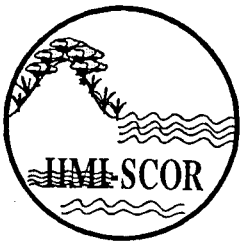
irrigation management | financial planning | irrigation programs | natural resources
resource allocation



SHARED CONTROL OF NATURAL RESOURCES (SCOR)

SCOR PROGRESS
4th QUARTER 1996

March, 1997

International Irrigation Management Institute (IIMI)
Sri Lanka National Program
127, Sunil Mawatha, Battaramulla, Sri Lanka

SCOR seeks to increase the users' share of control of natural resources in selected watersheds through partnership between the state and users that contributes to greater production while conserving the natural resources base. SCOR is promoting integrated planning for the use of land and water resources in two pilot watersheds and other areas with spread effects. The SCOR project is a collaborative effort of the Government of Sri Lanka, the United States Agency for International Development (USAID) and IIMI

SCOR PROGRESS
FOURTH QUARTER 1996

1. INTRODUCTION

This report presents the SCOR progress achieved at 33 sub-watersheds of Huruluwewa and Upper Nilwala Watersheds by the collective interventions of the resources users, government implementing and research agencies, and SCOR teams as at end of December 1996. Progress is reported by programme level and project level indicators supplemented by information on its spatial distribution.

Separate progress reports prepared by each pilot watershed offices with watershed specific details are available for more information.

2. UTILIZATION OF PROJECT INPUTS

2.1 Financial Inputs

ITEM	UNIT	LOP TARGET	TOTAL TO DATE
1. Budgeted expenditure	US$ ('000)	6,464.55	3,415
2. User grants[1]	US$ ('000)	495	171
3. Host country contribution[2]	Rs. (M)	151.50	79

[1] This excludes research grants [2] See Annex 5 for details

2.2 Budgeted Expenditure

The project recorded 85% of fund utilization during the fourth quarter of 1996. *Annex 1* presents the actual expenditure out of the budget by major line items. *Annex 2* presents the actual expenditure out of the budgeted allocation for the quarter. *Annex 3* presents the actual expenditure out of the budget for the year 1996. *Annex 4* presents the actual expenditure out of the budgeted allocation for the life of project.

3. PERFORMANCE IN SUMMARY BY STRATEGIC AND PERFORMANCE INDICATORS

3.1 Performance by strategic indicators

Performance (SCOR)	Last Year US$	YEAR 1996				
		First quarter	Second quarter	Third quarter	Fourth quarter	Total
Planned Expenditure	3,063,797	263,930	259,146	276,393	498,491	1,297,960
Actual Expenditure	2,443,003	200,176	229,208	235,969	306,687	972,040
% Achieved	80	76	88	85	62	75
Host Country Contribution Planned	936,800	75,800	90,000	145,000	190,000	500,000
Actual	1,085,275	53,818	67,647	51,099	223,134	395,697
% Achieved	116	72	75	35	117	79

3.2 Project purpose level indicators

Strategic level indicator	Unit	LOP Target (Six years)	Total To date
1. Targeted hectares under improved production and protection techniques,	Ha	30,000	13,979
2. Value of targeted investment by the resource users in environmentally sound production practices.	$(M)	3.0	1.35
3. Government policy decisions initiated.	#	4	3

3.3 Performance by program outcome level indicators

Programme Outcome Level Indicator	Unit	LOP Target	Total To date
1. Targeted land area covered by agreements between GSL and user groups (Extent now under protection and production practices expecting user rights)*	Ha.	5,000	494
2. Farm households using improved environmental techniques	#	25,000	13,321

* In accordance with the National Steering Committee decision for demonstrating action for the required policy change.

Project Purpose Level Indicator	Unit	LOP Target	Total To date
1. Number of natural resources groups operating	#	750	75
2. No. of policy/procedures, organizational changes exacted and adopted	#	4	3

Project Output Targets/Performance	LOP Target	Total To date
1. User groups organized/assisted to take joint responsibility for management of land and water resources	750	71
2. Number of new commercial activities supported by linking to markets	200	37
3. Land leasing/usufruct agreements issued for establishments and functioning of production companies and commercial activities	10	1
4. Training opportunities provided to representatives of NGOs and other private sector organizations in participatory natural resources management	30,000	16,127
5. Number of officials trained in local level planning, user groups formation, support and collaboration	2,000	410
6. Number of user organizations conferred with legal status and powers	75	83
7. Number of NGOs and private sector agencies providing technical, managerial and commercial information to user groups	20	22
8. Research studies completed on natural resources issues	30	18

4. SPATIAL DISTRIBUTION OF PROJECT OUTPUT AND EFFECTS

Map 1 and *Map 2* shows the distribution of sub-locations, the targets and achievements on the anticipated effects and impact on the adoption of production and land and water conservation techniques (Strategic level indicator 1) in each sub-location with the number of farm families involved (Programme outcome level indicator 2) under major interventions in the Huruluwewa and Nilwala watersheds.

DISTRIBUTION OF SELECTED SUB-LOCATIONS FOR IMPLEMENTATION FROM 1993-1997

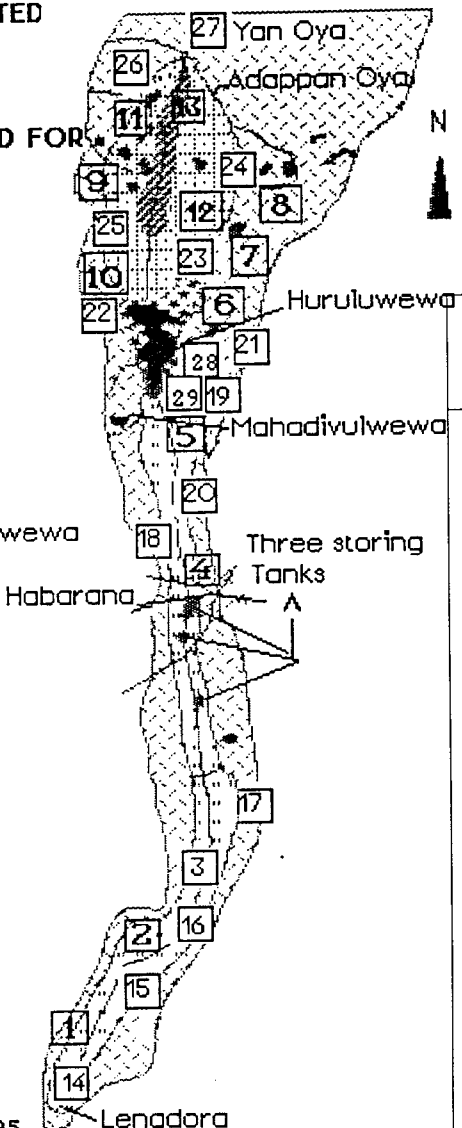
SUB-LOCATIONS SELECTED FOR FIRST PHASE

(1) Walgamwewa
(2) Anaunawelbelessa
(3) Welangolla
(4) Puwakpitiya
(5) Manameegaswewa
(6) Padikaramaduwa
(7) Garandiyaulpotha
(8) Kokawewa
(9) Ulpathgama
(10) Marodankalla
(11) Tract 6
(12) Other tracts of Huruluwewa command area
(13) Drainage area

SECOND PHASE

(14) Atubendiyawa
(15) Kalundewa
(16) Ereula
(17) Polattewa
(18) Veheragala
(19) Madawela
(20) Kudarambawewa
(21) Sampathgama
(22) Karuwalagaswewa
(23) Nitulgollewa
(24) Paluaollaaama
(25) Wiharagala
(26) Ollukalagala
(27) Tikkanpothana
(28) Maharambawewa
(29) Thelhavadiyawewa

