smallholder irrigation schemes no supervisor from the government who had spared their time seeing our small schemes. This is very bad because if there is proper supervision we can improve more in certain areas.

- Government of Malawi should facilitate AEDOs to farmer study tours, ensure that all AEDOs at potential sites are trained, and recognize promotion of the AEDOs who have seriously cooperated during the implementation period.
- Government of Malawi should gather all NGOs working in food security sector and train them in the technologies tried and proposed by JICA.
- At present it is just good at speaking because it mainly depends on irrigation officers and is deeply with treadle pumps and nothing on gravity irrigation. Nothing on taking irrigation as our culture.
- The government of Malawi is indeed willing to promote smallholder irrigation development but the very few irrigation specialists the government is having have never called AEDOs effort in smallholder irrigation.
- The government of Malawi should take the system taken by JICA to take fellow AEDOs to be Facilitators – that is very big motivating factor. Otherwise privileges like these ones bear no fruits if handled by RDP staff according to my experience, so keep it up like JICA.

To/about Myself:

- I have been equipped with technical know how on temporary brash dam construction and other related technologies.
- People to curry out irrigation think very complicated machines that the government can only afford – not use of local materials. People think of government to assist them with free issues like inputs materials. Civic education is my important point even to members of assembly and all politicians.
- I need some technical knowledge further from small-scale irrigation design so that I can achieve better on the course.
- I should always be working hard for development i.e. achieving goals and not for money as others do/ can do.
- I should make sure to accomplish the appointment of helping development of Malawian farmers hence Malawi.
- I should know that I promised the Malawi government that I will do any possible development works assigned to me in my working area or anywhere possible as means of helping developing Malawian whether assigned by government organization or NGOs.
- I should make sure I can work anywhere in Malawi that I promised to the Government of Malawi during the day of appointment.
- I myself, as government of Malawi, hence should not have the desire of enjoying the benefit (fruits) of development before they are mature.
- I think myself to pull up socks whenever I have been a failure and improve irrigation system in Malawi.
- To my side I will still need your assistance so that some of the AEDOs including me who are not yet well trained should be trained so that we must be competent in all technologies concerning small-scale irrigation.
- I am committed to work anywhere in the country in extending the technologies.
- As an AEDO, I should be well equipped with all irrigation technologies.
- JICA helped me a lot because I have been equipped with different technologies on small-scale irrigation development. In addition to that I am able to train my friends and farmers (as trainer) because of JICA. I am now thinking of finding a land to establish my irrigation farm.
- I am able to work efficiently and effectively provided there are motivating factors.
- Paying me visit and say a word of thanks to the little, I have done and assist me wherever they can. If I can have reliable transport considering field tours so that I can see and learn from other peoples experience.

- Extension workers should work hard in assisting farmers. They should work with farmers in a participatory way.

To/about the Farmers:

- Malawian farmers should be very committed and be able to learn and use the new knowledge acquired. They should not be rigid to change.
- Farmers are now able to construct the weirs, align the crops using botanic pesticides, make the quickest method of manure (bocashi), and make improved grain storage on their own after being trained with skills and knowledge through JICA's technical support.
- Farmers should know they play great role in feeding Malawian nation and economy as far as Malawian economy is concerned.
- They should know they play great part in national food security and future of Malawi's economy as Malawi's economy greatly comes from farming.
- Farmers should be aware farming is continuous business hence soon after rain fed farming is safely harvested they should start preparation and implement irrigated farming as means of assuring food security at household to national level and as means of assuring funds for his/her daily household basic needs for luxuries and social needs etc. at household level.
- Malawian farmers must achieve development. They should remove the dependency syndrome in order to develop.
- Farmers are now able to construct weir on their own, do canal alignment, plant different crops using botanical pesticides, make the manure (bocashi) and improved stove after being imparted with skills and knowledge through JICA's technical support.
- They should be encouraged to be self depended and be trained on how they can identify problems and solutions, plan, implement and evaluate the irrigation project. Also, be trained in other cross cutting issues.
- Where JICA has been doing its activities, farmers are enjoying having a lot of food. They are able to find ways and means of finding inputs on their own because of JICA.
- Malawian farmers are hard working people who are always willing and are able to undertake any development activities while they are being misled by NGOs who exchange their services with money which encouraged them to go away from any government/ AEDOs meetings especially chiefs who are always at the forefront of any development.
- Malawian farmers also need proper training especially when we are talking farming as business.

Others:

- JICA programs are not yet fully known by the community and even working class in ADD.

MINUTES OF THE MEETING
ON
DRAFT FINAL REPORT
FOR
THE STUDY
ON
THE CAPACITY BUILDING AND DEVELOPMENT FOR SMALLHOLDER IRRIGATION SCHEMES
IN
THE REPUBLIC OF MALAWI

Lilongwe, Malawi
January 31, 2005

Mr. S. C. Y. MAWERU
Director of Irrigation Services
Department of Irrigation (DOI),
Ministry of Agriculture

Mr. Kosei HASHIGUCHI
Leader of the Study Team,
Japan International Cooperation
Agency (JICA)

Witnessed by:

金森秀行

Dr. Hideyuki KANAMORI
Senior Advisor (Agriculture Development)
Japan International Cooperation
Agency (JICA)

INTRODUCTION

The Study Team headed by Mr. K. HASHIGUCHI commenced field work on the Capacity Building and Development for Smallholder Irrigation Schemes in the Republic of Malawi (the Study) on January 7, 2003, and a meeting to present the draft final report of the Study was held on January 28, 2005 at a conference room of Lilongwe Hotel.

Participants from the government of Malawi were the Program Managers, Irrigation Officers from eight ADDs, DADOs and Irrigation and Assistant Irrigation Officers from Lilongwe, Dedza, Dowa and Ntchisi RDPs, and other relevant officers from irrigation projects and international agencies. The list of the participants for the meeting is attached hereto.

OPENING REMARKS

The guest of honor, Mr. Murase, the deputy representative of JICA Malawi office made opening remarks. He expressed his sincere pleasure to attend the meeting and said that JICA is very pleased with the cooperation received from the Government of Malawi throughout the two-year implementation of the Study. He also stated that JICA recognizes Smallholder Irrigation Development as a vital area for the development of Malawi and believes that the best development especially to smallholder farmers come from an environment wherein they are using locally available resources with minimal external assistance. He then said that JICA expects that discussions in the meeting and materials produced from the Study shall be translated into progressive action in improving the livelihood of smallholder farmers.

PRESENTATION ON DRAFT FINAL REPORT

1) Presentation on the Main Report

In the morning session, the Study Team presented the Draft Final Report including the study schedule, results of the verification project implementation, package of methodologies for smallholder irrigation development, and conclusion and recommendations by using Power Point. Upon the presentation, the participants clarified some issues and made comments towards the final report preparation.

Chairman of the meeting, Mr. Maweru, the Director of the Department of Irrigation, made a remark upon the presentation of the team: when the government came to formulate a national irrigation strategy, problems were identified as lack of irrigation culture, high cost for the development, lack of capacity of irrigation development etc., but this Study solved these issues and the irrigation technologies are now in blood of the farmers and the officers concerned. He also said that he thinks it is easy for farmers to construct not permanent weir but temporal one, and once they learn the process of the construction and see the benefit, food security for the participating communities can be achieved. He further said that the country also needs large-scale irrigation systems, but it takes time such as four or five years to be implemented starting from feasibility study, designing, bidding, etc., and therefore smallholder irrigation development can bridge the

time lag.

Following are the comments, questions and recommendations raised by the participants:

1. A participant inquired if any appropriate technologies to reduce seepage of canal were introduced. Team leader explained that there were some sites with sandy soil and in such cases farmers bought by themselves plastic sheets, which are affordable and used them, to prevent the seepage. Team leader also introduced cases that the farmers used dissipater or stone-pitched canal to prevent soil erosion and thereby reduce water velocity.

2. There was also an inquiry if some people were stealing the plastic sheets used for canal bridge. Team leader explained that usually those materials provided by the outside government/ donors are likely to be stolen, but the materials sourced by the farmers themselves were rarely stolen. Mr. Khonje, the deputy director of the Department of Irrigation added that during the first generation sites some materials bought by the Government were indeed stolen, but for the second season materials, which farmers sourced by themselves, were amazingly not stolen indicating the significance of farmers' initiative.

3. Program Manager of Karonga ADD commended that he has been excited with the profitability of the irrigation culture, however he pointed out that there is a problem of marketing of vegetables. He further said that the marketing issue is vital and he wished if there were components of marketing aspect in the Study. Team leader explained that concerning marketing, the Study did not take into account it much, but the Study just concentrated on farmers' initiative on what to grow though in the areas near national roads and township the Team promoted vegetables crops. The chairman said this study did not really cover the marketing field since the marketing needs to cover a lot of areas to study. But also he said that as entry point we should preach to farmers to grow crops, which they know about their exit. In this view the chairman pointed out that maize is easier to grow and also meets the needs of food security and can even sell green. Then he mentioned that the issue of marketing is a good lesson from the Study and the efforts in another programs to improve marketing should be taken into account. Another participant inquired if the Ministry of Agriculture can cover crop diversification or income generation with the other initiatives of the ministry. Chairman replied that HFCPD project has component of marketing and also the World Bank program which includes marketing area is in pipeline. Team Leader added that out of 49 Sub-Saharan African countries only two are self-sufficient in staple food. These are South Africa and Zimbabwe and 86% of population in Malawi lives in rural area, implying most of Malawian are farmers, yet Malawi is still importing food wasting precious hard currency. It is, therefore, better to focus on the food security first. The team leader further said that the development should be done step by step and that this Study centered on the first step.

4. A participant commented that the ministry should take into consideration how they can extend the technologies developed by the Study to cover the whole country. Chairman explained that efforts are already in that direction as the DOI have prepared a request letter to JICA to cover the whole country with the same concept and also Mr. Okada, a JICA smallholder irrigation development advisor, has been placed in the Department.

5. A participant argued that simple weir is good but more or less permanent type would be much better using small piece of bricks etc. to make the weir last five years or more rather than making the weir every year and the government should discuss how to source necessary external inputs. Chairman replied that on the ground farmers do not mind making weir every year, since they see the benefit from irrigation, so the way forward is to let us be demand-driven, namely wait by the time farmers to ask for the government.

6. Concerning environment degradation, a participant raised an issue on what the government can do with soil protection, since irrigation is new to Malawi and many farmers would go into it, but in some areas this would also encourage soil degradation. The chairman explained that Environmental Act says that irrigation development with more than 10 ha needs an environmental impact assessment, but small schemes less than 10 ha do not need full scale EIA. He also told that environmental conservation should be the area to tackle with the future and the DOI is cooperating with land resource department to promote activities such as growing vetiver grass. Program Manager of an ADD told that involvement of all the engineers from different fields at district level, so called holistic approach is needed and should be done at ADD level.

7. A participant questioned on the result of the inventory survey summarized in the draft final report, since the irrigation potential area in Shire valley ADD in the draft final report does not match as the government estimate of 40,000 ha. Team leader said that the reason of the difference would be the fact that the Study only deals with small-scale gravity irrigation excluding mid to large-scale ones. A team member also explained how the data was collected, analyzed and arranged to clarify the meaning of the figures shown in the draft final report.

8. A participant raised an issue of monopolization of irrigation benefit by landowners and inquired how they can cope up with the issue. Team leader said that the issue was indeed a critical problem that occurred during the Study. Team leader explained that to share the benefit, the irrigable land of owners were divided into pieces and rented out to villagers free of charge during dry season and this measure worked very well for the first year but not so well for the second dry season. Team leader then presented the recommendations are, with the basic point in mind that dogmatic equity cannot be established, 1) renters should take care of land with compost manure after harvest so that landowners will be willing to rent their land, 2) pay reasonable rent to the landowners, and 3) allocate larger part to owners when

farmers divide the land into pieces to share among them. The chairman remarked that land issues should be taken in caution and it is important at the beginning to understand the concept of the development otherwise owner may think the land will be grabbed by the government.

9. A participant inquired on involvement of women considering the anxiety about the breakdown between men and women in the community and also pointed out that the illustrations in the technical manual appear with mostly men. Team leader explained that there was a lot of women participation in irrigation development in some cases women being more than men. As for the illustrations, Team leader explained on how they made the illustrations: they took photos of activities and asked illustrator to draw according to the photos. Women usually worked behind men and the illustrator concentrated on the people working in front to make the illustrations simple enough for the readers. That is why men appear on the illustration. The chairman said that the comment on the illustrations should be taken into account when revising the materials in future. It was agreed that description and statistical data on women participation shall be incorporated in the Final Report.

10. A participant asked if there has been an effort to train farmers or AEDOs on water management. Team leader answered that the team trained them on how to measure water flow by V notch so that they can estimate how much hector can be developed with the available amount of water measured. He also added that on-farm irrigation management such as furrow irrigation and basin irrigation were disseminated during the implementation of the verification project.

11. A participant said that the Study proved that irrigation is not an expensive venture, but there is need to mention the minimum cost required. Team leader replied that actually the required cost is in most cases is nil and for some cases farmers used plastic bags and sandbags which were sourced by themselves. With this fact, Team leader suggested that extension officers can ask farmers to estimate the cost by themselves according to circumstances since the foreign materials such as plastic bags are already available in their locality, so they know how much they cost.

12. A participant inquired how the Study managed to segregate poorest in the project or how the poorest can access to the irrigation technologies. Team leader replied that pre-requisition for the poorest is only to participate in the construction work, so that they can be members of the irrigation club. He further explained that the weir construction could be finished in half day in most cases, so that the poorest can spare their time to participate in the operation. A counterpart of the Study Team also explained that they called for all the villagers to have a kick-off meeting prior to commencing of the irrigation development and they could identify who were owners of the prospective irrigable land and also who the poorest were. He also said that if the poorest were involved in the beginning of the activities, they were in

fact integrated in the irrigation club.

13. A participant told the meeting that if farmers sell maize as green, they can earn four or five times more than dry maize, so they can sell maize green and buy more dry one, and he said that economic analysis should be included in the report. Team leader explained that about 80% of smallholder irrigation beneficiaries sold maize as green and bought dry maize. It was agreed that although the team has carried out economic analysis in the draft final report, the team will elaborate it.

14. A participant asked if the figure of 8,254 ha on page 3 of the executive summary is collect. The data was from statistics given by the DOI in 2003, and it was agreed to refer to the latest data and correct it if necessary.

