

ケニア半乾燥地  
社会林業普及モデル開発計画  
計画打合せ調査報告書

平成 10 年 6 月

国際協力事業団

## 序 文

国際協力事業団は、ケニア国政府からの技術協力の要請を受け、平成9年11月から同国において半乾燥地社会林業普及モデル開発計画を開始しました。

このたび当事業団は、本計画の今後の実行計画を協議・検討するため、平成10年5月6日から5月17日まで、国際協力事業団林業水産開発協力部林業技術協力課課長代理 藤井 知之を団長とする計画打合せ調査団を同国に派遣しました。調査団は、ケニア国政府関係者や派遣専門家らと協議を行うとともに、プロジェクト・サイトでの現地調査を実施し、帰国後の国内作業を経て調査結果を本報告書にとりまとめました。

今回の調査・協議の結果が本計画の協力目標達成に役立つとともに、この技術協力事業の実施が両国の友好・親善の一層の発展に寄与することを期待いたします。

終わりに、この調査にご協力とご支援をいただいた関係者の皆様に対し、心から感謝の意を表します。

平成10年6月

国際協力事業団  
理事 亀若 誠

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### 付属資料

協議議事録 (Minutes of Meeting)

## 1 調査の目的

ケニアでは、過去 20 年間に於いて人口が倍増したことから、薪炭の伐採、過放牧、無秩序な耕作地の拡大が進み、森林荒廃が深刻化している。このような状況の下、ケニア国政府は半乾燥地における造林技術を開発・改良すること、そして開発された技術を利用し、農民たちによる農地林造成の普及モデルを確立することを目的として我が国にプロジェクト方式技術協力を要請してきた。

本調査団では、1997 年 11 月に締結された討議議事録 (Record of Discussions; R/D) に基づき、現在までの進捗状況及び問題点を把握し、今後の協力期間中に実施する活動の具体的な内容についてプロジェクト及び相手国政府と協議し、プロジェクトデザインマトリックス (Project Design Matrix; PDM) 及び活動計画 (Plan of Operation; PO) を作成し、協議内容をモニタリング・評価計画書として議事録 (Minutes of Meeting; M/M) にまとめて署名することを目的とする。

## 2 調査日程

調査期間：1998 年 5 月 6 日～5 月 17 日

1	1998/5/6	Wed	成田発→ヨーロッパ経由
2	5/7	Thu	ナイロビ着 JICA ケニア事務所打ち合わせ、大使館表敬、研究技術省表敬、日本人専門家との打ち合わせ
3	5/8	Fri	天然資源省、KEFRI 本部、林業局表敬
4	5/9	Sat	資料整理
5	5/10	Sun	移動 (ナイロビ→キツイ)、SFTP で対象としたモデル農家等のサイト視察
6	5/11	Mon	キツイ郡林業事務所表敬、サイト視察 (パイロットフォレスト)、M/M 協議
7	5/12	Tue	M/M 協議
8	5/13	Wed	移動 (キツイ→ナイロビ)、M/M 案作成
9	5/14	Thu	合同調整員会
10	5/1	Fri	M/M 署名、大使館、事務所報告
11	5/16	Sat	資料整理
12	5/17	Sun	移動 (ナイロビ→タンザニア・キリマンジャロ村落林業計画フェーズ 2 F/U 運営指導調査)

### 3 調査団員

総括 藤井 知之 (JICA 林業水産開発協力部林業技術協力課長代理)  
計画管理 滝 勝也 (JICA 林業水産開発協力部林業技術協力課 職員)

### 4 主要面談者

#### (1)Ministry of Research Technology (研究技術省、MRT)

Eng. Sharawe Permanent Secretary  
Amb. P. Mathanjuki Deputy Secretary / research Institute  
Ms. Jane L. Chohae Senior Assistant Secretary  
Mr. H. K. Macharia