SCOR IIMI- 14 October 1995



HURULUWEWA WATERSHED

- Huruluwewa command area
- Drainage area
- Huruluwewa tank eco system
- Yan Oya and feeder canal subwatersheds
- Other lands within watershed

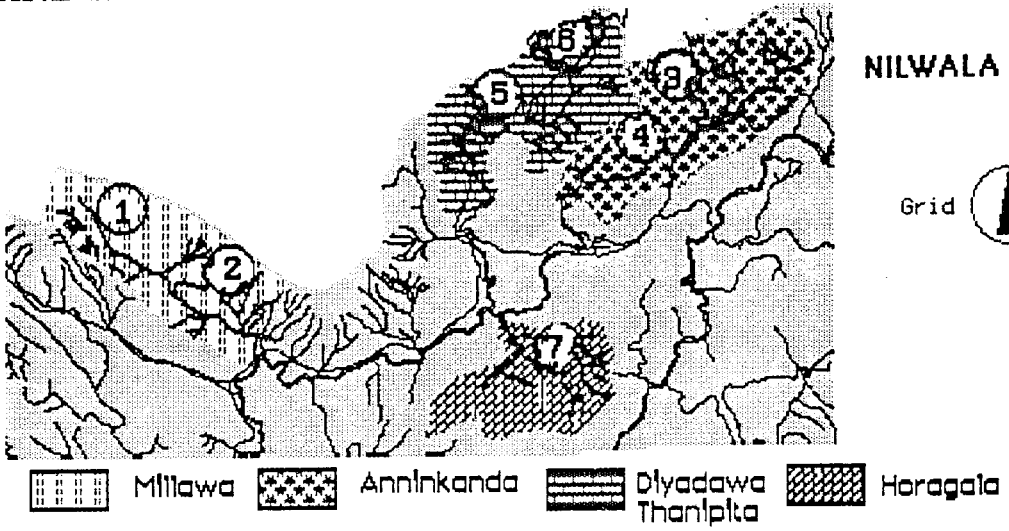
TARGETS AND ACHIEVEMENT UPTO END OF 4th QUARTER 1996

Location	Target Area (ha.)	Achievement Upto end of 3rd Qtr. 1996	Achievement During 4th Qtr. 1996	Achievement End of 4th Qtr. 1996	Target Farm Families	Achievement Upto end of 3rd Qtr. 1996	Achievement During 4th Qtr. 1996	Achievement End of 4th Qtr. 1996
1	545	368.6	10.0	**378.6**	248	230	0	**230**
2	647	507.1	16.5	**523.6**	76	287	0	**287**
3	727	465.8	10.0	**475.8**	168	262	0	**262**
4	394	278.4	8.0	**286.4**	65	406	0	**406**
5	218	138.2	17.0	**155.2**	64	368	0	**368**
6	644	191.6	7.0	**198.6**	63	140	0	**140**
7	688	78.8	0.0	**78.8**	100	313	0	**313**
8	169	223.5	5.3	**228.8**	131	244	0	**244**
9	293	294.0	3.0	**297**	150	284	0	**284**
10	197	765.9	0.0	**765.9**	78	289	0	**289**
11	282	507.4	14.2	**521.6**	168	698	0	**698**
12	4400	4213.6	0.0	**4213.6**	9315	3105	0	**3105**
13	300	72.0	0.0	**72**		0	0	**0**
14	154	24.0	6.0	**30**	107	36	0	**36**
15	254	92.0	11.5	**103.5**	188	40	0	**40**
16	434	86.9	11.0	**97.9**	225	102	0	**102**
17	341	379.7	7.0	**386.7**	106	120	0	**120**
18	153	79.0	27.0	**106**	158	44	18	**62**
19	418	342.8	70.0	**412.8**	152	0	9	**9**
20	361	82.1	0.0	**82.1**	130	0	0	**0**
21	190	31.0	20.0	**51**	76	0	0	**0**
22	200	187.4	0.0	**187.4**	74	50	0	**50**
23	180	173.2	54.5	**227.7**	165	77	0	**77**
24	131	90.0	72.6	**162.6**	242	0	22	**22**
25	135	76.5	13.0	**89.5**	22	0	0	**0**
26	352	42.8	38.9	**81.7**	115	140	0	**140**
27	216	95.7	17.0	**112.7**	286	35	0	**35**
Feeder Canal	933	201.8	2.0	**203.8**	1023	0	0	**0**
Yan Oya	116	7.0	49.0	**56**	163	0	0	**0**
Upper part of command	613	21.3	7.0	**28.3**	741	45	0	**45**
								0
Total	**14685**	**10118.1**	**497.5**	**10615.6**	**10626**	**7315**	**49**	**7364**

PROJECT EFFECTS AND IMPACT

AREA AND FAMILIES ADOPTING PRODUCTION TECHNIQUES WITH LAND AND WATER CONSERVATION

NILWALA WATERSHED



TARGETS AND ACHIEVEMENT UPTO END OF 4th QUARTER 1996

Location	Target Area (ha.)	Achievement			Target Farm Families	Achievement		
		Upto end of 3rd Qrt. 96	During 4th Qrt 1996	End of 4th Qrt. 1996		Upto end of 3rd Qrt. 96	During 4th Qrt. 1996	End of 4th Qrt. 1996
1. Millawa	495	447.3	33.0	**480.3**	600	450	70	**520**
2. Aninkanda Dothalugala	227	274.5	9.0	**283.5**	250	417	13	**430**
3. Aninkanda	1174	677.0	159.0	**836.0**	1500	857	148	**1005**
4. Diyadawa Thenipita	591	582.0	215.8	**797.8**	906	1021	620	**1641**
5. Thenipita	487	623.0	101.0	**724.0**	967	1030	910	**1940**
6. Horagala	248	220.3	21.2	**241.5**	351	327	94	**421**
Total	**3222**	**2824.1**	**539.0**	**3363.1**	**4574**	**4102**	**1855**	**5957**

5. HIGHLIGHTS OF PERFORMANCE

5.1 Huruluwewa Watershed

5.1.1 Integrated Water Management

Weather conditions prevailed in September and October was not favourable for dry cultivation or wet cultivation. SCOR arranged for a discussion session with professionals from the Mahailuppallama Agricultural Research Station, 05 officials of other line agency officials and farmer representatives to get insights for an adjusted program to face the drought conditions. It was decided to observe end of December rainfall pattern and select other field crops (mainly Maize) in January with the available water in the tanks. The Huruluwewa Farmer Company indicated readiness to purchase maize and Tru Dhal on an agreed price demonstrating the role of the farmer company at times of crucial decision making on seasonal cropping.

5.1.2 Organization and Market Links to Agricultural Produce

Sixteen field level meetings and two planning sessions at divisional level were conducted to increase awareness on the process of forming the Dambulu Peoples Company. The name of the company was registered. The Peoples Company for Huruluwewa procured buildings for office and sales outlet. Habarana Green Path company obtained stores from Mahaweli Authority to store seeds and fix machines for oil extraction.

SCOR convinced the farmer's under the feeder canal to cultivate 3 months paddy varieties commencing on November 1st. The farmers adhered to cultivate 3 months varieties only after November 1st allowing Mahaweli water to reach Huruluwewa during September and October.