15. A participant asked if the study trained AEDOs on how to identify irrigation potential site. Assistant irrigation officer of Ntchisi RDP explained how they worked with farmers to identify irrigation sites as checking if the river is perennial or not. Team leader also said that the guideline prepared includes the topics on how to identify sites and how to measure flow of water.

16. DADO of Dowa RDP presented his opinion and activities: farmers can realize 5,000 cobs from 2 kg of seeds and they get MK25,000 at MK5/cob, and then farmers can use money to buy inputs or contribute to group revolving fund etc. This is how the RDP is promoting in the villages.

Closing for the Morning Session

As a closing remark, Dr. Kanamori, senior advisor of JICA, expressed his gratitude to make statement on this meeting. He introduced himself that Malawi has been his second home country since 1978 when he was assigned as JOCV in Chilumba and worked for two years and seven months and it was first time for him to live in another country. When he came back to Malawi in 2001 as a member of the preparatory mission of the Study, he found that farmers were poor and the government budget was limited, so that the way to promote irrigation was to be zero cost. When he was in JOCV task, he saw a farmer diverting stream water with grass-made weir. He was impressed with the wisdom of the farmer. Such impression being in his mind, he together with the mission members made a concept of "cheap, quick and simple" for applying the technologies. Apart from the concept, they added that soil fertility can be exhausted with irrigation so that the Study needed agronomy concept and then compost manure application was in fact promoted. They also pointed out dissemination using posters and picture stories because there is no electricity in villages.

He further pointed out three successful factors of the Study: 1) farmers are excellent as they invented remarkable facilities like cliff-hanger; 2) extension coordinators / officers and irrigation officers are excellent as they developed nearly 300 sites as a result of dissemination training; and 3) JICA approach was, if allowed to say, good. He requested the participants first to make effort themselves to disseminate the technologies

though a follow up project has been requested to the Government of Japan and JICA expert for follow-up of smallholder irrigation development has been assigned. He requested the participants to utilize the posters distributed. He finally expressed his sincere gratitude to all the participants.

The chairman also thanked the JICA Study Team and asked them to send his appreciation to the Government of Japan. He also extended his appreciation to the efforts of officers involved in the verification project especially in Dowa, Ntchisi, Lilongwe, Dedza Hills RDPs. He said that the Study was just a pilot and now they need to take it to the field and added the participants have to utilize the JICA expert who is ready to assist for smallholder irrigation development. Finally he commended the participants who made efforts to come to the meeting and their contribution. Then the morning session was closed with prayer.

2) Presentation on the Package of Smallholder Irrigation Development

In the afternoon session, Malawian counterparts of the Study presented in detail the contents of the package of methodologies for smallholder irrigation development including Comprehensive Guidelines, Technical Manual, Posters and Leaflets. The session was meant particularly to the irrigation officers who would be the primary users of the package. Upon the presentation the participants discussed the contents of the package. Comments and questions raised during the session are as follows:

1. Q: How much volume of bocashi manure should be applied per station?
   A: It should be each handful amount.
2. Q: How is the content of nutrition in bocashi?
   A: Bocashi nutrients were tested at Chitedze Research Center and found more contents of nitrogen than conventional compost manure.
3. Q: Are the yields estimated in the report with chemical fertilizers or without them or only with bocashi?
   A: High yields mentioned in the report was achieved with chemical fertilizers. It should be understood that only compost manure cannot compete with chemical fertilizers in terms of yield.
4. Q: About planting issue, if you plant crop on top of the ridge, you may waste a lot of water (over irrigation may be required), and if you plant in lower part of the ridge, you may lose solar radiation. What is your recommendation?
   A: It still needs investigation, but planting in lower part of ridge may be less risky though you may need to sacrifice some radiation. A recommendation is in any case that the height of the ridge should be less than that of rain-fed ridge; preferably 20-25cm in lieu of conventional 30cm.
5. Q: Improved cooking stove introduced under the Study is quite encouraging. There is however another kind of stove. It will be worth referring to it and test the heat

efficiency if possible.

A: All the components incorporated in the technical manual including the cooking stove have been tested during the verification project. As this study is about to finish, there is in fact not time to test the stove suggested. Therefore, it may be followed up by the counterparts from DOI.

6. Q: Leaflet should be translated into another dialects of Malawi like Chitumbuka and Tonga.

   A: The request will be taken to JICA office for the consideration.

7. Q: Which type of banana should be used for bocashi making, green or matured?

   A: It should be matured one and also rotten one.

8. Q: For the ADDs and RDPs who have not been involved in the verification project, they may seek to clarify questions on materials like the posters and guideline. What will be the way forward?

   A: Think and make your own idea, and do whatever you can. JICA cannot say any committed statement at this moment, but Mr. Okada, JICA expert, will advise you. Also about 30 government staff have been working together with the Study Team since the onset of the Study and they know all about smallholder irrigation, so you can invite them to your offices.

9. Q: On double line weir, when you block water, are you thinking of downstream farmers?

   A: No matter how much you compact the soil, there is still water leakage to give certain volume of water to downstream farmers.

10. Q: Is it possible to get electronic copy of the materials?

    A: The Study Team is supposed to submit the electronic copy to JICA, as well to the DOI. Therefore, you can contact DOI to get the electronic copy.

One of the participants on behalf made remarks saying appreciation of active discussions in the meeting and appreciation to the Study Team and JICA. Team leader in the end thanked all the participants on behalf of the team and the afternoon session was closed.

LIST OF ATTENDANTS

THE GOVERNMENT OF MALAWI

1.	Mr. S. C. Y. Maweru	Director of Irrigation, DOI
2.	Mr. A. T. Khonje	Deputy Director of Irrigation, DOI
3.	Mr. Charles Mwalabu	Principal Irrigation Officer, DOI
4.	Mr. Flint Malungah	Snr. Irrigation Officer, DOI
5.	Mr. Chawangwa Jana	Snr. Irrigation Officer, DOI
6.	Mr. C. Kumbyo	Irrigation Officer, DOI
7.	Mr. G. M. Gwaza	Econmist, DOI
8.	Mr. E. C. Kanyinji	Programme Manager, Kasungu ADD
9.	Mr. A. J. Kaunda	Programme Manager, Salima ADD
10.	Mr. Chris S. Khonje	Programme Manager, Mzuzu ADD
11.	Mr. Mr. J. J. Mussa	Programme Manager, Machinga ADD
12.	Mr. M. Z Bodzalekani	Programme Manager, Shire Valley ADD
13.	Mr. E. P Ching'amba	Programme Manager, Karonga ADD
14.	Mr. J. L. L. Banda	Deputy Programme Manager, Lilongwe ADD
15.	Mr. N. T. S. Mataka	Deputy Programme Manager, Blantyre ADD
16.	Mr. W. M. Sataya	Chief Irrigation Officer, Kasungu ADD
17.	Mr. A. S. Tembo	Chief Irrigation Officer, Mzuzu ADD
18.	Mr. Peter Chipeta	Chief Irrigation Officer, Salima ADD
19.	Mr. A. C. M. Msowya	Principal Irrigation Officer, Lilongwe ADD
20.	Mr. E. Kayembe	Principal Irrigation Officer, Blantyre ADD
21.	Mr. T. M. Mpezeni	Principal Irrigation Officer, Kasungu ADD
22.	Mr. M. M. E. Mhango	Principal Irrigation Officer, Machinga ADD
23.	Mr. F. K. S. Simfukwe	Principal Irrigation Officer, Karonga ADD
24.	Ms. T. J. J. Kopa	Principal Irrigation Officer, Mzuzu ADD
25.	Mrs. P. N. Moyo	Snr. Irrigation Officer, Lilongwe ADD
26.	Mr. D. A. Juma	Snr. Ass. Irrigation Officer, Machinga ADD
27.	Mr. Edward K. Fulezala	Irrigation Officer, Kasungu ADD
28.	Mr. B.A.A Sumani	Irrigation Officer, Shire Valley ADD
29.	Mr. T. S. Dobvu	Irrigation Officer, Shire Valley ADD
30.	Mr. R. Maganga	Irrigation Officer, Shire Valley ADD
31.	Mr. J. O. Ngombe	Irrigation Officer, Shire Valley ADD
32.	Mr. E. Bozanah	Irrigation Officer, Blantyre ADD
33.	Mr. C.J Chamasowa	Irrigation Officer, Salima ADD
34.	Mr. A. Chilwa	DADO, Ntchisi RDP
35.	Mr. P. W. Kabuludzi	DADO, Dowa RDP
36.	Mr. Mphatso Magombo	DADO, Lilongwe RDP
37.	Mr. J. V. Chikoya	Ass. DADO, Dedza Hills RDP
38.	Mr. Joseph Bonongwe	Irrigation Officer, Dowa RDP
39.	Mr. Lucas Banda	Irrigation Officer, Ntchisi RDP
40.	Mr. C. H. Kayira	Irrigation Officer, Karonga RDP
41.	Mr. A.B.B.C. Cheyo	Snr. Ass. Irrigation Officer, Dedza Hills RDP
42.	Mr. M. N. Kumasala	Ass. Irrigation Officer, Lilongwe RDP

43. Mr. F.F Mzalule	Ass. Irrigation Officer, Ntchisi RDP
44. Mr. E. L. Musopole	Food Security Administrator, MOA
45. Mr. T. Msisua	Agr. & Rural Development Program Officer, MOA
46. Mr. G. Mvula	National Program Officer, FAO
47. Mr. M. Lungu	Agriculture Program Manager, Universal Concern
48. Mr. F.E. Kadwa	Project Manager, Small Farms Irri. Project, Chintheche
49. Mr. E.D Chidzungu	Project Manager, Small Farms Irri. Project, Mangochi
50. Mr. Gibson Kauta	Project Manager, HFCDP
51. Mr. T. M. Magombo	ACAEO-Agri-business, DAES
52. Mr. G. Chisanga	FSTIF / TS
53. Mr. E. Tsoka	FSTIF / TS
54. Mr. K. M. Chawla	DCP
55. Mr. M. R. Mumba	Irrigation Manager, GOM / EU Public Works Program
56. Mr. Yappy Silungwe	RE, Rural Income Enhancement Project
57. Mr. Hideo Okada	Smallholder Irrigation Development Advisor to DOI
58. Mr. U. Koganemaru	Advisor to Chitedze Research Center
59. Mr. Kotaro Tanaka	Senior Volunteer, JOCV

JICA HEADQUARTERS

1. Dr. Hideyuki Kanamori	Senior Advisor, Institute for International Cooperation

JICA MALAWI OFFICE

1. Mr. Tatsuya Murase	Deputy Resident Representative
2. Mr. Kiyonori Matsushima	Project Formulation Advisor
3. Mr. A. Thakwalakwa	Program Officer

JICA STUDY TEAM

1. Mr. Kosei Hashiguchi	Team Leader
2. Mr. Akihiko Hata	Project Monitoring / Financial Management System
3. Mr. James Chikungu	Counterpart (DOI)
4. Mr. Matthews Ngwira	Counterpart (DOI)

APPENDIX-3

RURAL SOCIETY AND PARTICIPATORY DEVELOPMENT

APPENDIX-3. RURAL SOCIETY AND PARTICIPATORY DEVELOPMENT

1. National Level Stakeholder Analysis
1-1 Group 1: Funding Organizations
1-2 Group 2: Service Providers
1-3 Group 3: Facilitators
1-4 Group 4: Beneficiaries
1-5 Group 5: Local Institutions

2. Problem Analysis at ADDs
2-1 Problem Tree at Lilongwe ADD
2-2 Problem Tree at Kasungu ADD
2-3 Problem Tree at Machinga ADD
2-4 Problem Tree at Salima ADD
2-5 Problem Tree at Mzuzu ADD
2-6 Problem Tree at Karonga ADD
2-7 Problem Tree at Blantyre ADD
2-8 Problem Tree at Shire Valley ADD

3. Problem Analysis at Clubs
3-1 Problem Tree at Mtuwanjovu Club (1-1), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD
3-2 Problem Tree at Duwu Club (1-2), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD
3-3 Problem Tree at Chimphonongo Club (1-4), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD
3-4 Problem Tree at Mgunda Club (1-7), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD
3-5 Problem Tree at Chikhasu and Mchiku Clubs (2-1, 2), Kanyama EPA, Dedza RDP, Lilongwe ADD
3-6 Problem Tree at Thom Village, Kanyama EPA, Dedza RDP, Lilongwe ADD
3-7 Problem Tree at Mtsetse Club (2-4), Bembeke EPA, Dedza RDP, Lilongwe ADD
3-8 Problem Tree at Kadiwa Club (2-5), Bembeke EPA, Dedza RDP, Lilongwe ADD
3-9 Problem Tree at Namanolo Club (2-7), Bembeke EPA, Dedza RDP, Lilongwe ADD
3-10 Problem Tree at Tikolore Club (3-1), Mvera EPA, Dowa RDP, Kasungu ADD
3-11 Problem Tree at Loyi Club (3-3), Mvera EPA, Dowa RDP, Kasungu ADD
3-12 Problem Tree at Msambaimfa Club (4-1), Kalira EPA, Ntchisi RDP, Kasungu ADD
3-13 Problem Tree at Gontha Club (4-2), Kalira EPA, Ntchisi RDP, KasunguADD
3-14 Problem Tree at Katema Club (4-3), Kalira EPA, Ntchisi RDP, KasunguADD
3-15 Problem Tree at Kasangadzi Club (4-4), Kalira EPA, Ntchisi RDP, KasunguADD