#### (2)Ministry of Natural Resources (天然資源省、MNR)

Mr. Mbaka Permanent Secretary  
Mr. G. K. Muwargi Economist

#### (3)Kenya Forestry Research Institute (ケニア林業研究所、KEFRI)

Dr. P. K. A. Konuche Director  
Dr. B. N. Kigomo Deputy Director  
Mr. G. K. Cheboiwo Kitui Center Director  
Mr. B. Ownor Researcher / Trainer  
Mr. Paul Barasa Information Officer  
Mr. B. Muok Pilot Forest Manager  
Ms. J.K.Musyoki Extension Method / Information

#### (4)Forestry Department (林業局、FD)

Dr. K. Kipkore Chief Conservator of Forests  
Mr. G. Ochieng Deputy Chief Conservator of Forests  
Mr. D. W. Muita Head, Forest Extension Services Branch  
Mr. F. M. Ngatiah Extension Training  
Mr. A. M. Gondo District Forest Officer, Kitui

#### (5)在ケニア日本大使館

川戸 英騎 書記官

#### (6)JICA 長期専門家

三島 征一	チーフアドバイザー
齋藤 克郎	アシスタントチーフアドバイザー／業務調整
野田 光弘	技術開発
南 達彦	農地林造成（技術）
剣持 賢一	農地林造成（普及）
山内 弘美	普及手法・情報
佐藤 稔	社会林業普及計画

#### (7)ケニア JICA 事務所

田上 実	事務所長
松本 淳	次長
阿部 浩之	所員

## 5 調査概要

1. 研究技術省（MRT）次官、天然資源省（MNR）次官、KEFRI 所長及び林業局長等を表敬した際に両者に対し、本プロジェクトの実施についてはケニア側の自立発展性確保を最優先にすることを考えているので、活動の規模、範囲等は、これを前提として決定される旨先方へ伝えた。更に、モニタリング・評価計画の策定に関しては、ケニア側がイニシアティブをとって実施できる体制を整えることが重要である旨伝えた。

また特に、MNR 次官及び同省林業局長表敬の際に、本プロジェクトは農地林の造成を通じて社会林業の普及モデルを作ることを目的としている。従って、林業局が果たす役割は非常に大きいと認識しているため、予算の手当を含めた全面的な協力を申し入れた。

### 2. モニタリング・評価計画書の策定について

（1）KEFRI のキツイ及びムグガにおける C/P 及び日本人専門家との協議は、PO 策定を中心に行った。大きく議論となった点は以下の3点である。

1) パイロットフォレストにおける技術開発については、当初プロジェクト側は新規を含め多くの課題を挙げてきたが、

- 農家が受け入れ可能な実用的技術の開発を優先すること
  - 過去 12 年間の活動成果をベースとすること
  - 物理的制限要因（期間、人員、予算）を考慮すること
- 等を説明し、先方の了解を得て課題を整理した。

2) 活動 1-2 オンファームでの技術の実証をどこで行うかという点では、活動 2 の「農地林の計画、造成、モニタリング、評価」分野で造成される農地林とは別のプロットを独自に設けることとした。これは、活動 2 の中だけでは、十分に技術を実証するデータを得ることは出来ないという理由による。

3) R/D のマスタープランには、成果として「普及エージェントの能力向上」という項目があったが、今回 PDM を作成する段階では削除された。

農地林の造成を行う中で、エージェントの OJT を行うこととしているが、ここでの OJT は農地林の面的な広がり期待して行うものではなく、農地林の造成を目的としている。また、面的な広がりはこのプロジェクトの目標ではないことから、「普及エージェントの能力の向上」という言葉は削除した。このプロジェクトは農地林の造成を通じ社会林業普及のモデルを作ることであり、普及を目的としていないことから、「普及エージェントの能力の向上」を成果にあげると誤解を受けやすいことも削除の理由としてあげられた。

(2) 各活動については KEFRI 及び FD 主導で実施することを確認した上で、活動項目ごとの責任者(担当)を C/P とした。

(3) モニタリングの実施体制に関しては、ケニア側の主体性を考慮して、C/P が中心となり作成したモニタリング調書に基づきケニア側プロジェクトマネージャーを議長とした定期会議を招集して活動の進捗等を把握することとした。