5.1.3 Integrated Planning and Participatory Management

Under the integration of the participatory forestry project activities of the Forest Department into sub-watershed plans, 180 farmers in 83.67 ha. under agro forestry (Farmer Block Forestry) and 166 farmers in 47 ha. under reservations received the 1st instalment in this December which is equivalent to Rs. 1,829,380.00. Total trees supplied under the above two items from the Department of Forestry are Rs. 137,203.50 is in addition to the plants received under homegarden and miscellaneous. Usually 40 plants/homegarden are supplied by the PFP and 28,760.00 trees have been planted during this season in homegardens.

The Department of Forestry and the SCOR Project initiated activities to expand the PFP to 116 Grama Niladhari Divisions in all three (Galenbindunuwewa, Palugaswewa and Dambulla) Divisional Secretary Divisions. Mapping of the areas for the project activities was undertaken with the help of the officials of the Land Use Policy planning Division at Anuradhapura and Matale. The maps will be used to identify the areas for forestry interventions. The intervention will vary according the land use and the land class.

During the quarter,in all the sub watersheds , 386 farmers in homegardens and 236 farmers in Chena were involved in establishing graded bunds and drains. Most of these bunds have been prepared as recommended by the Department of Agriculture. Also the Agricultural Instructors were involved in marking contour lines. In many places bunds have been stabilized with Pawatta to minimize any damage. As a consequence of dry spells prevailed of Pawatta was severely effected.

Alley cropping has been integrated to farmer fields and established between graded bunds, in order to improve soil organic matter by incorporating leaves and tender parts of the alley plants. More than 25,000 Gliricidia seedlings were established as alleys in many sub- watersheds.

The following programs were launched during the quarter.

1. Special Maize production program in 130 acres with the support of AgEnt project and market links with Advance Marketing Ltd. and Huruluwewa Farmer Company.
2. Pigeon pea production program in about 46 acres with arrangements to market the harvest.
3. Sunflower seed production program with prospects in future for sunflower seeds for oil extraction with a high cash value, to produce seed materials.
4. Establishment of wood apple seedings as stock for orange scion guided by a recent study conducted by the SCOR team, with 1500 wood apple seedlings for future grafting purposes.

One Sub Council in Kokawewa sub-watershed and four zone organizations in feeder canal area have been formed by the end of this quarter. The Sub Council is in Kokawewa sub watershed.

Hurulu Farmer company issued 140,000 shares (value of share is Rs. 10.00) for 2500 farmers in Huruluwewa watershed area during the quarter. A sales Outlet and the office of the company was opened at Galenbindunuwewa town on 24th Oct 96. The company was able to get dealership of Rajarata Pohora Company and Cepetco Chemical products. Dambulla Janatha Govi Samagama was formed and a board of directors was appointed. The Divisional Secretariat of Dambulla allocated a land plot at Dambulla Town area for the use of the company.

5.2 Nilwala Watershed

5.2.1 Integrated Planning and Coordination

SCOR facilitated forming of four task forces and sixteen sub-task forces in the watershed level, in order to enhance and sustain the productivity of natural resources of the watershed while conserving them. At the moment 1028 members of 6 TSHD societies have consented to contribute to society green leaf fund through monthly green leaf payments from processing factories.

Fifty two volunteer Extension Assistants(VEAs) were selected from farmer organizations and they were given a training on theoretical/practical aspects of technologies pertaining to home gardening and paddy. A program of training on soil conservation and organic fertilizer production was organised for the Estate Mangers (Tea), Tea small holders, farmers of homesteads and paddy cultivators. For development of Institutional Capacity, 60 representatives from the farmer organizations were trained on technologies pertaining to SWS plans at the district farmer training center, Tellijjawila. A training programme for 33 representatives of farmer organizations on leadership, financial management for formation and implementation of Mini projects was arranged at the International Center for Training Rural Leaders (ICTRL), Ambilipitiya. During 4th quarter 108 youths have obtained training on Anthurium cultivation and 83 resource users received practical training at the goat husbandry unit of Small Farmer Foundation at Malimbode. Already 32 of them have started goat rearing. Ten farmers were selected from pilot watersheds for a study tour to India to get first hand information on participatory watershed management.

Under the guidance of Divisional Secretaries, Samurdhi Managers and Niyamakas attached to Pasgoda, Kotapola and Neluwa DS divisions were trained to function as Catalysts particularly to get involved in implementation of mini projects and monitoring process of SWS level activity plan. Four training classes were conducted in four sub watersheds for Samurdhi Managers and Niyamakas on monitoring process of SWS level activity plan.

Janatha Nilwala agro processing Co. Ltd. commenced test operation of processing dehydrated food (Jack and Bread fruit) during the reporting period. Attention focused during this process was mainly to improve the quality standards and cost reduction. Test marketing of these products commenced initially involving few supper markets in Colombo and the response shown by them was satisfactory. CPC Lanka (pvt.) ltd. (KIST products) provided necessary facilities to commence test operation on re-processing and bottling of Kitul treacle (December 14th and 15 th) and the action so far taken by the Peoples company towards this important market linkages had been satisfactory according to the CPC Lanka (pvt.) company officials.

Eight organizations/societies undertook in fertilizer purchasing/distribution activities during the quarter. The quantity handled was 240,150 Kg with a value of Rs. 187,600. Three societies and 87 resource users and have benefitted by obtaining loan facilities from mini project revolving funds to promote production protection activities in their lands. Value of loans granted was Rs. 111,750.00.

5.2.2 Shared Management of Natural Resources

Voluntary forest protection groups were formed within the community to help the Department of Forest in protecting forests from further degradation. These groups have brought the information regarding illicit felling, encroachments and other illegal activities to the notice of FD, Police, Divisional secretariats or other relevant authorities while they are helping to create an awareness among villagers on the importance of protecting the natural forest. Currently, there are five active groups in Lawalugahahena, Dandenikanda, Polgahahena, Kandekumbura and Puwakgahadola villages. In response to the information given by the vigilant forest protection groups of the village, a team from the flying squad of the Department of Forest were able to detect the illicit felling and felled timber were confiscated.

By the end 1996, 101 resource users and nine groups/societies raised 89 tea nurseries with a plant capacity of 388,000. Twenty eight Km. of stream reservations were enriched by planting 23,390 forest and fruit plants and 15,750 plants were established in 23 Km. of roadside. School Environmental Committees of the area played a major role in roadside planting. Stream and Road reservation Task Forces chaired by the Divisional Secretaries are examining the possibilities to grant user rights for those involved in stream and road reservation planting.

5.2.3 Improvements in Tea Sector

An extent of 2,104 ha. of tea small holdings and estate tea lands have been brought under production and protection practices in the four sub-watersheds with continued catalytic functions for wider adoption. The promoted technologies in these lands include soil conservation through biological (e.g. vetiver and SALT hedgerows, ground cover) and mechanical methods (e.g. contour drains, stone bunds); planting of Mana grass in vacant patches prior to in-filling of degraded lands; in-filling with tea under suitable soil conditions; planting of shade trees for both high and low shade; improvements in pruning methods; introduction of proper fertilizing practices; dolomite and Zinc sulphate application; and promotion of high plucking standards. Tea small holders and estate owners/managers have accepted vegetative hedgerows as an effective conservation practice. As at end of 1996, about 108,081 ft of vetiver hedgerows, 33,446 ft of SALT hedgerows and 108,020 shade trees have been established in tea estates and small holdings. These practices seem to have a wide spread effect within and outside of the project area. Under the Integrated Rural Development Project (IRDP), Matara, people of low income group in Horagala SWS were provided with 19,600 tea plants. SCOR facilitated this by linking TSHD with UOs.