4. Action Plans at Clubs
4-1 Action Plan of Duwu Club (1-2), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD
4-2 Participants of Planning Workshop, Duwu Club (1-2), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD
4-3 Action Plan of Chimphonongo Club (1-4), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD
4-4 Participants of Planning Workshop, Chimphonongo Club (1-4), Mpenu EPA, Lilomgwe RDP, Lilongwe
4-5 Action Plan of Chikhasu Club (2-1), Kanyama EPA, Dedza RDP, Lilongwe ADD
4-6 Participants of Planning Workshop, Chikhasu Club (2-1), Kanyama EPA, Dedza RDP, Lilongwe ADD
4-7 Action Plan of Mchiku Club (2-2), Kanyama EPA, Dedza RDP, Lilongwe ADD
4-8 Participants of Planning Workshop, Mchiku Club (2-2), Kanyama EPA, Dedza RDP, Lilongwe ADD
4-9 Action Plan of Livizi Club (2-3), Kanyama EPA, Dedza RDP, Lilongwe ADD
4-10 Participants of Planning Workshop, Livizi Club (2-3), Kanyama EPA, Dedza RDP, Lilongwe ADD
4-11 Action Plan of Mtsetse Club (2-4), Bembeke EPA, Dedza RDP, Lilongwe ADD
4-12 Participants of Planning Workshop, Mtsetse Club (2-4), Bembeke EPA, Dedza RDP, Lilongwe ADD
4-13 Action Plan of Mtanda Club (2-6), Bembeke EPA, Dedza RDP, Lilongwe ADD
4-14 Participants of Planning Workshop, Mtanda Club (2-6), Bembeke EPA, Dedza RDP, Lilongwe ADD
4-15 Action Plan of Namanolo Club (2-7), Bembeke EPA, Dedza RDP, Lilongwe ADD
4-16 Action Plan of Tikolore Club (3-1), Mvera EPA, Dowa RDP, Kasungu ADD
4-17 Participants of Planning Workshop, Tikolore Club (3-1), Mvera EPA, Dowa RDP, Kasungu ADD
4-18 Action Plan of Tilime Club (3-2), Mvera EPA, Dowa RDP, Kasungu ADD
4-19 Participants of Planning Workshop, Tilime Club (3-2), Mvera EPA, Dowa RDP, Kasungu ADD
4-20 Action Plan of Loyi Club (3-3), Mvera EPA, Dowa RDP, Kasungu ADD
4-21 Participants of Planning Workshop, Loyi Club (3-3), Mvera EPA, Dowa RDP, Kasungu ADD
4-22 Action Plan of Gontha Club (4-2), Kalira EPA, Ntchisi RDP, KasunguADD
4-23 Participants of Planning Workshop, Gontha Club (4-2), Kalira EPA, Ntchisi RDP, KasunguADD
4-24 Evaluation at Katema Club (4-3), Kalira EPA, Ntchisi RDP, KasunguADD
4-25 Action Plan at Katema Club (4-3), Kalira EPA, Ntchisi RDP, KasunguADD
4-26 Participants of Workshop, Katema Club (4-3), Kalira EPA, Ntchisi RDP, KasunguADD
4-27 Action Plan at Kasangadzi Club (4-4), Kalira EPA, Ntchisi RDP, KasunguADD
4-28 Participants of Planning Workshop, Kasangadzi Club (4-4), Kalira EPA, Ntchisi RDP, KasunguADD

1-1 Group 1: Funding Organizations

Group 1 Members:	T. Beza	T. Mpezeni	Katsusuke Niwa	T. Tiembo	Sizilande

Funding Organizations:	Donors	NGOs	Finance institutions

Detail Analysis of Funding Organizations

	General Characteristics	*Strength*	*Weaknesses*	*Problems*
Donors	Recourse providers	They have adequate funds	Tough conditions in usage of funds	Pulling out (too fast)
	International organizations	Bring new technologies	Bring technologies which are not suitable for the host country	Lack of sustainability
	They are short-term	Provide training	Inadequate research	
NGOs	They are non-governmental	They provide funds and resources	They depend on government staff most of the time	Most of them are not sustainable
	They are service providers	They are target oriented	Over-dependence on donors	Funding is for a specific time period (usually too short)
	Most of them are funded by donors			
	Most of their projects are small			

Note: The card "Most of them are funded by donors" was also in the column of "weakness" first, but was decided to be only in "general characteristics" after the discussion. The conclusion is that it becomes weakness only when NGOs are controlled by the donors.

1-2 Group 2: Service Providers

Stakeholder Analysis, January 09, 2003

Group 2 Members:	F. Malunga	C. Nkuna	G. Mwepa	A. Tembo	K. Matsushima	W.P. Kalua

Service Providers:	Marketing organizations	Equipment suppliers	Input suppliers	Traders	Local artisans

Detail Analysis of Service Providers

	General Characteristics	*Strength*	*Weaknesses*
Organization	Profit oriented	Liberalized economy	Limited distribution
	Low product/service quality	Known by customers	Low output
	Low level of competition	Liberalized economy	Working independently
		High service demand	Unreliability
Capacity	Poor product handling	Manpower availability	Low managerial capacity
Resources	Limited resource base (capital: local artisans and traders)	Tax exemption (irrigation equipment)	High interest rates
			Low backup support (spare parts)
Information	Limited advertising		Limited information sharing

1-3 Group 3: Facilitators

Group 3 Members:	Abel Khonje	V.A.L. Mkandawire	Dr. Munthali	Erica Maganga (Ms)

Facilitators:	MoAI	Irrigation Department	ADD	RDP	Extension workers	Non governmental organizations	Other departments	Health workers	Environmental workers / specialists

Detail Analysis of MoAI

	General Characteristics	*Strength*	*Weaknesses*	*Problems*
Organization	8 ADDs, 32 RDs, 186 EPAs	Agro-economical setting	Low staff / farmer ratio (1/2,000)	Lack of motivation
		Strategic location of extension staff		
Capacity	Most posts vacant	Structure in place	Bureaucratic procedures	Staff attrition
	Gender imbalance		Poor institutional memory	Lack of replacement
				Inadequate specialized/trained personnel
Resources	Budgetary constraints	Offices available	Under-provision of financial resources	Lack of mobility
		Government commitment	Poor generation of resources	Inadequate resources
		Prioritization of activates		Dwindling resources for implementing
Information flow	Inadequate feedback	Data available	Limited access to data available	Poor quality data
	Poor coordination at all levels		Poor institutional capacity to build database - equip	Unreliable data

Detail Analysis of Non Governmental Organizations

	General Characteristics	*Strength*	*Weaknesses*	*Problems*
Organization		Operate at grass root level	Poor coordination	Poor organization structures
		Many NGOs	Low coverage & localized	
Capacity	Localized	Limited government interference	Don't have qualified staff	Most don't have own staff
		Can hire specialized skills		Short term
		Are results oriented		Too many functions
Resources	Most well funded	Easier access to resources		Endanger the extension system e.g.. Paying
Information flow	Limited to their project	Have information on their projects	Poor coordination between NGOs & government	

1-4 Group 4: Beneficiaries

Group 4 Members:	C.S. Khonje	E.P. Ching'amba	M.R. Mumba	M.R. Mkwamba	P.W. Muleta

Beneficiaries:	Farmers	Women Groups	Youth Clubs

Detail Analysis of Farmers

General Characteristics	*Strength*	*Weaknesses*	*Problems*
Dependent to loans	Willing to work	Illiterate	Frequent illness
Dependent to extension advisors	Has land	Late adaptors of technology	Operations not done timely
Dependent to government	Socially responsive	Over dependency on the hoe	Low productivity
Dependent to Weather		Generally poor	Narrow food base / source
		Mostly works as an individual	Poverty
		Culturally bound	Limited access to media
		Idling during dry season	Poor eating habits
		Lack of self transformation	

Detail Analysis of Women Groups

General Characteristics	*Strength*	*Weaknesses*	*Problems*
Over dependence on men	Easy adopters	Jealousy	Landlessness
Generally marginalized	Reliable	Highly illiterate	Poverty
	Hard working	Easily misled	Extended family
	Good at sourcing food	Gossip	Property grabbing
	Endure		

Note: Discussion was made on the weaknesses of "women groups", but the cards stayed as they were. The characteristics here are not absolute, but relative to the characteristics of "farmers".

Detail Analysis of Youth Clubs

General Characteristics	*Strength*	*Weaknesses*	*Problems*
Disobedience	Energetic	Laziness	HIV/AIDS
Indiscipline	Socially interactive	Easily misled (foreign culture)	
	Very open	Not dependable	

1-5 Group 5: Local Institutions

Group 5 Members:	G.J.C. Kauta	J.K. Chisenga	C.C. Khonje	J.T. Kopa	R.C. Kachuma (Ms)

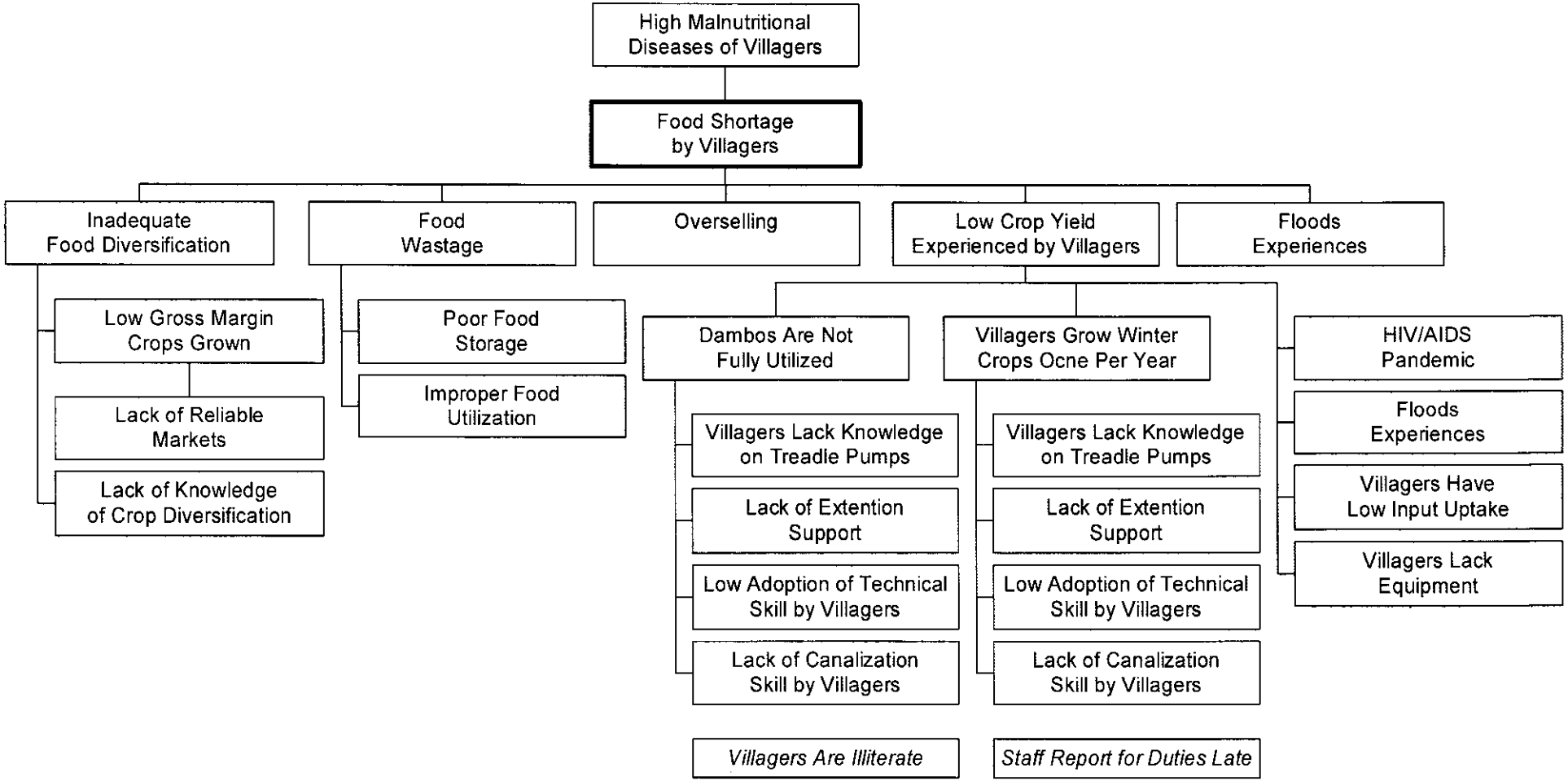
Local Institutions:	District Assemblies	Area Development Committees	T/A & other local community leaders	Village headmen	Counselors	Politicians	Religious leaders

Detail Analysis of District Assemblies

	Organization	*Resources*	*Information (flow)*	*Capacity (individual)*
General Characteristics	Permanent structure	Government budget	Top-down kind of information flow	Departmental Stratification
	District based	District Development Fund		
		Utilization of government department staff at district level		
		Indigenous resources		
Strength	Grass root level structures	Human resource (labor) plenty	Quick	Indigenous (local) knowledge + skills
	Well structured	Revenue collection opportunities available		
	Positive political influence			
	Local recognition			
	Decentralization			
Weakness / Problems (difficulties)	Negative political influence	Over-dependence on government subvention	Inadequate information systems	Inadequate capacity at all levels
		Technical - inadequate	Lack of information on potential	Limited training capacity of institutions
		Financial - inadequate	Feedback mechanism - poor	Inadequate service providers
		Lack of mechanisms for collection of revenue		Lack of hire - fire power / ability