(4) 関係者の合意を得た PO に基づき、調査団が各活動の進捗状況のモニタリングを行った。

(5) 以上をモニタリング・評価計画書(案)として取りまとめ、合同調整委員会の承認を得、5月15日ミニッツとしてケニア側と署名交換を行った。

### 3. その他

(1) イスラエル、ドイツ GTZ との連携協力については、現場主導かつプロジェクト活動の範囲内で具体的内容、実施体制等を含めた実施可能性を検討することが望ましいと思われる。特に、GTZ との協力については「テクニカルオーダー」の策定に関して何らかの連携が実施できれば、本プロジェクトの上位目標である社会林業普及モデルの面的な広がりにも少なからず貢献できるものと思われる。

(2) 本プロジェクトとタンザニア村落林業計画とは、目的、活動、実施環境等が多くの共通点があることから、双方の開発技術及び有望樹種の交換等を中心に技術交換を実施することは極めて有意義であると考えられる。具体的時期等については現在検討中であるが、本プロジェクトの植林適期(準備期間を含めて)である 10 月?12 月は避けた方が望ましい。また、両プロジェクトが地理的に近いことから予算の範囲内で可能な限り多くの C/P が参加できるよう配慮すべきであると考ええる。

(3) プロジェクトは昨年 11 月開始以来 6 カ月を経過し、チーフアドバイザー、アシスタントチーフアドバイザー始め長期専門家の多大な努力により順調な立ち上がりを見せてい

る。今後の運営にあたっては、本プロジェクトの目的は、技術開発や技術普及の実施ではなく、あくまでも農地林の造成を通じて「ケニア半乾燥地の社会林業普及モデルを作ることである」ことを十分理解することが重要であると考え。

# 附 属 资 料

THE MINUTES OF MEETING  
BETWEEN THE JAPANESE CONSULTATION TEAM  
AND AUTHORITIES CONCERNED OF THE GOVERNMENT  
OF THE REPUBLIC OF KENYA  
ON THE TECHNICAL COOPERATION  
FOR THE SOCIAL FORESTRY  
EXTENSION MODEL DEVELOPMENT PROJECT  
FOR SEMI-ARID AREA

The Japanese Consultation Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Tomoyuki Fujii, Forestry cooperation Division, Forestry & Fisheries Development Cooperation Department, JICA, visited the Republic of Kenya for the purpose of making "Monitoring and Evaluation Plan" on the Social Forestry Extension Model Development Project for Semi-arid Areas (hereinafter referred to as "the Project").

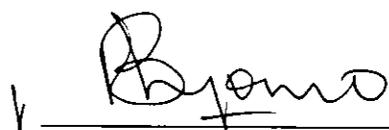
During its stay in the Republic of Kenya, the Team held a series of discussion and exchanged views with the authorities concerned of the Government of the Republic of Kenya and conducted a field survey of the Project sites.

As a result of the discussions and the field survey, the Team and the Kenyan authorities reached a mutual understanding of which are recorded in the document attached hereto.

Nairobi, May 15, 1998



Mr. Tomoyuki Fujii  
Leader  
Consultation Team  
Japan International  
Cooperation Agency



Dr. P.K.A. Konuche  
Director  
Kenya Forestry  
Research Institute  
Ministry of Reseach and Technology



Dr. K. W. Kipkore  
Chief Conservator of Forests  
Forestry Department  
Ministry of Natural Resoureces

Project	The Social Forestry Extension Model Development Project in Semi-arid Areas		
Duration of Cooperation	November 26, 1997~November 25, 2002		
Mission Name	Consultation Team	Leader	Tomoyuki Fujii
Mission Period	May 7, 1998 ~ May 15, 1998		
Section in JICA	Forestry Cooperation Division, Forestry and Fisheries Development Cooperation Department	Officer in charge	Katsuya, Taki

## I. Project structure and activities

### 1. Project Design Matrix (PDM:Annex 1)

The PDM was prepared by SOFEM Japanese experts and Kenyan counterparts in charge in consultation with Japanese consultation team. And which was endorsed by the joint steering committee.