Tea small holders were trained on proper techniques and methodologies regarding soil conservation including demarcation of contours using A-frame and regular maintenance of conservation measures; shade management; application of fertilizer and organic manure; pruning and plucking; and maintenance of a plucking table and a good ground cover through the canopy structure. These training programs were arranged by Tea Small Holders Development Authority and Tea Research Institute. These programs included lectures, posters, field demonstrations and video presentations. In addition, Tea extension officers regularly visit some of the selected tea

lands in the watershed to enable surrounding farmers to participate in the field training. Also, 17 tea land holders were trained at TRI on nursery management during the reporting quarter. SCOR is facilitating this event continuously.

Under the homestead development program, interventions were initiated to motivate resources users for production and protection in 457 ha. of homesteads. Service farmer organizations and resource user groups have supplied 69,372 plants to 3,580 homesteads (including those adjacent tea lands accounting for 234.3 ha) by making use of their revolving funds as well as the free plants issued by the Forest Department, Department of Export Agriculture and Coconut Cultivation Board. SCOR has so far facilitated to establish 275 bee colonies in pilot watersheds. An NGO provided bee boxes and materials worth over Rs.60,000.00 apart from regular field visits made by two experts to assist and advice resource users. During the reporting period 58 bee boxes have been purchased by resource users and awaiting introduction of colonies.

5.2.4 Action Research

1. Analysis of Argo-climatic data of the Nilwala Basin

2. Analysis of Land Use, Rainfall and Riverflow Relations of the Upper-Nilwala River Basin.

3. Baseline Survey of the New Sub-watersheds Selected for Interventions.

4. Identification of Constraints for Promotion of Fruit Trees in Home-Gardens

   Research study on economics of resin tapping.

5. Study on biological diversity of forest reserves in upper Nilwala watershed with emphasis on sustainable use of non-wood forest resources.

6. Structure and composition of home gardens (potentials for improvement)

5.3 Trends

Annex 6 and 7 presents trends observed so far in respect of the following indicators.

1. Area under production and land & water conservation practices.

2. Farm households using improved environmental techniques.

3. Growth of resources user group formation in production & conservation practices.

4. Growth of farmer organization.

5. Small grants made to user groups to investment into common user groups assets.

6. Training opportunities offered to government officer.

7. Host country contribution.

8. Training opportunities offered to resources users.

6. RESEARCH

Annex 8 presents current status of SCOR research studies. *Annex 9* presents list of SCOR reports/papers.

USAID – SRI LANKA
GRANT NO: 383 – 0109 – A – 00 – 3413 – 00

BUDGET VERSUS ACTUAL EXPENDITURE FOR 4th QUARTER 1996

(US $ '000)

Description	Budgeted Expenditure				Actual Expenditure				Balance
	Oct.	Nov.	Dec.	**Total**	Oct.	Nov.	Dec.	**Total**	
Salaries Benifits & All.									
Int'l	7,800	7,800	7,800	**23,400**	7,667	7,667	7,667	**23,001**	399
Local	43,000	43,000	63,000	**149,000**	37,035	38,203	63,883	**139,121**	9,879
Consultant									
Int'l	300	500	500	**1,300**	0	450	300	**750**	550
Local	3,000	3,000	3,000	**9,000**	2,496	4,234	2,456	**9,186**	(186)
Travel									
Int'l	0	0	0	**0**	0	0	0	**0**	0
Local	3,000	3,000	3,000	**9,000**	2,528	3,394	2,421	**8,343**	657
Workshops & Training									
Int'l	0	0	500	**500**	0	0	590	**590**	(90)
Local	6,000	6,000	6,000	**18,000**	1,142	4,677	4,466	**10,285**	7,715
Other Direct Costs									
Vehicle Oper. & Main.	5,000	5,000	5,000	**15,000**	2,716	3,874	4,624	**11,214**	3,786
Office/Research Supp. & Ser.	4,500	4,500	4,500	**13,500**	7,624	6,849	7,111	**21,584**	(8,084)
Information & Dissemination	0	0	0	**0**	0	98	(63)	**35**	(35)
Indirect costs/ Overheads (32%)	22,506	22,568	28,923	**76,384**	18,974	21,528	28,971	**69,474**	6,910
Sub Grants/sub contracts	12,000	12,000	2,000	**26,000**	7,364	3,787	(10,452)	**699**	25,301
Equipments	10,000	10,000	0	**20,000**	4,182	8,224	0	**12,406**	7,594
Total	**117,106**	**117,368**	**124,223**	**361,084**	**91,728**	**102,985**	**111,974**	**306,688**	**54,396**