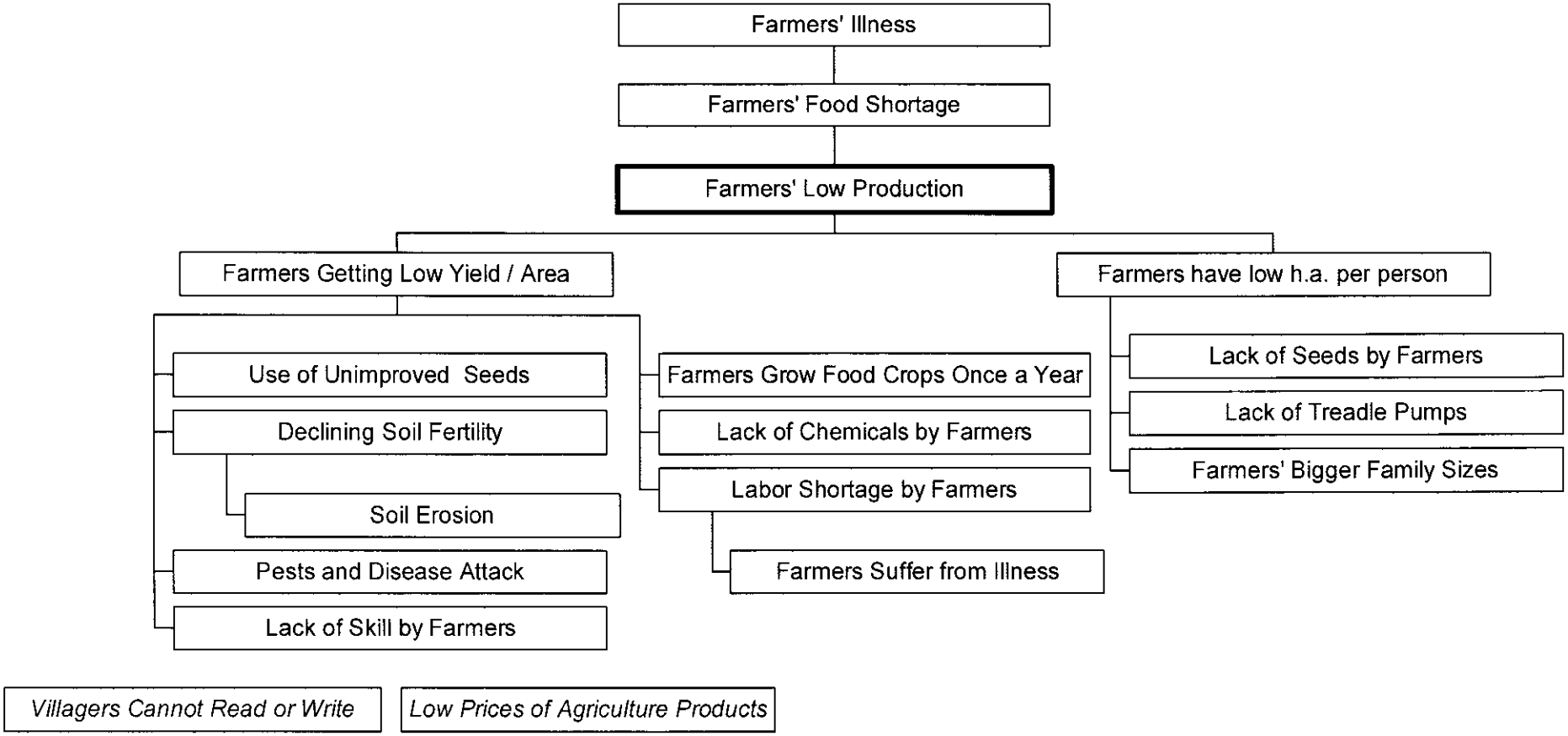
2-1 Problem Tree at Lilongwe ADD

January 27, 2003



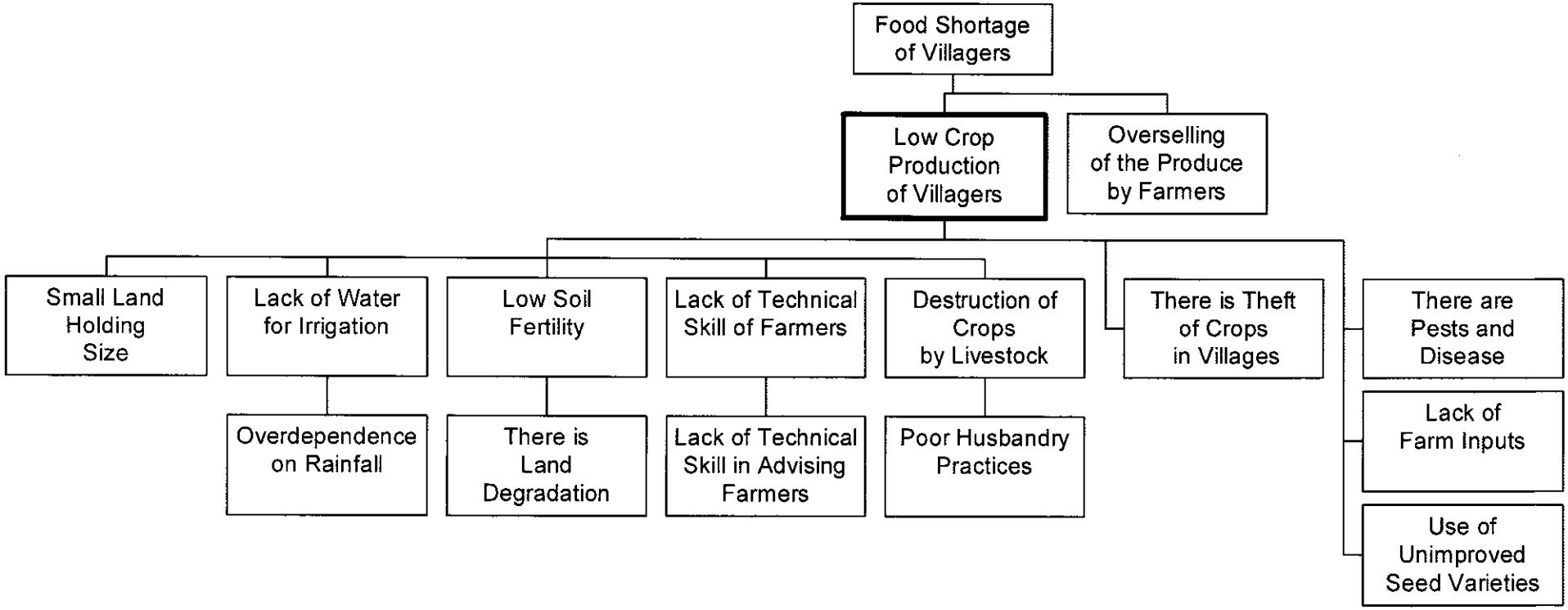
2-2 Problem Tree at Kasungu ADD

January 28, 2003



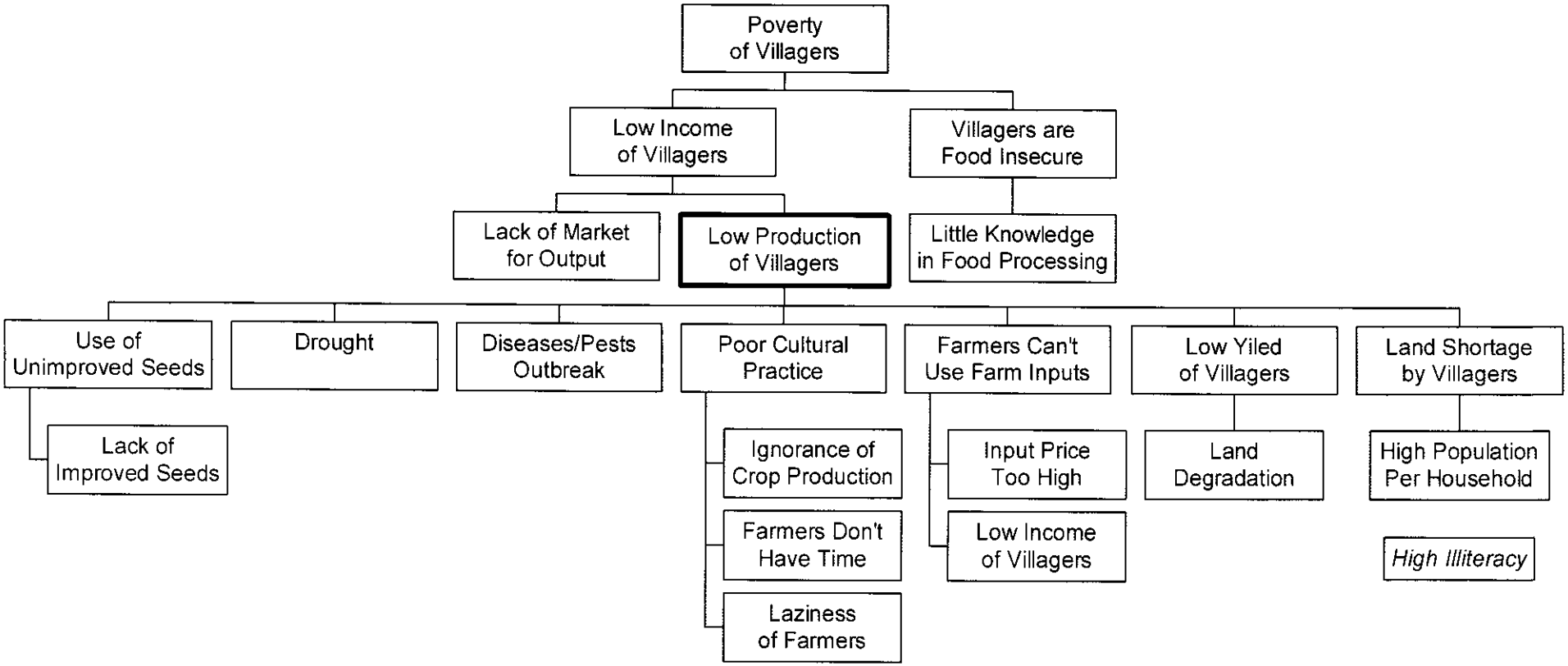
2-3 Problem Tree at Machinga ADD

January 29, 2003



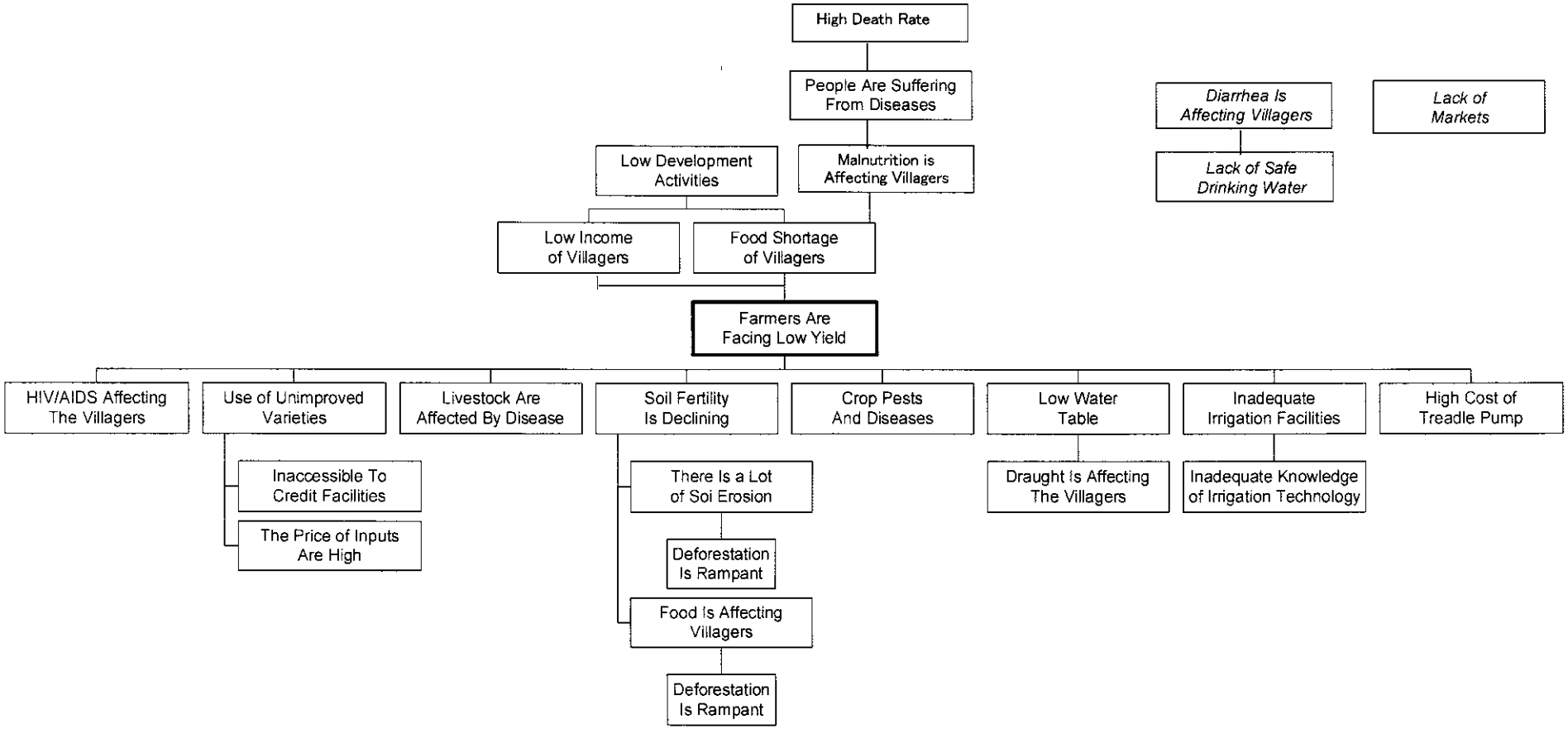
2-4 Problem Tree at Salima ADD

January 30, 2003



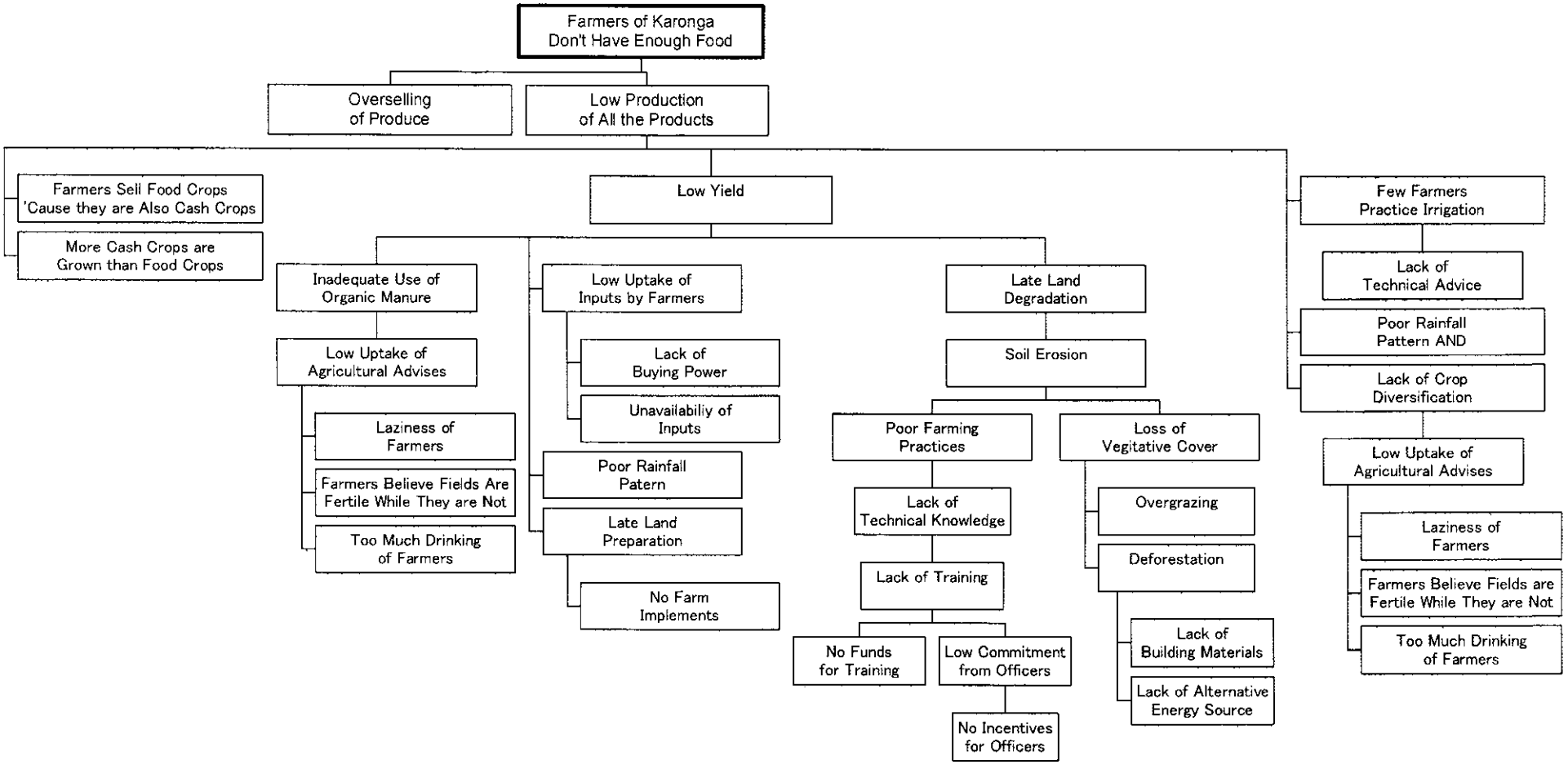
2-5 Problem Tree at Mzuzu ADD