### 2. Plan of Operations (PO:Annex 2)

The PO was prepared by SOFEM Japanese experts and Kenyan counterparts in charge in consultation with Japanese consultation team. And which was endorsed by the joint consultation team.

## II. Monitoring and Evaluation activities

### 1. Monitoring System

In accordance with the monitoring schedule (III), the Project hold regular meeting chaired by the project manager to monitor the Progress of activities.

Sufficient data for monitoring should be provided by the responsible person for each activities. Monitoring reports should be prepared under the format "Project Achievement Chart"(Annex 3)

\*The mission has conducted the monitoring prior to the 1st monitoring shown in Annex3

### 2. Evaluation System

In accordance with the evaluation schedule, an evaluation mission will be dispatched by JICA. The mission and Kenyan authorities concerned will formulate a joint evaluation team. The team will evaluate the Project, based on "Items of evaluation "(Annex 4).

An evaluation report should be prepared, which should be signed by both (Japanese and Kenyan) sides.

### III. Schedule of Monitoring and Evaluation (provisional)

Time	Types of monitoring and evaluation	Conducted by	Reported by
October, 1997	Agreement on cooperation		R/D and TSI
November, 1997	Commencement of cooperation		
May, 1998	Monitoring and evaluation plan	Consultation team	Minutes
January, 1999	1st monitoring	Counterparts & JICA experts	Monitoring report
July, 1999	2nd monitoring	Counterparts & JICA experts	Monitoring report
January, 2000	3rd monitoring	Counterparts & JICA experts	Monitoring report
July, 2000	Intermediate evaluation	Joint evaluation team	Minutes
January, 2001	4th monitoring	Counterparts & JICA experts	Monitoring report
July, 2001	5th monitoring	Counterparts & JICA experts	Monitoring report
January, 2002	6th monitoring	Counterparts & JICA experts	Monitoring report
June, 2002	Final evaluation	Joint evaluation team	Joint evaluation report
November, 2002	Completion of the program		

### IV. Criteria and Items for Monitoring and Evaluation

#### 1. Criteria for Monitoring

Targets/Indicators listed in "Plan of Operations" should be utilized for monitoring.

#### 2. Criteria of Evaluation

Suggested list of criteria for evaluation is shown in Annex 4.