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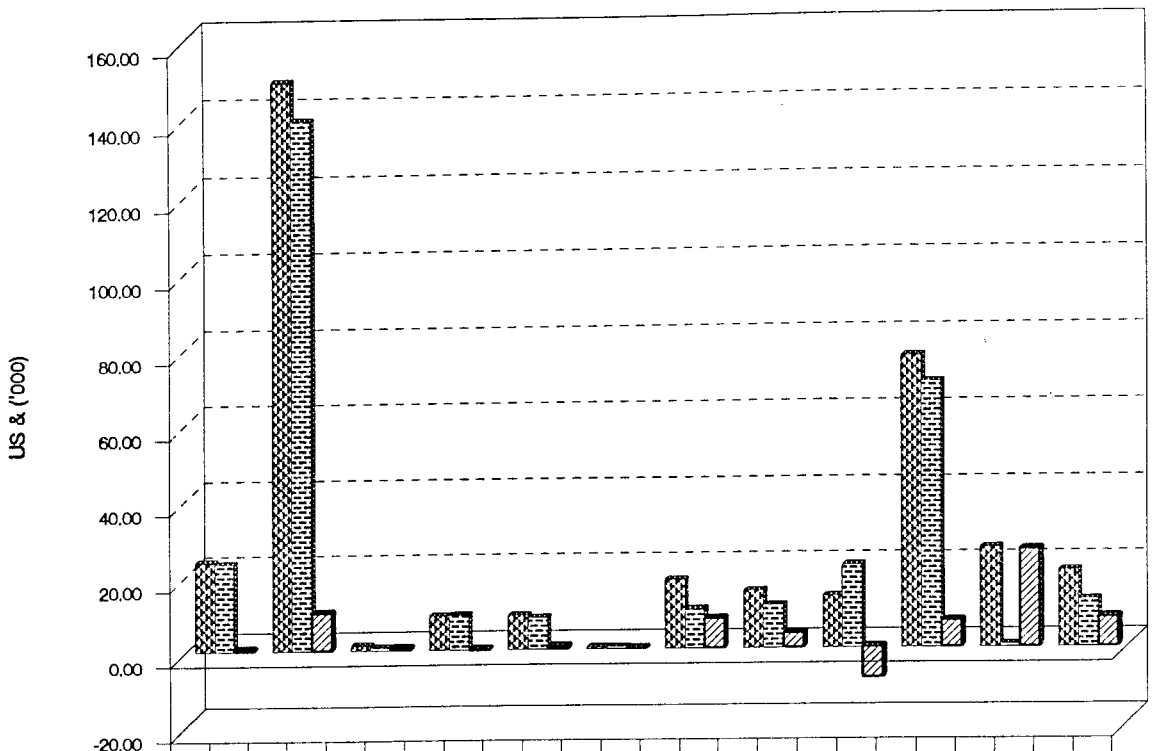
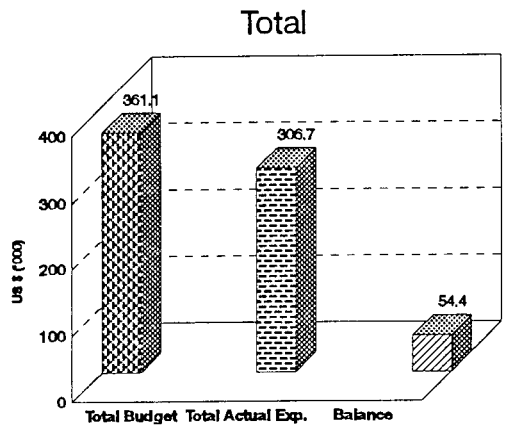
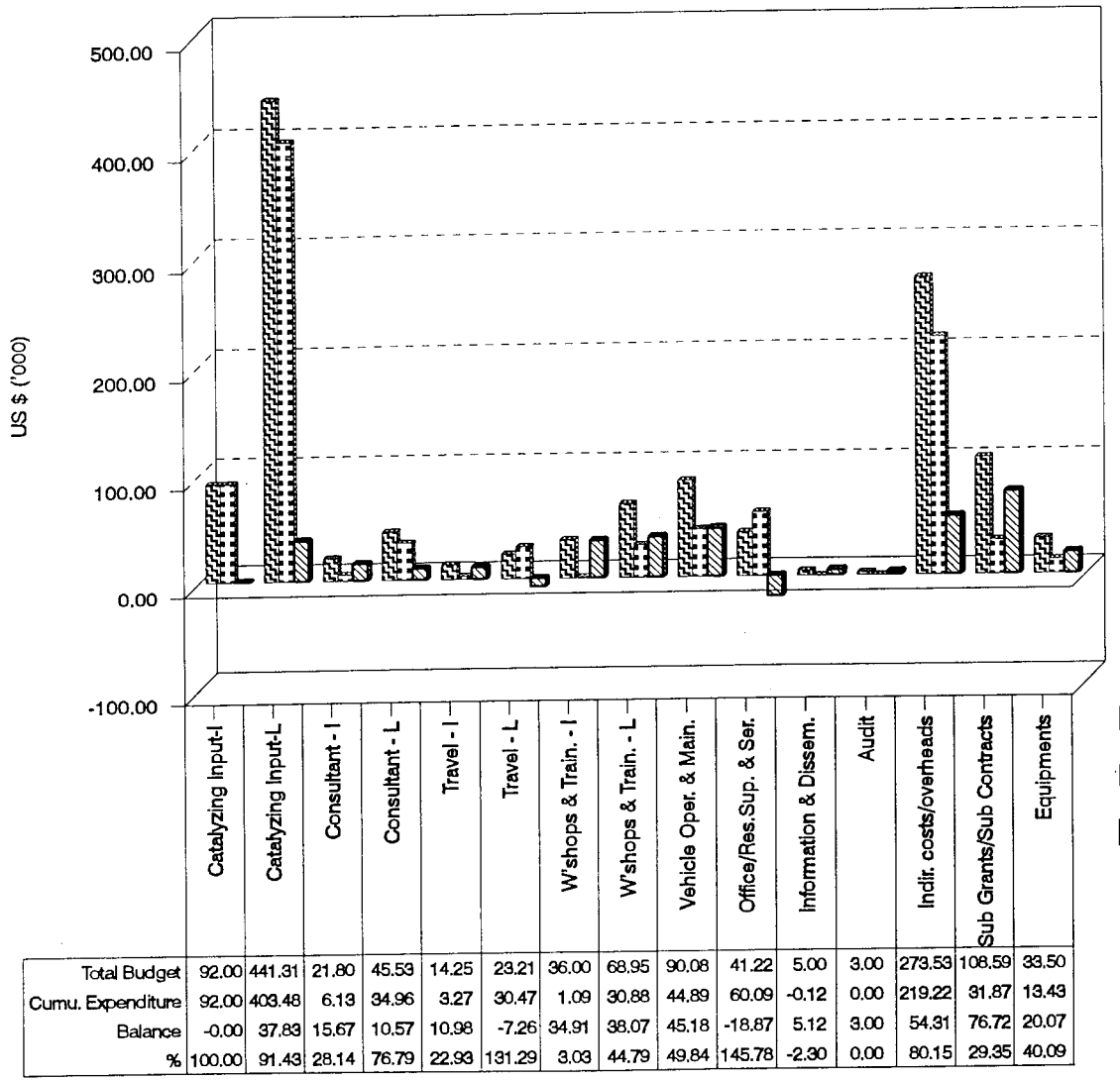
EXPENDITURE OUT OF THE BUDGET FOR THE 4th QUARTER, 1996



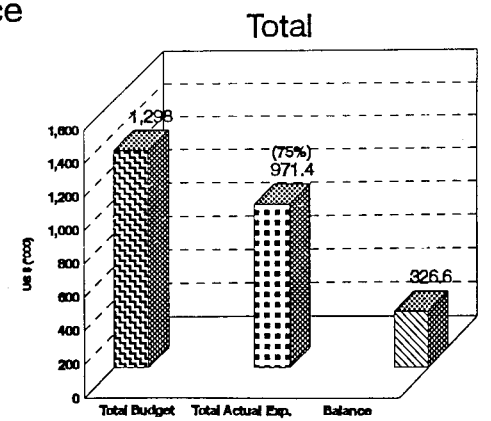


	Catalyzing Input-Int'l	Catalyzing Input-Local	Consultant - I	Consultant - L	Travel - L	W'shops & Train. - I	W'shops & Train. - L	Vehicle Oper. & Main.	Office/Res.Sup. & Ser.	Indir. costs/overheads	Sub Grants/Sub Contracts	Equipment
Total Budget	23.40	149.00	1.30	9.00	9.00	0.50	18.00	15.00	13.50	76.38	26.00	20.00
Cumu. Expenditure	23.00	139.12	0.75	9.19	8.34	0.59	10.29	11.21	21.58	69.47	0.70	12.41
Balance	0.40	9.88	0.55	-0.19	0.66	-0.09	7.72	3.79	-8.08	6.91	25.30	7.59
%	98.29	93.37	57.69	102.07	92.70	118.00	57.14	74.76	159.88	90.95	2.69	62.03