February 4, 2003



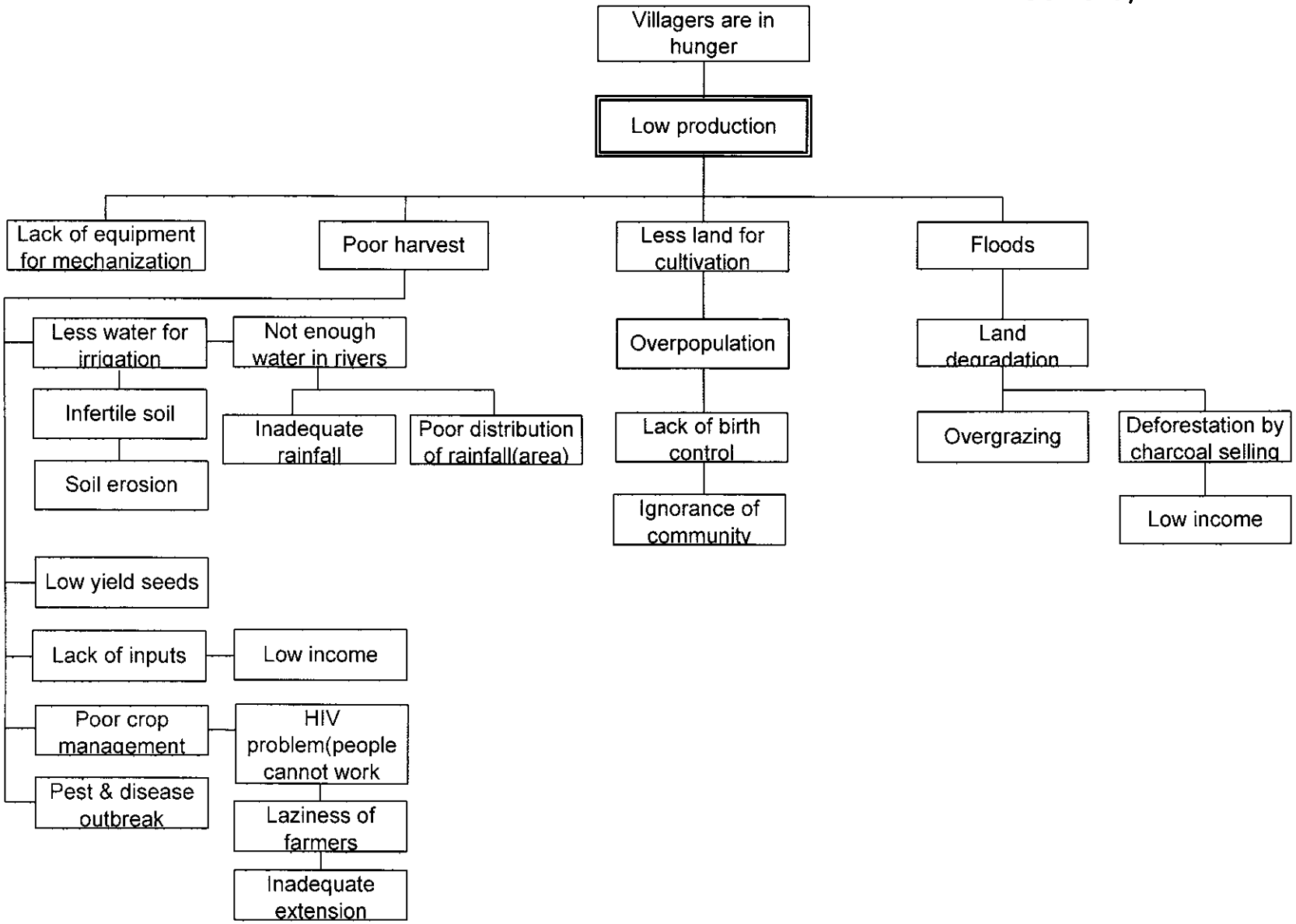
2-6 Problem Tree at Karonga ADD

June 6, 2003



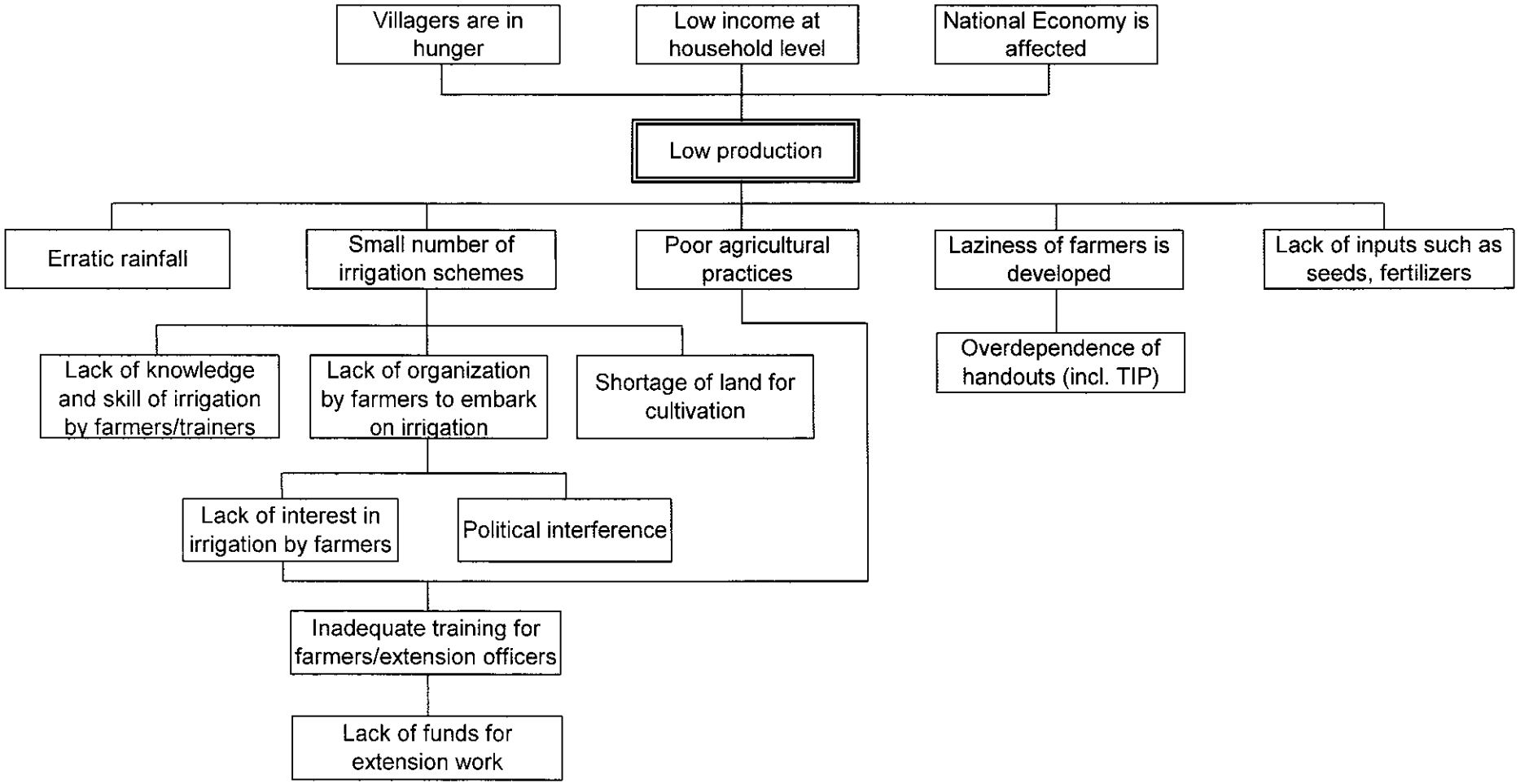
2-7 Problem Tree at Blantyre ADD

June 9, 2003



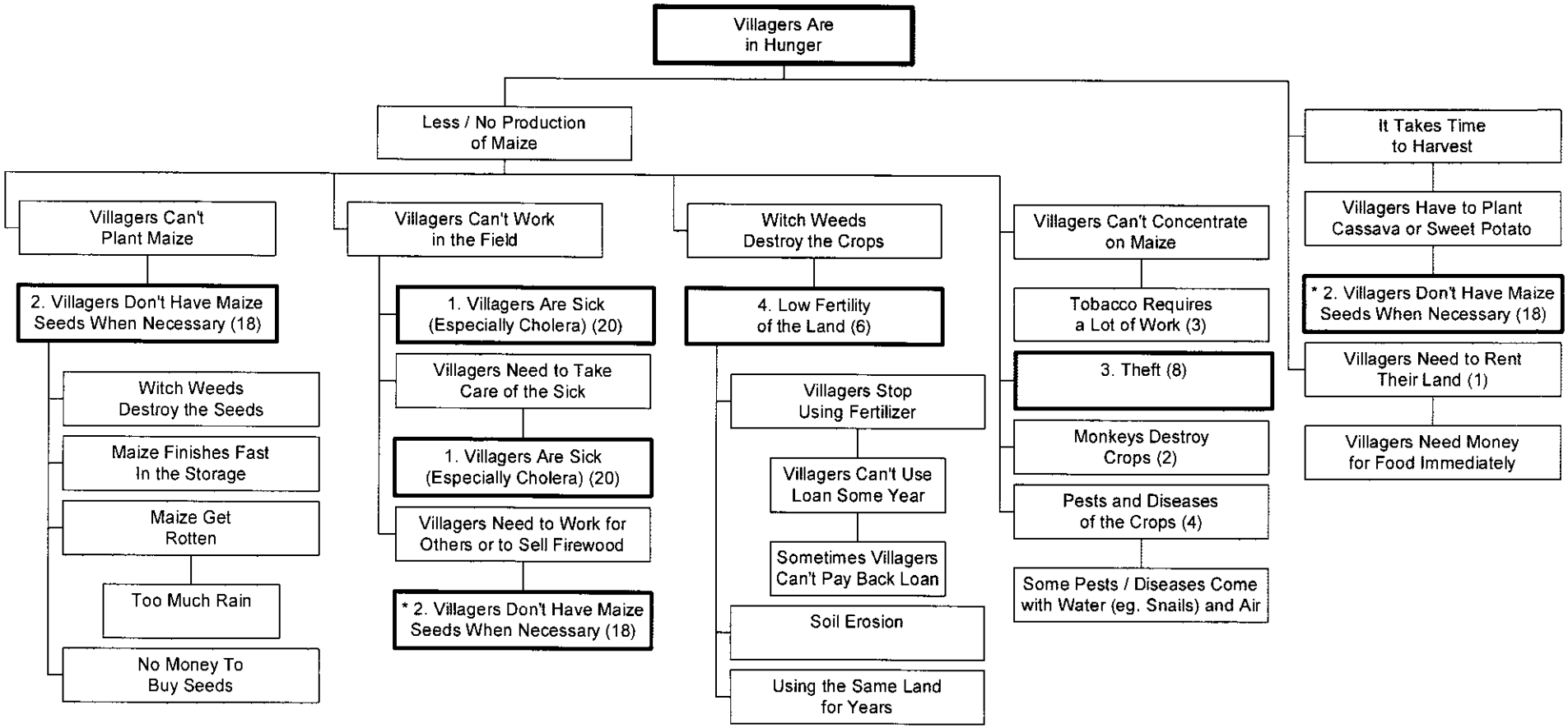
2-8 Problem Tree at Shire Valley ADD

June 10, 2003



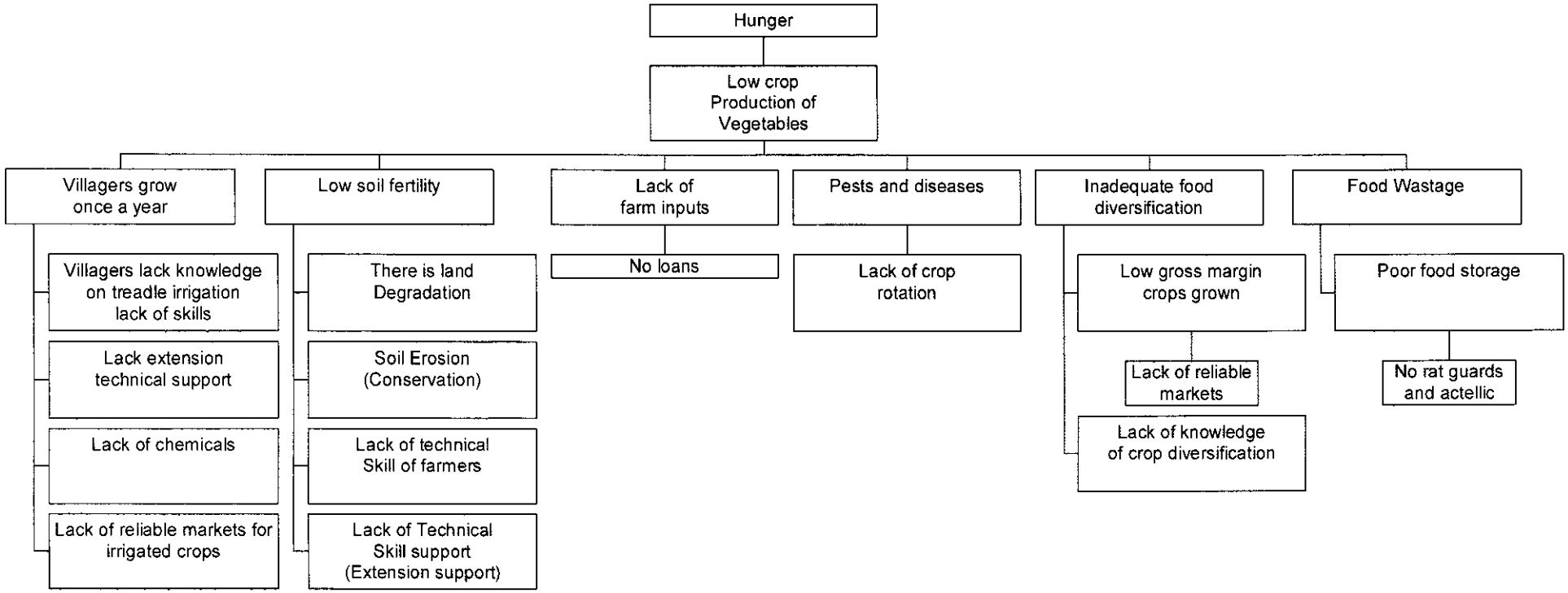
3-1 Problem Tree at Mtuwanjovu Club (1-1), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD