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# PROJECT DESIGN MATRIX

Annex 1

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall Goal</b> The inhabitants of semi-arid areas in Kenya are equipped with appropriate techniques to plant trees and management them	- Number of inhabitants who adopted more appropriate method of social forestry extension in semi-arid areas	Sample questionnaire survey	- Government policy to promote farm forestry is not changed - Adequate number of extension agents and their operation fund are timely provided - Severe natural disasters, such as drought, does not occur
<b>Project Purpose</b> A social forestry extension model for semi-arid areas is developed through establishment of farm forest by local residents	- Preference by farmers - Preference by extension agents - Cost effectiveness - Replicability to other semi-arid areas	- Interviews to farmers - Interviews to extension agents - Project document - Assessment by a third party	- Need for tree products and social forestry techniques and extension services by farmers does not change
<b>Outputs</b> 1. Practical techniques for planting and tending trees for establishment of farm forest are provided  2. Appropriate methods of establishing farm forests are developed  3. Information on social forestry extension is shared by the people and other related organizations	1. - No. of techniques adopted for farm forest establishment - No. of technical reports 2. - No. of successful farm forests - No. of unique/original findings on methods of farm forest establishment 3. - No. of recipients who utilize and share the information	1. - Project document - Technical reports 2. - Project document - Project document 3. - Sample questionnaire survey	- Natural conditions, such as rain fall patters, does not change greatly - Severe natural disasters, such as drought, does not occur - Inputs form both sides are timely and adequately provided
<b>Activities</b> 1. Develop practical technique for establishment of farm forests in semi-arid areas 1.1. Develop technology in the Pilot Forest 1.2. Verify practical technologies by on-farm experiments 1.3. Prepare technical manuals  2. Design, establish, monitor and evaluate farm forests 2.1. Establish farm forest in SFTP (II) target area 2.2. Collect and analyze information concerning establishment of farm forest 2.3. Formulate plan of farm forest establishment 2.4. Establish farm forests 2.5. Feedback technical knowledge of tree planting and tending into technology development 2.6. Intermediate evaluation 2.7. Review of plan of farm forest establishment 2.8. Establish farm forests by extension agents 2.9. Final evaluation and compilation of the results of the activities  3. Collect, synthesize and disseminate information on social forestry extension 3.1. Make preparations for information activities 3.2. Hold regular meetings 3.3. Collect and analyze of information from outside sources 3.4. Collect of information accumulated through project activities 3.5. Develop extension materials on establishment of farm forest for extension agents 3.6. Disseminate information through publications and events	<b>Inputs</b>		- Severe natural disasters, such as drought, does not occur - Cooperation by the farmers and related institutions are obtained - Planted trees for experiment are not stolen nor damaged by animals/ insects/diseases - Inputs form both sides are timely and adequately provided  <b>Preconditions</b> - Inputs form both sides are timely and adequately provided
	<b>Japanese Side</b>	<b>Kenyan Side</b>	
	1. Experts 6 long-term experts in the following fields - Chief Advisor - Coordinator - Technology Development - Farm Forest Establishment (technology) - Farm Forest Establishment (extension) - Extension method and information 2 - 3 short-term experts per year 2. Training in Japan 2 - 3 counterparts per year 3. Equipment 4. Sharing of running expenses - for plantation - for extension	1. Counterparts and staff - Project Director - Project Manager - Project Coordinator - Counterparts PF Manager Extension Manager Forest Ext. Officer Training Manager Training Officer Research Officer - Administrative staff Clerks Drivers & Laborers Other supporting staff 2. Land & buildings 3. Running expenses for the implementation of the project	

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Activities	Targets/Indicators	Schedule												Responsible persons in the project	Inputs	Remarks
		1998		1999		2000		2001		2002						
		I	II	III	IV	I	II	III	IV	I	II	III	IV			
2 Design, establish, monitor and evaluate farm forest																
2.1 Establish farm forests in SFEP (II) target area																
2.1.1 Select target farmers	Number of selected target farmers															Ali, Family DFEEO, Yamashita
2.1.2 Conduct profile survey on selected targets	Number of target farm profiles															Ali, Family, DFEEO, Kemunochi
2.1.3 Design target farm forests	Number of designed farm forests															Kidando, Mook Kyalo DFEEO, Minami, Kemunochi, Yamashita, labour
2.1.4 Establish farm forests	Number of established farm forests															Ali, Family Kyalo DFEEO, Kemunochi, Minami
2.1.5 Monitor the establishment of farm forests	Number of times monitored / reports															Ali, Family Mook Kyalo DFEEO, Kemunochi, Minami
2.1.6 Record keeping	Number of records															DFEEO, Ali, Family, Mook Kyalo, Kemunochi, Minami,
2.2 Collect and analyze information concerning establishment of farm forest																
2.2.1 Review of SFEP (II) extension approaches	Crucial points for tree planting by farmers report															Family, Ali, Raterig, Yamashita,
2.2.2 Conduct general conditions survey in target areas	Socio economic and natural conditions report of the target areas															DFEEO, Kidando, Mook, Kemunochi, Minami,
2.2.3 Conduct forest resource survey	Forest resource inventory report															Mook, Mshama, Minami,
2.2.4 Conduct survey for general condition of individual farmers in target areas	Criteria for selecting target farmers															Mook, Kamwe, DFEEO, Kemunochi
2.2.5 Study of forestry extension status	Reports															Kidando, Kamwe, DFEEO, Yamashita,
2.2.6 Literature review of establishment of farm forest	Reports															Kidando, Kamwe, DFEEO, Yamashita
2.3 Formulate plan of farm forest establishment																
2.3.1 Set up farm forest establishment strategy	Document strategies for farm forest establishment															Kidando DFEEO, Mook, Kyalo, Yamashita, Kemunochi, Minami,
2.3.2 Set up criteria for target farmer selection	List of criteria															Kidando DFEEO, Mook, Kyalo, Kemunochi, Yamashita, Minami,
2.3.3 Design farm forest types	Number of farm forest types															Kidando Mook Kyalo DFEEO, Minami, Kemunochi, Yamashita,
2.3.4 Select target areas	Number of target areas															Kidando, DFEEO, Mook, Kyalo, Kemunochi, Yamashita, Minami