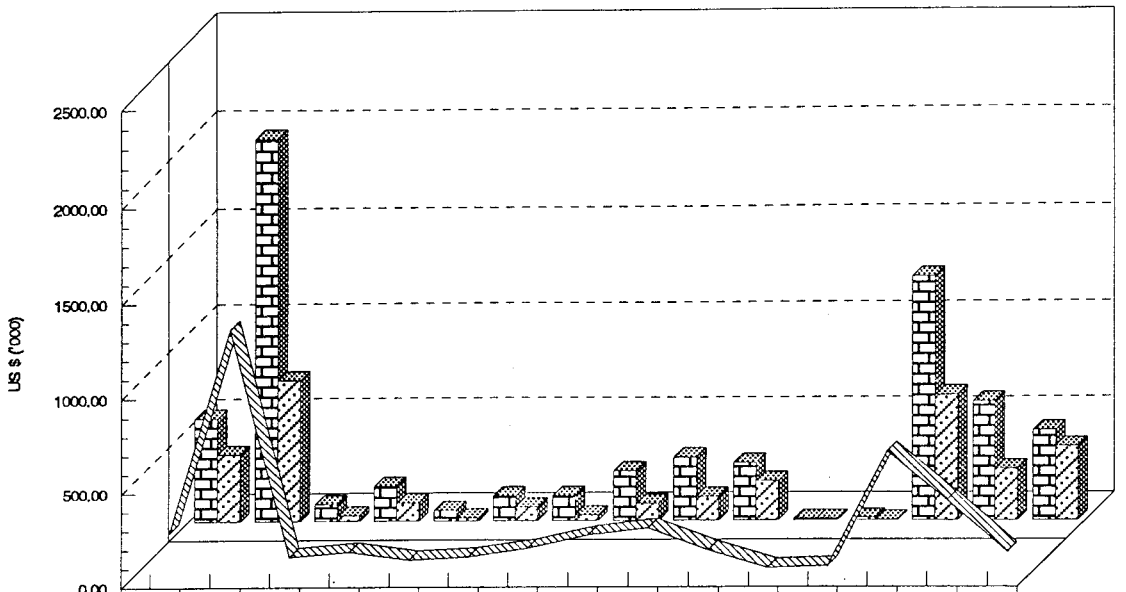
EXPENDITURE AS AT END OF DECEMBER OUT OF THE BUDGET OF THE YEAR 1996



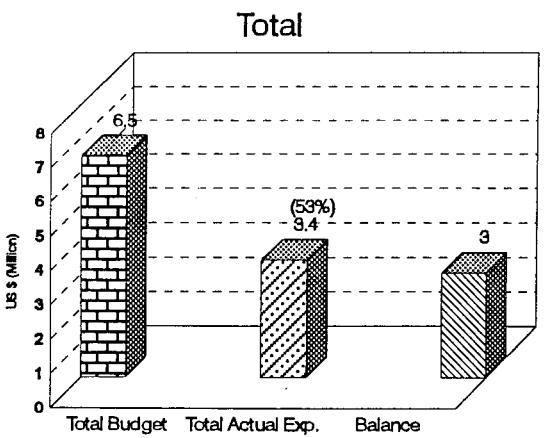
	Catalyzing Input-I	Catalyzing Input-L	Consultant - I	Consultant - L	Travel - I	Travel - L	W'shops & Train. - I	W'shops & Train. - L	Vehicle Oper. & Main.	Office/Res.Sup. & Ser.	Information & Dissem.	Audit	Indir. costs/overheads	Sub Grants/Sub Contracts	Equipments
Total Budget	92.00	441.31	21.80	45.53	14.25	23.21	36.00	68.95	90.08	41.22	5.00	3.00	273.53	108.59	33.50
Cumu. Expenditure	92.00	403.48	6.13	34.96	3.27	30.47	1.09	30.88	44.89	60.09	-0.12	0.00	219.22	31.87	13.43
Balance	-0.00	37.83	15.67	10.57	10.98	-7.26	34.91	38.07	45.18	-18.87	5.12	3.00	54.31	76.72	20.07
%	100.00	91.43	28.14	76.79	22.93	131.29	3.03	44.79	49.84	145.78	-2.30	0.00	80.15	29.35	40.09



CUMULATIVE EXPENDITURE OUT OF LIFE OF PROJECT BUDGET FROM JUNE 1993 TO DECEMBER 1996



	Catalyzing Input-Int'l	Catalyzing Input-Local	Consultant - I	Consultant - L	Travel - I	Travel - L	Wshops & Train. - I	Wshops & Train. - L	Vehicle Oper. & Main.	Office/Res.Sup. & Ser.	Information & Dissem.	Audit	Indir. costs/overheads	Sub Grants/Contracts	Equipments
Balance	190.66	1260.65	59.60	87.91	42.71	60.46	102.18	173.47	208.82	94.08	0.94	10.97	617.83	355.97	83.56
Total Budget	547.40	2005.34	89.60	186.08	58.05	133.70	132.00	264.38	336.92	305.73	7.48	15.11	1278.03	628.75	476.00
Cumu. Expenditure	356.74	744.69	30.01	98.18	15.34	73.24	29.82	90.90	128.10	211.65	6.54	4.14	660.21	272.78	392.44
%	65.17	37.14	33.49	52.76	26.43	54.78	22.59	34.38	38.02	69.23	87.42	27.37	51.66	43.38	82.44

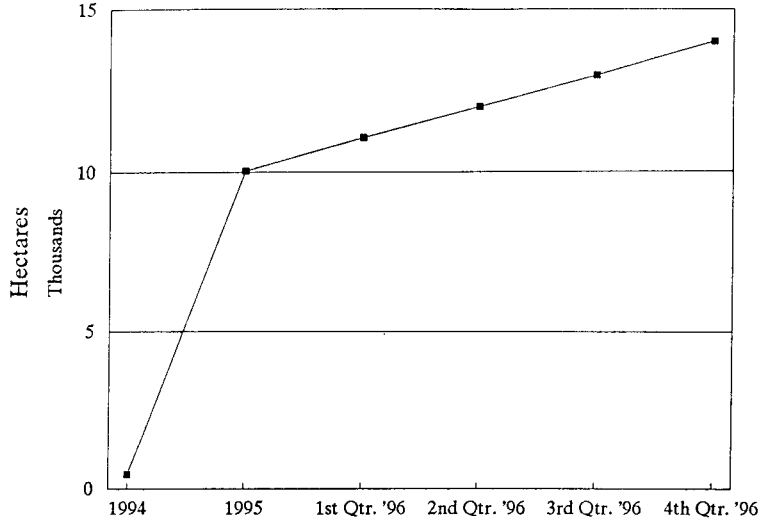


Annex 5

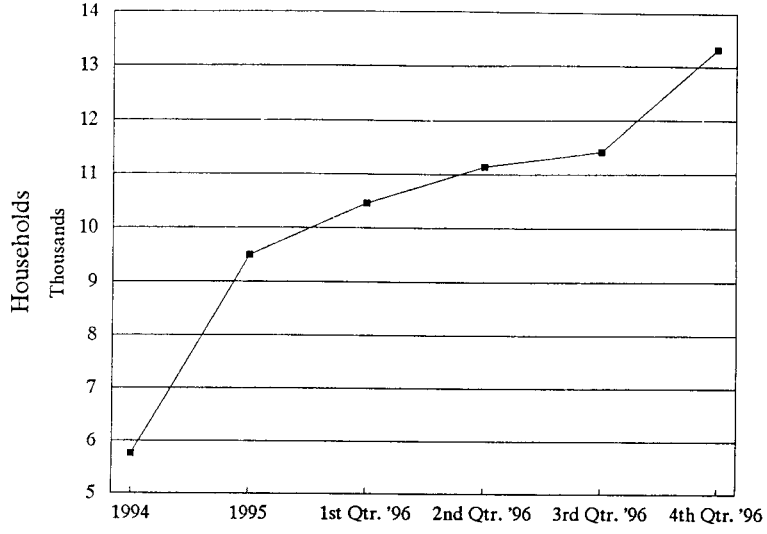
SUMMARY REPORT ON HOST COUNTRY CONTRIBUTION (HCC)
25.10.93 – 31.12.96

Description	Nilwala		Huruluwewa		Total No.	Total HCC Rs.
	No.	HCC Rs.	No.	HCC Rs.		
Contribution of NGOs, groups, farm households, and individuals by way of time/labour, and materials supplied (persons)	9,606	1,984,033	18,856	4,368,596	28,462	6,352,629
Value of conserved capital assets	–	679,871	–	5,614,699		6,294,570
Value of sub Grants (No)	55	3,977,830	69	4,739,229	124	8,717,059
Govt. officers contribution (persons)	672	4,221,917	731	1,734,775	1,403	5,956,692
Conserved Area		8,528,440		42,733,872		51,262,312
Total		19,392,090		59,191,171		78,583,261