February 19, 2003



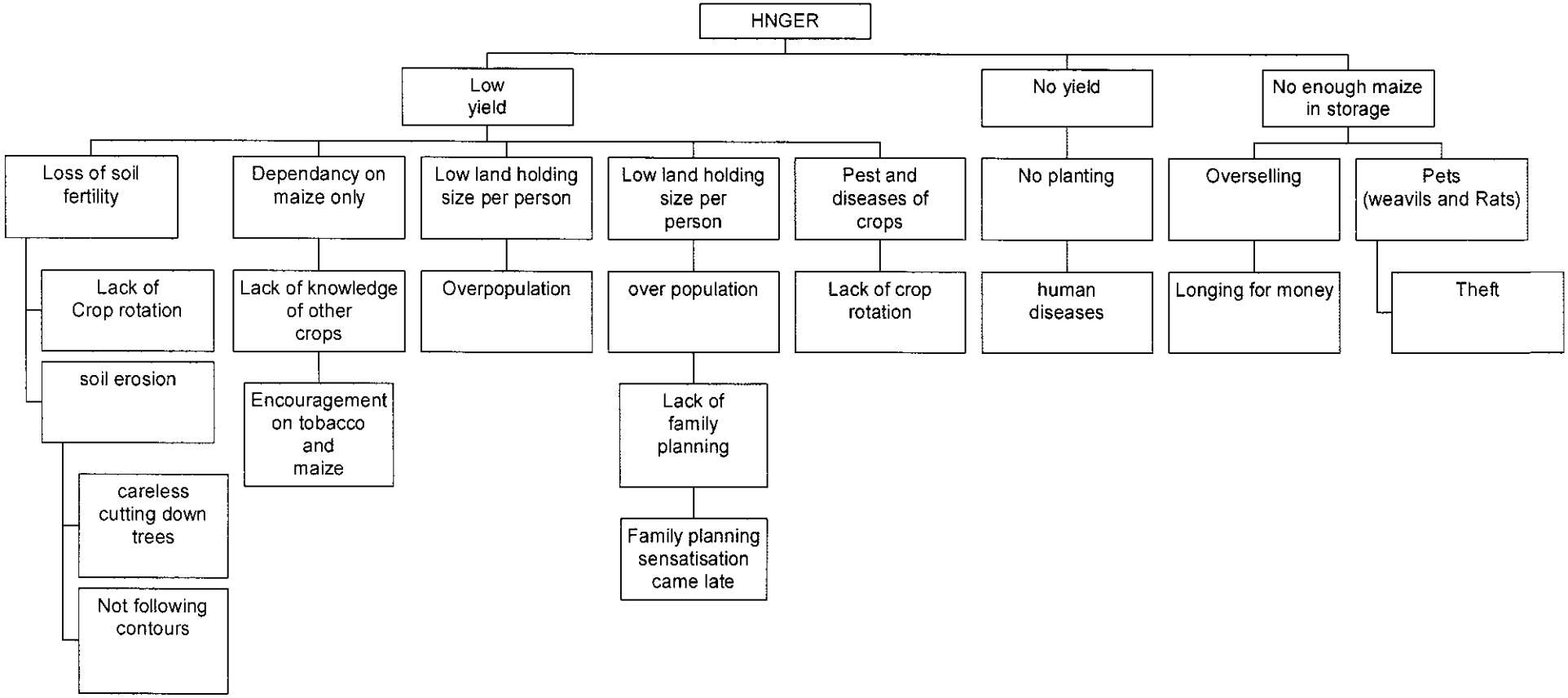
3-2 Problem Tree at Duwu Club (1-2), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD

May 28, 2003



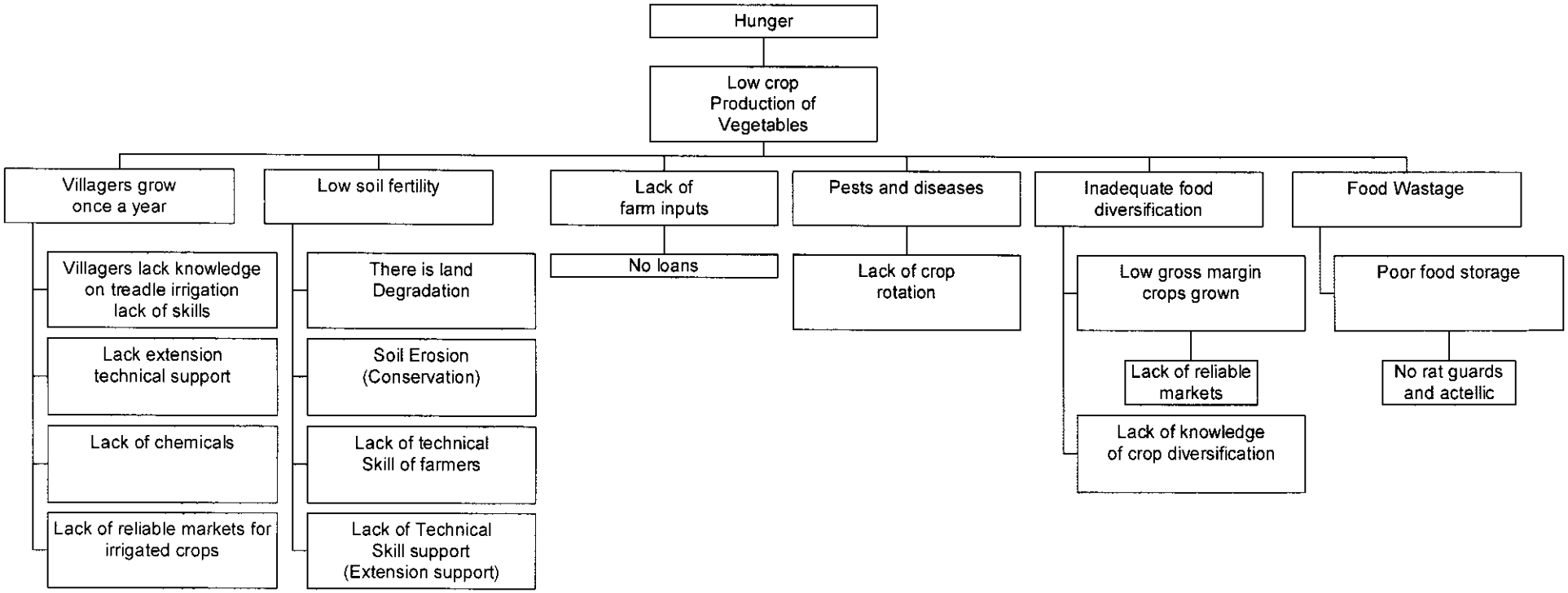
3-3 Problem Tree at Chimphonongo Club (1-4), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD

June 19, 2003



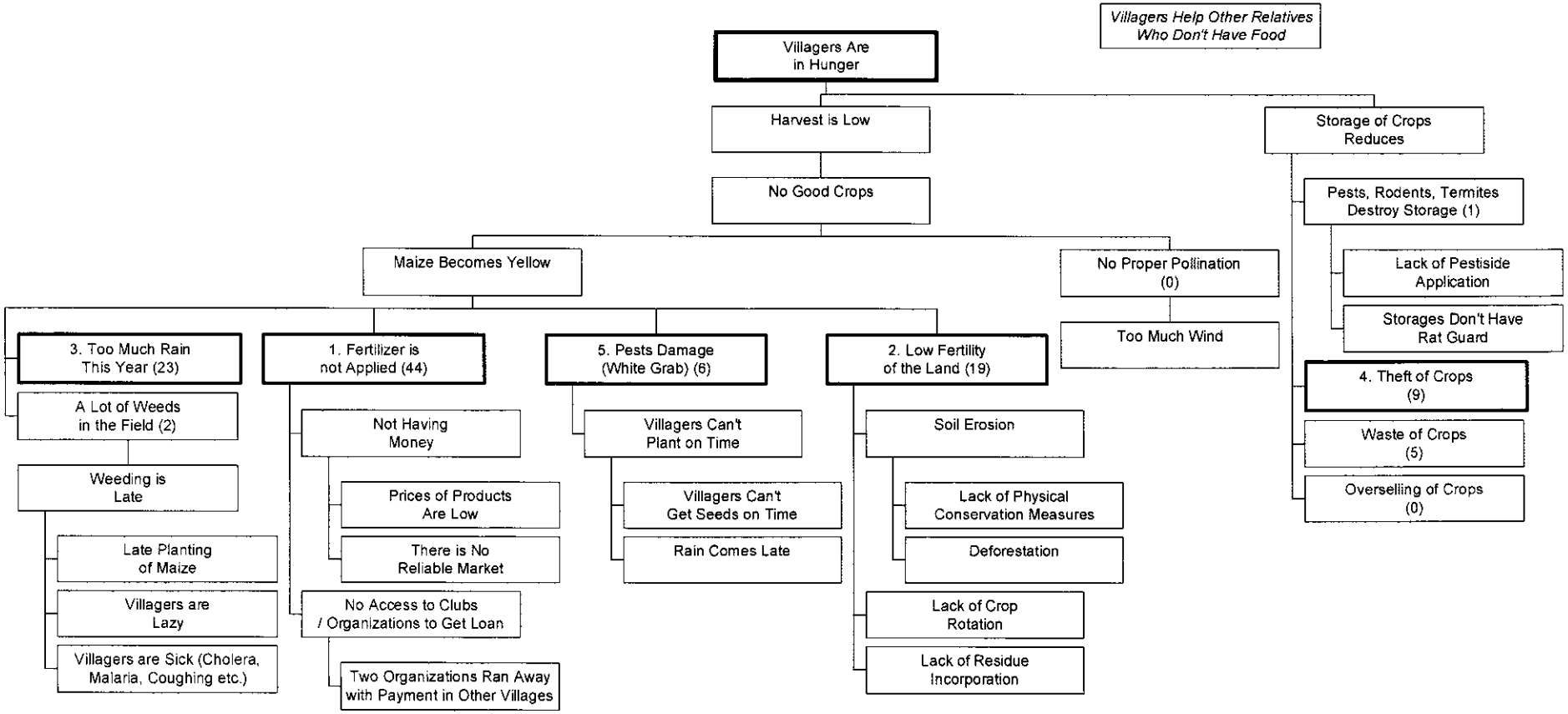
3-4 Problem Tree at Mgunda Club (1-7), Mpenu EPA, Lilomgwe RDP, Lilongwe ADD

May 29, 2003



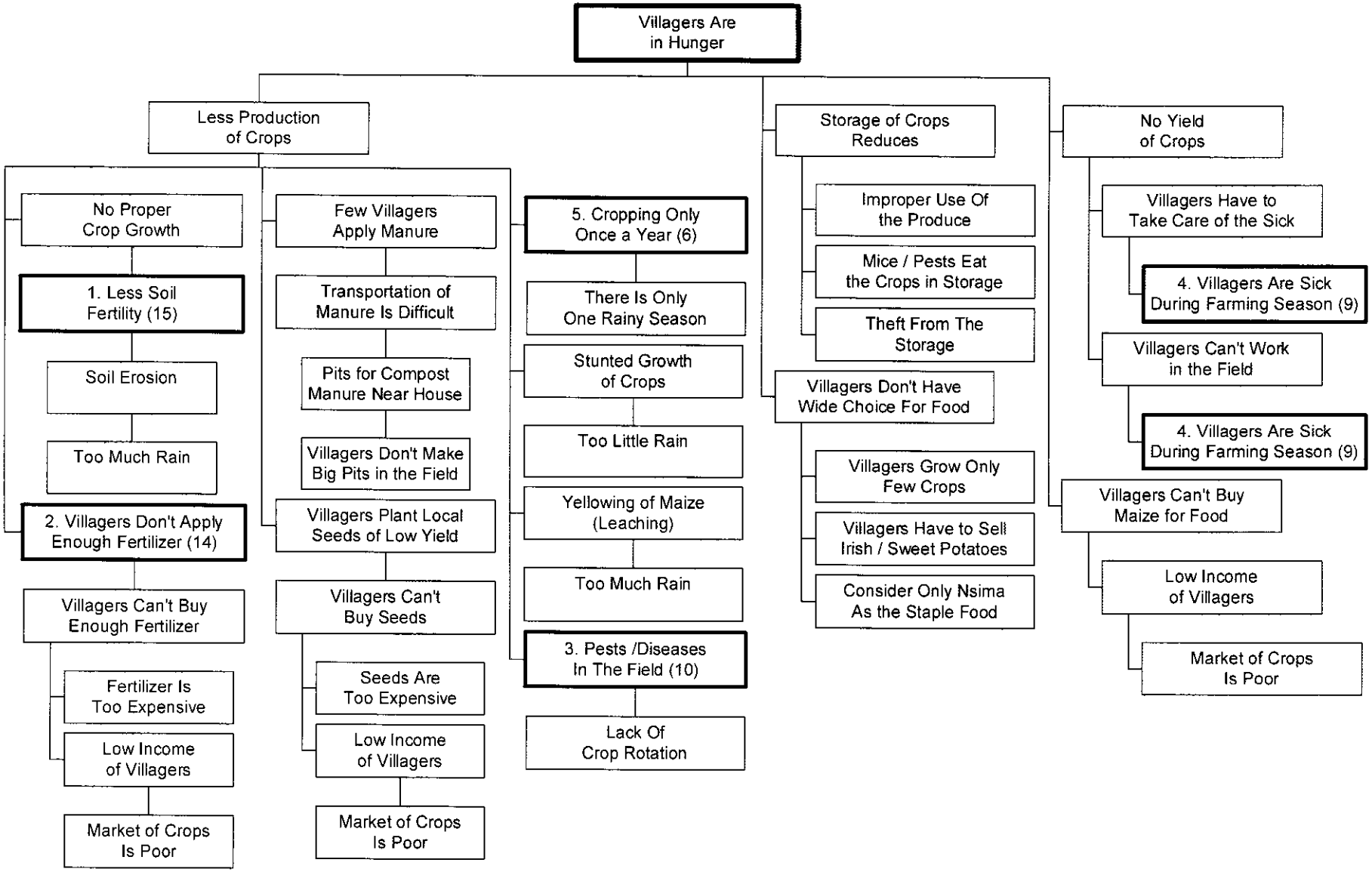
3-5 Problem Tree at Chikhasu and Mchiku Clubs (2-1, 2), Kanyama EPA, Dedza RDP, Lilongwe ADD