Note : 1. 1st quarter is January to March, 2nd quarter is April to June, 3rd quarter is July to September and 4th quarter is October to December. The project commenced on 26th November 1997.

2. First name in the row is the Activity Leader

Activities	Targets/Indicators	Schedule												Responsible persons in the project	Inputs	Remarks				
		1998			1999			2000			2001						2002			
		I	II	III/IV	I	II	III/IV	I	II	III/IV	I	II	III/IV				I	II	III/IV	
2.4 Establish farm forests																				
2.4.1 Train extension agents																				
2.4.1.1 Implement training courses	Number of TAs trained																	training expenses		
2.4.1.2 Implement OJT through establishment of farm forests	Number of TAs trained																	bicycles, motorcycle		
2.4.2 Select target farmers	Number of selected target farmers																	transport, stationery		
2.4.3 Train target farmers	Number of target farmers trained																	training expenses		
2.4.4 Conduct profile survey on selected targets	Number of target farm profiles																	transport, stationery		
2.4.5 Establish farm forests and monitor																				
2.4.5.1 Design target farm forests	Number of designed farm forests																	transport, stationery, allowance		
2.4.5.2 Establish farm forests	Number of established farm forests																	transport, seedlings, labour		
2.4.5.3 Monitor the establishment of farm forests	Number of times monitored / reports																	transport, allowance		
2.4.5.4 Record keeping	Number of records																	stationery		
2.5 Feedback of technical knowledge of planting and tending into the technology development	Report including identified gaps																	stationery		
2.6 Intermediate evaluation	Intermediate evaluation report																	transport, stationery, allowance		
2.7 Review of plan of farm forest establishment	Revised plan																	stationery		
2.8 Establish farm forests by extension agents																				
2.8.1 Select target farmers	Number of selected farmers																	transport, stationery		
2.8.2 Conduct profile survey on selected targets	Number of target farm profiles																	transport, stationery		
2.8.3 Design target farm forests	Number of design of farm forests																	transport, stationery, allowance		
2.8.4 Establish farm forests	Number of established farm forests																	transport, seedlings		
2.8.5 Monitor the establishment of farm forests	Number of times monitored / reports																	transport, stationery		
2.8.6 Record keeping	Number of records																	stationery		
2.8.7 Monitoring of above activities	Number of times monitored / reports																	transport, stationery		
2.9 Final evaluation and compilation of the result of the activities	Final evaluation report																	transport, stationery		

Note: 1. 1st quarter is January to March, 2nd quarter is April to June, 3rd quarter is July to September and 4th quarter is October to December. The project commenced on 26th November 1997.  
2. First name in the row is the Activity Leader