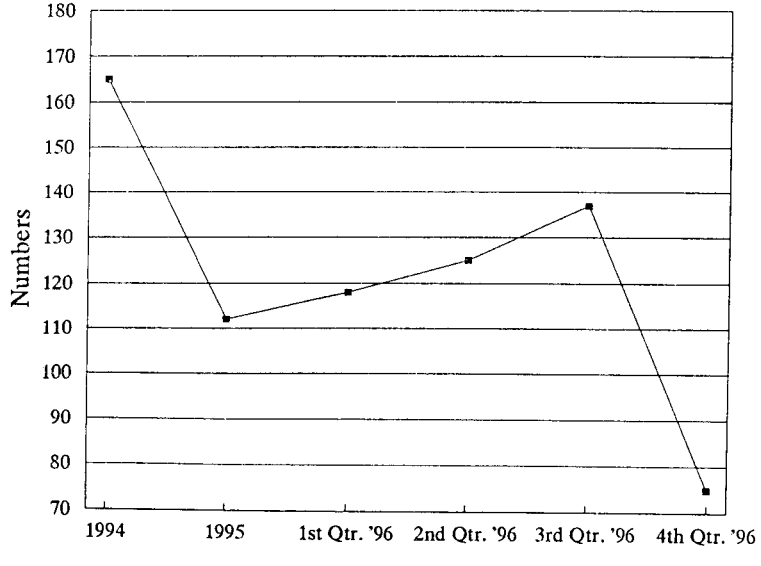
AREA UNDER PRODUCTION AND LAND & WATER CONSERVATION PRACTICES



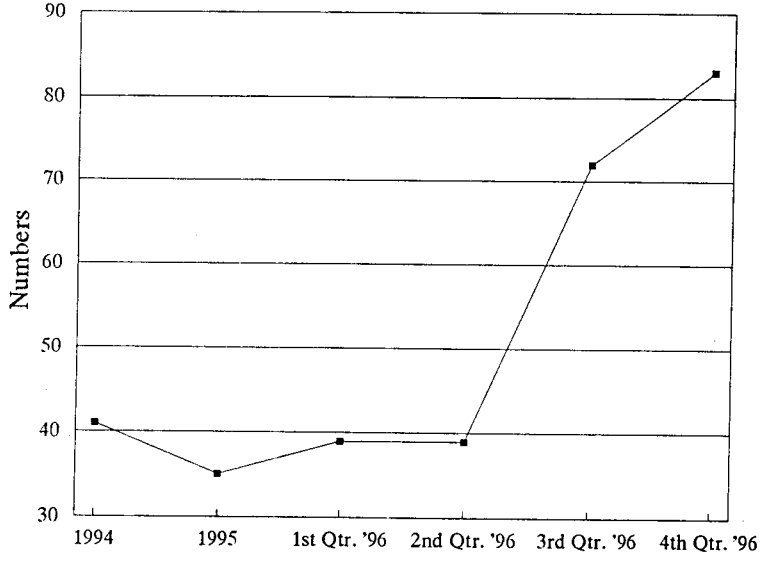
FARM HOUSEHOLDS USING IMPROVED ENVIRONMENTAL TECHNIQUES



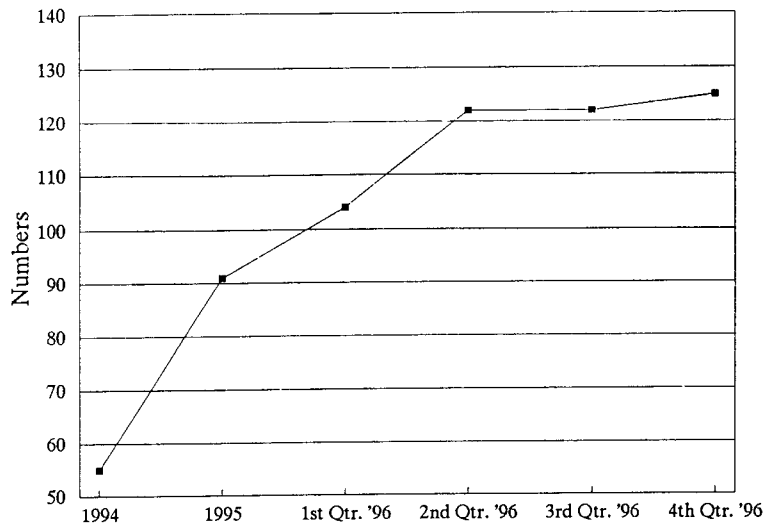
GROWTH OF RESOURCES USER GROUP FORMATION IN PRODUCTION & CONSERVATION PRACTICES



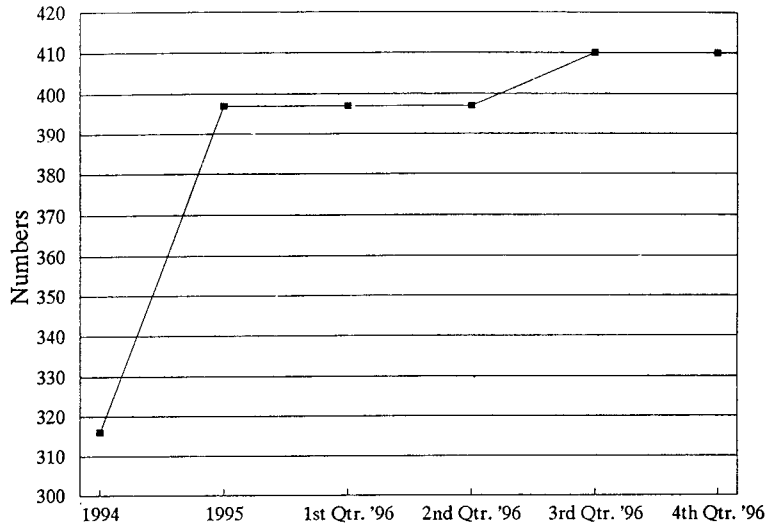
GROWTH OF FARMER ORGANIZATION



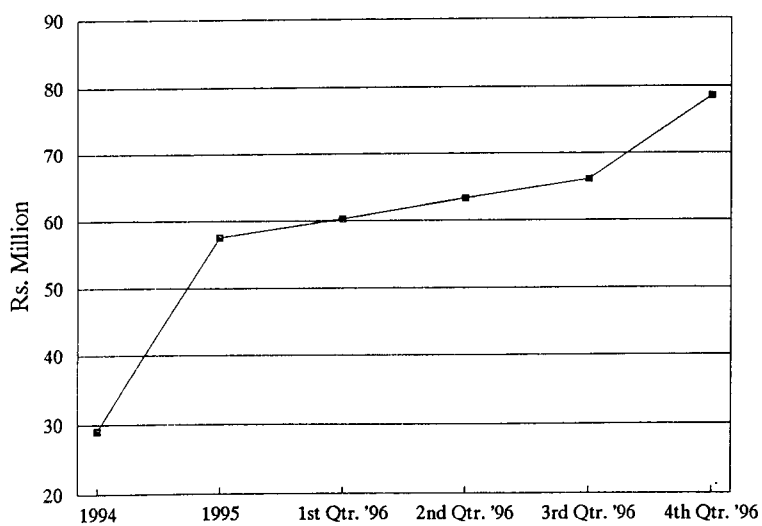
SMALL GRANTS MADE TO USER GROUPS TO INVEST INTO COMMON USER GROUPS ASSETS



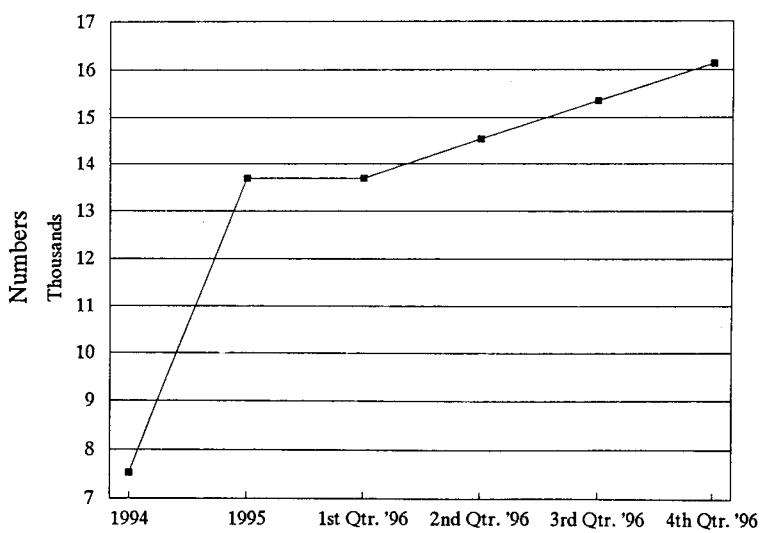
TRAINING OPPORTUNITIES OFFERED TO GOVERNMENT OFFICERS



HOST COUNTRY CONTRIBUTION



TRAINING OPPORTUNITIES OFFERED TO RESOURCES USERS



Annex 8

SCOR RESEARCH STUDIES – CURRENT STATUS (SUMMARY)
– Huruluwewa and Nilwala watersheds –
END OF 4th QUARTER 1996

Study No	Name of study	Present status
(1)	Rainfall trends, surface water balance and vegetation change in the Maha Meegaswewa sub – watershed	Completed
(2)	Baseline and M&E studies for intergrated water management in Huruluwewa watershed.	Completed
(3)	Agro–well & Ground water management in Huruluwewa watershed	Completed
(4)	Land use maps (1:50000) for Nilawala & Huruluwewa Watersheds to demarcate boundaries of watersheds & sub–watersheds & to help identify to pilot intervention sites.	Completed
(5)	Complete the review of land use and prepare land use maps for Huruluwewa Watershed	Completed
(6)	Complete the review of land use and prepare land use maps for Nilwala Watershed	Completed
(7)	Effects of Conservation Measures under SCOR interventions in the Huruluwewa Watershed.	Completed (as a component of the major project)
(8)	A study on adoption of Technology in the tea sector in Upper Nilwala watershed.	Completed
(9)	An analysis of demand, supply and price–relations aimed at production scheduling	Completed
(10)	Biodiversity of Medicinal and other tree species in the Huruluwewa Watershed with emphasis on their economic utility.	Completed
(11)	Evaluation of SCOR interventions on resources management and profitability trends in Huruluwewa and Nilwala watersheds Part 1 – Bench mark establishment Part 2 – Impact Evaluation	Completed To be commenced

Study No	Name of study	Present status
(12)	Study on crops/ livestock yield, profitability and other socio-economic aspects in Nilwala Watershed	Completed
(13)	Feasibility study on Production & processing of Medicinal plants- a component of land & water conservation efforts in the dry zone	Completed
(14)	Impact of Land Tenure Part 1- Literature Review Part 11- Micro level analysis	 Completed Completed
(15)	Development & Sustainability of user organizations in watershed management in Nilwala and Huruluwewa Watersheds.	Completed
(16)	Evaluation of Technology adoption in balancing Production & Protection in Nilwala and Huruluwewa watersheds.	Completed
(17)	Participatory Planning for Sustainable Natural Resources Mangement in Watersheds.	Completed
(18)	Micro Hydro Electric Power Generation and Watershed Management	Completed
(19)	Participatory Development and Design of Projects - The SCOR Experience	On going
(20)	Enhancing Sustainable Productivity of Land and Water Resources in Small Tank Systems.	On going
(21)	Community Resource Mobilization through Mini Projects for Watershed Management.	On going