February 24, 2003



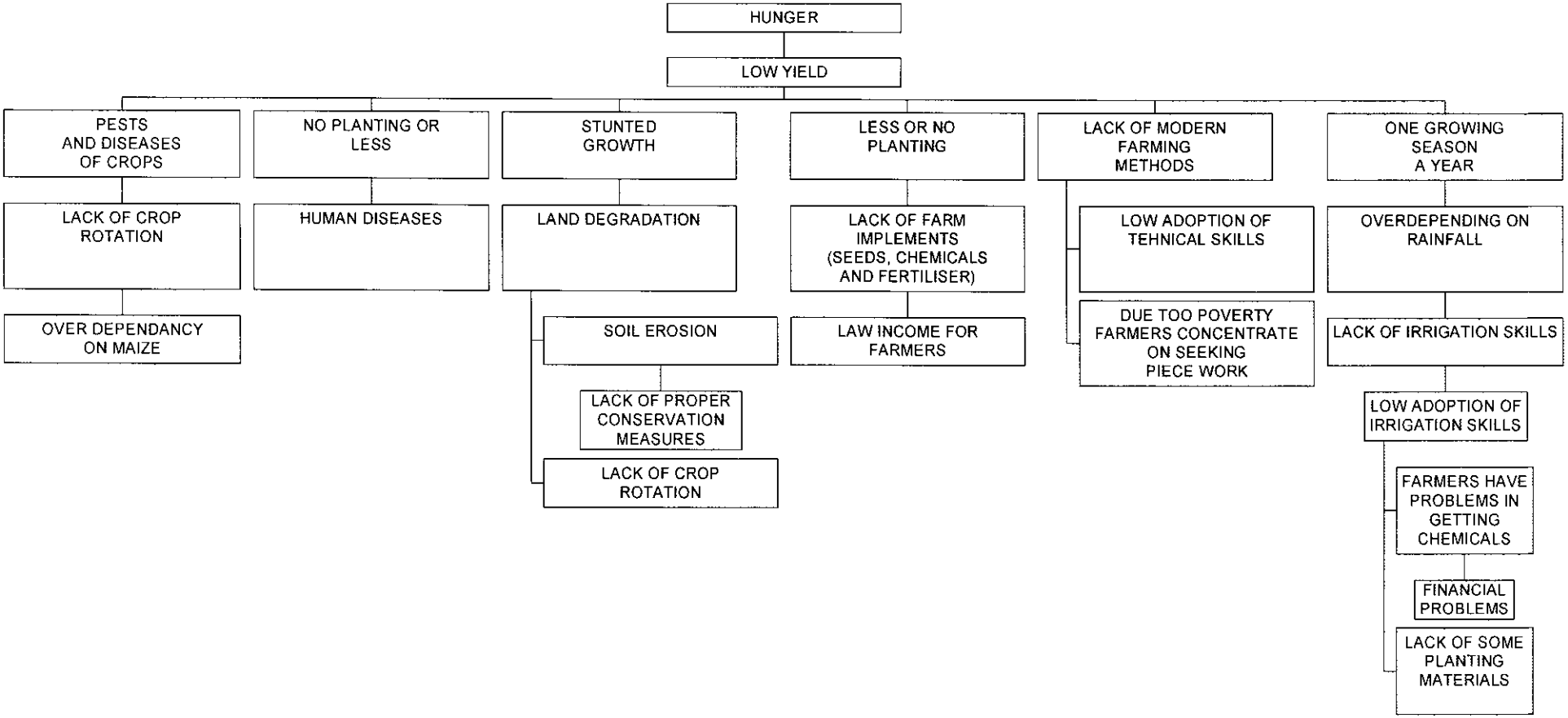
3-6 Problem Tree at Thom Village, Kanyama EPA, Dedza RDP, Lilongwe ADD

February 18, 2003



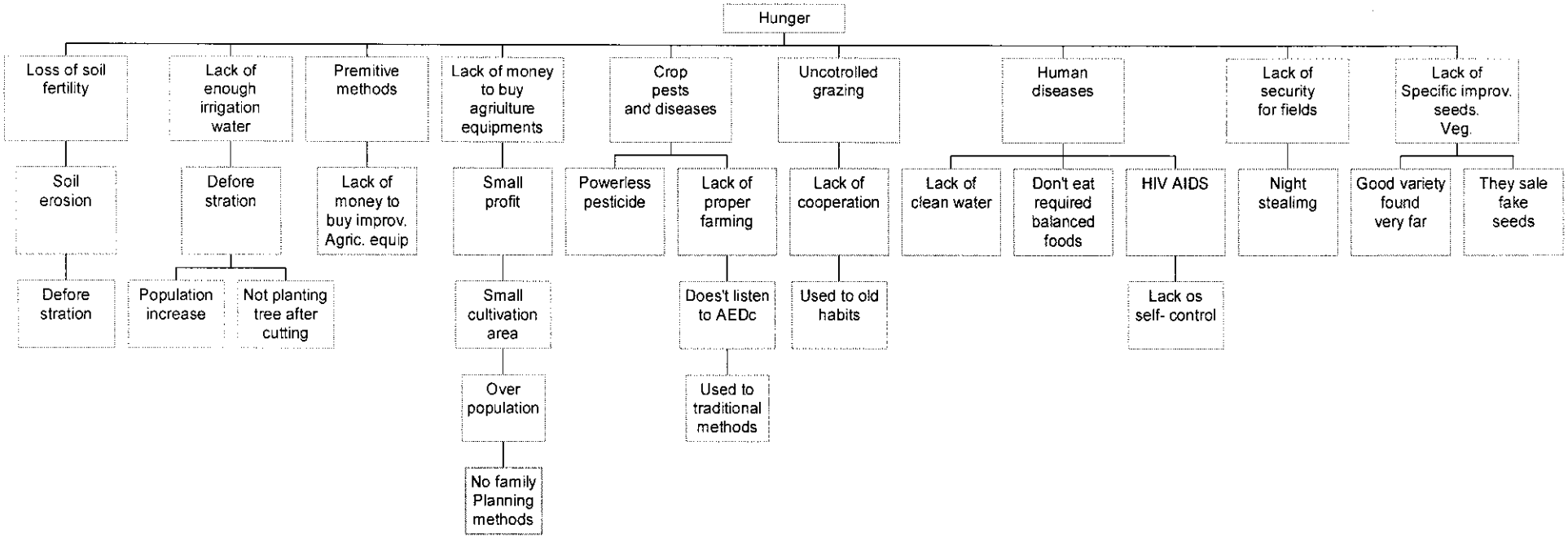
3-7 Problem Tree at Mtsetse Club (2-4), Bembeke EPA, Dedza RDP, Lilongwe ADD

June 3, 2003



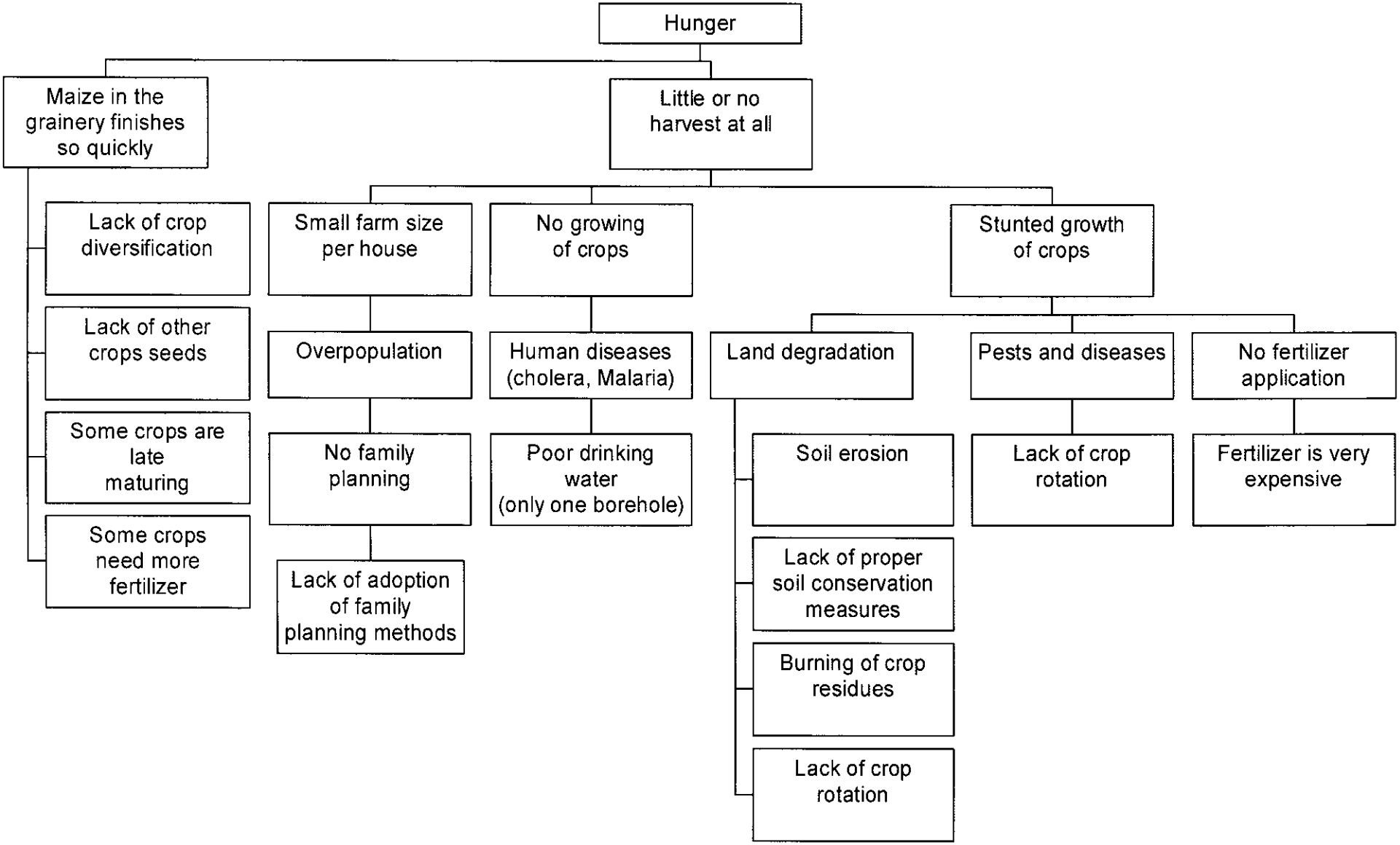
3-8 Problem Tree at Kadiwa Club (2-5), Bembeke EPA, Dedza RDP, Lilongwe ADD

June 24, 2003



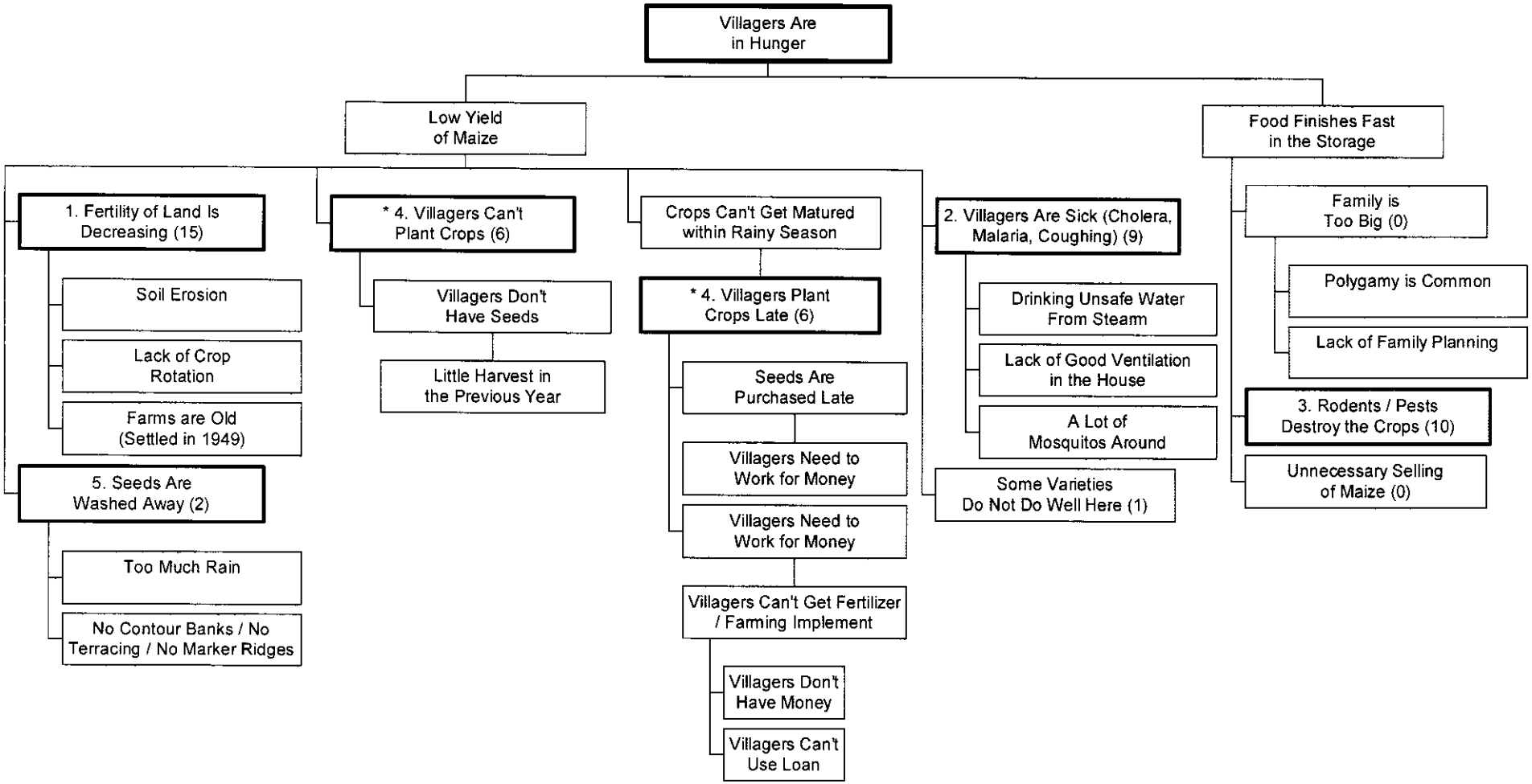
3-9 Problem Tree at Namanolo Club (2-7), Bembeke EPA, Dedza RDP, Lilongwe ADD