Activities	Targets/Indicators	Schedule												Progress (%)	Distinguished Achievement	Problems and Countermeasures		
		1998			1999			2000			2002							
		I	II	III/IV	I	II	III/IV	I	II	III/IV	I	II	III/IV					
2 Design, establish, monitor and evaluate farm forest																		
2.1 Establish farm forests in SIFP (II) target area																		
2.1.1 Select target farmers	Number of selected target farmers																	5
2.1.2 Conduct profile survey on selected targets	Number of target farm profiles																	
2.1.3 Design target farm forests	Number of designed farm forests																	
2.1.4 Establish farm forests	Number of established farm forests																	
2.1.5 Monitor the establishment of farm forests	Number of times monitored / reports																	
2.1.6 Record keeping	Number of records																	
2.2 Collect and analyze information concerning establishment of farm forest																		
2.2.1 Review of SIFP (II) extension approaches	Crucial points for tree planting by farmers report																	10
2.2.2 Conduct general conditions survey in target areas	Socio-economic and natural conditions report of the target areas																	30
2.2.3 Conduct forest resource survey	Forest resource inventory report																	
2.2.4 Conduct survey for general condition of individual farmers in target areas	Criteria for selecting target farmers																	50
2.2.5 Study of forestry extension status	Reports																	
2.2.6 Literature review of establishment of farm forest	Reports																	10
2.3 Formulate plan of farm forest establishment																		
2.3.1 Set up farm forest establishment strategy	Document strategies for farm forest establishment																	
2.3.2 Set up criteria for target farmer selection	List of criteria																	
2.3.3 Design farm forest types	Number of farm forest types																	
2.3.4 Select target areas	Number of target areas																	

Note : 1. 1st quarter is January to March, 2nd quarter is April to June, 3rd quarter is July to September and 4th quarter is October to December. The project commenced on 26th November 1997.

2. First name in the row is the Activity Leader.





Items of Evaluation		Indicators
1. Effectiveness	1-1. Achievement of Project Purpose	1. Manuals of social forestry extension for semi-arid areas.
	1-2. Contribution of outputs to achieve project purpose	1. No. of practical techniques developed for farm forest establishment. 2. Guidelines and manuals of appropriate method of establishing farm forest. 3. No. of farmers who adopted the techniques developed by the project. 4. Constraint against achievement of project purpose.
	1-3. Contribution of activities to achieve outputs	1. No. of technical reports. 2. No. of established farm forests. 3. No. of activities, volume of information and No. of dissemination activities. *Detail indicators are shown in P. O. 4. Constraint against achievement of output.
2. Efficiency	2-1. Timing, quality and quantity of inputs to produce outputs	1. Input for planned activities is provided as scheduled. 2. Sufficient quality and quantity of input is provided to produce output. *Input from Japan: experts, c/p training, equipment, subsidy of local running cost. Input from Kenya: c/p personnel, land, buildings, local running cost 3. Sufficient output is produced as scheduled.
	2-2. Linkages with other types of cooperation	1. Third country training. 2. No. of collaborative works with other organization.
3. Impact	3-1. Direct impacts on project purpose level	1. No. of farmers started establishing farm forest. 2. Group nursery activities has been promoted. 3. Demand of technical guidance from farmers to KEFRI/FD has been increased. 4. Number of researches on semi-arid farm forest conducted by KEFRI researchers has been increased.
	3-2. Indirect impacts on overall goal level	1. Developed techniques are disseminated, through various extension channel. 2. Extension agents and farmers surrounding the project have adopted developed techniques.
4. Rationale	4-1. Rationale of overall goal	1. Priority of social forestry on the National Development Plan. 2. Needs of beneficiary for social forestry.
	4-2. Rationale of project purpose	1. Relation between project purpose and overall goal. 2. Needs/ interests of KEFRI, FD, and farmers in Kitui.
	4-3. Rationale of project design	1. Relation among overall goal, project purpose, outputs, activities and inputs designed in PDM.
5. Sustainability	5-1. Institutional aspects	1. Government policy of social forestry is remained unchanged. 2. Organization of the project is maintained/strengthened. 3. Project counterparts stay in the project and continue to work for social forestry programs. 4. Maintenance system of facilities and equipment is established and works well.
	5-2. Financial aspects	1. Sufficient budget is allocated to continue activities.
	5-3. Technical aspects	1. Technologies improved or developed by the project meet to farmer's needs. 2. Social forestry extension model developed by the project is adopted to beneficiary. 3. No. of technology development studies continued by Kenyan initiative.


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