June 14, 2003



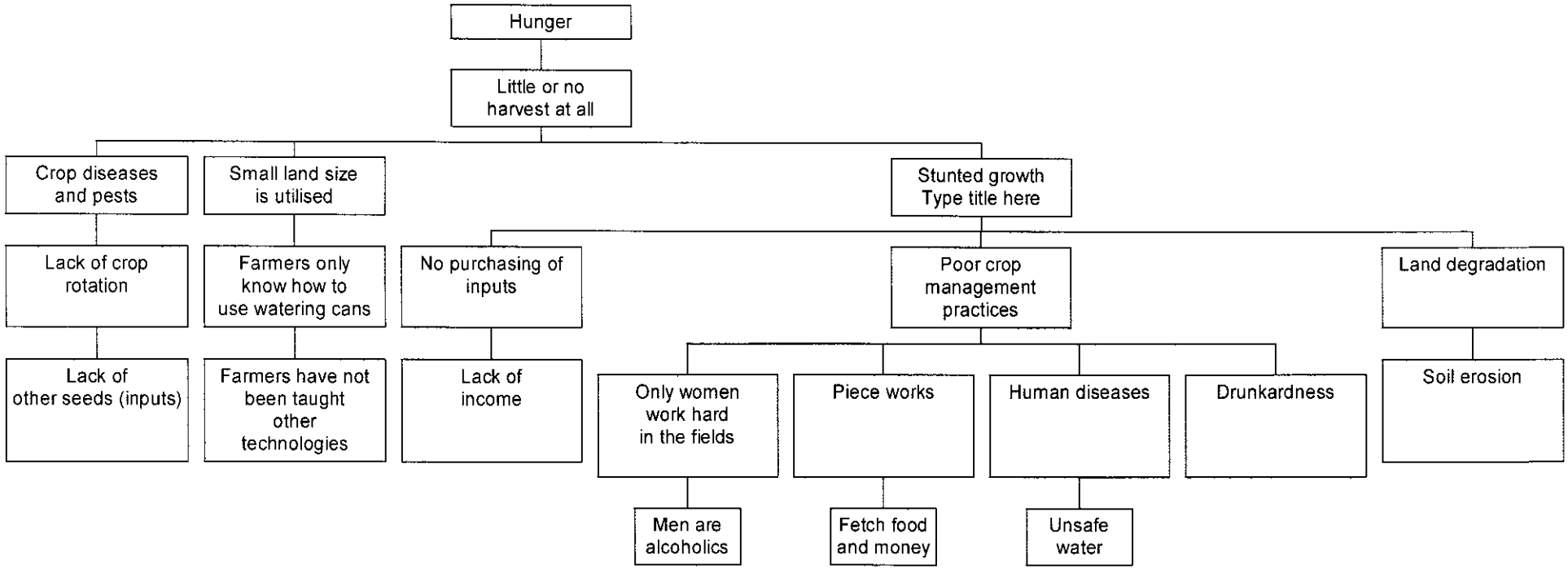
3-10 Problem Tree at Tikolore Club (3-1), Mvera EPA, Dowa RDP, Kasungu ADD

February 20, 2003



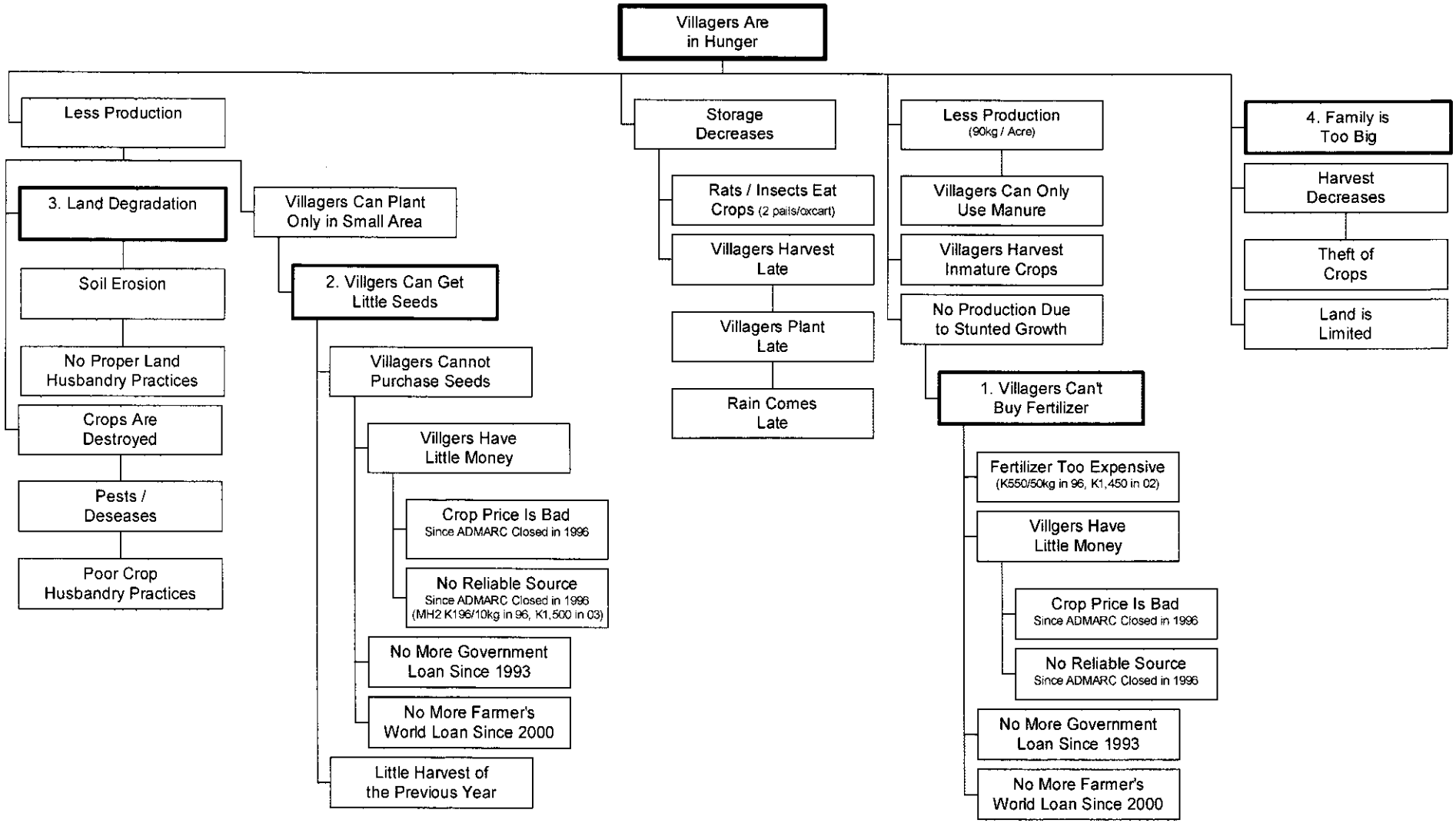
3-11 Problem Tree at Loyi Club (3-3), Mvera EPA, Dowa RDP, Kasungu ADD

July 4, 2003



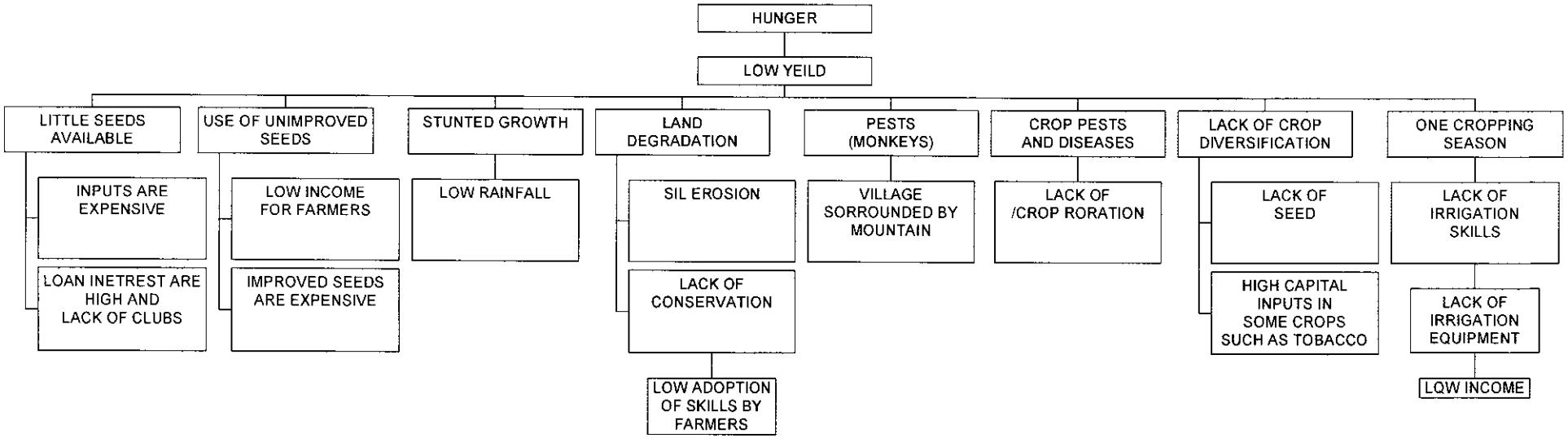
3-12 Problem Tree at Msambaimfa Club (4-1), Kalira EPA, Ntchisi RDP, Kasungu ADD

February 17, 2003



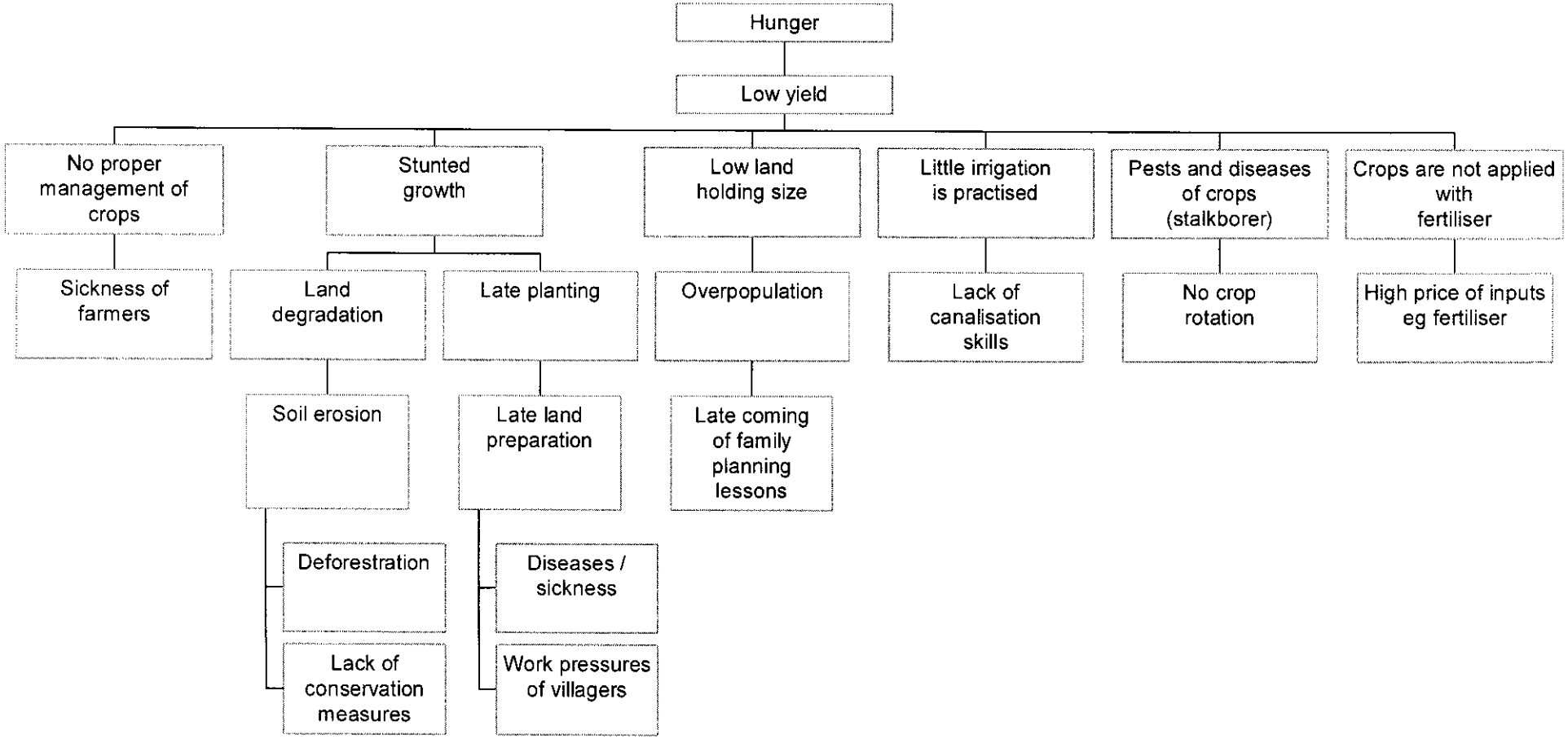
3-13 Problem Tree at Gontha Club (4-2), Kalira EPA, Ntchisi RDP, KasunguADD

May 30, 2003



3-14 Problem Tree at Katema Club (4-3), Kalira EPA, Ntchisi RDP, KasunguADD

June 20, 2003



3-15 Problem Tree at Kasangadzi Club (4-4), Kalira EPA, Ntchisi RDP, KasunguADD

June 27, 2003