(22)	Assessing Watershed Resources Management Institutions - Experiences of Shared Control of Natural Resources Project.	On going
(23)	Analysis of Spatial and Temporal Variability of Agro-climatic Data of the Nilwala Basin.	On going
(24)	Analysis of Land Use, Rainfall and River Flow Relations of the Upper Nilwala River Basin.	On going
(25)	Protecting Water Courses through Vegetated Reservations.	On going
(26)	Effects of Management Interventions on Resource Use Pattern at Household Level.	On going
(27)	An Assessment of the Changes of Resource Use on Crop Production through SCOR Interventions with particular Reference to Upstream Downstream Linkages.	On going
(28)	Potential for Localised Capital Formation Strategies in Watershed Management : The Case of Tea Farmer Bank in Upper Nilwala Watershed.	On going
(29)	Strategies and Process of Soil and Water Conservation Technology Transfer and Their Impact on Farmer Adoption - Lessons from Huruluwewa Watershed.	On going

Study No	Name of study	Present status
(30)	Determination of Impact of Watershed Management Interventions on Species Diversity	On going
(31)	Effect of Watershed Management Interventions on Technical and Allocative Efficiencies.	On going
(32)	Impact of Higher Level Institutions on Watershed Resources User Groups and Organizations – Experiences of Shared Control of Natural Resources Project, Sri Lanka.	On going
(33)	Assessment of the Rainwater Harvesting System with Eye–brow bunds and Buried Pots.	On going
(34)	Institutionalization Process of Environmental Protection and Production Strategies through Local NGOs – A Case Study on Dotalugala Local NGO, Nilwala Watershed, Sri Lanka.	On going
(35)	The Land and Water Based Area Development	On going

Annex 9

SHARED CONTROL OF NATURAL RESOURCES PROJECT (SCOR)

List of Reports/Papers

End of 4th Quarter 1996

	Title	Author
1.	SCOR Work Plan (1993-1995)	SCOR Project
2.	Land and Water Resources Management in Watersheds - Participatory Action Research Aimed at Integrating Production and Protection	***C.M. Wijayaratna*, Head, Sri Lanka Field Operations, IIMI, SCOR Project Leader** Paper presented to the 10th Internal Program Review of IIMI, 7-11 Nov. '94 Colombo.
3.	Shared Control of Natural Resources Spatial Database for Planning and Monitoring Resource Use Change.	***Gamini P. Batuwitage*, M&E Specialist, SCOR** Paper presented to the 10th Internal Program Review of IIMI, 7-11 Nov. '94 Colombo.
4.	Integrated Water Management in a Watershed Context	***Nihal Fernando*, Research Associate/Water Resources Engineer, SCOR** Paper presented to the 10th Internal Program Review of IIMI, 7-11 Nov. '94 Colombo.
5.	Shared Control of Natural Resources An Integrated Watershed Management Approach to Optimize Production and Protection	***C.M. Wijayaratna*, Head, Sri Lanka Field Operations, IIMI, SCOR Project Leader** Presented to the Annual General Meeting and Seminar of Sri Lankan Agricultural Economics Association Peradeniya, Sri Lanka.
6.	Integration Environmental and Conservation Concerns with Production Goals A Participatory Approach to Land and Water Resources Management in a Watershed Context	***C.M. Wijayaratna*, Head, Sri Lanka Field Operations, IIMI, SCOR Project Leader** Paper presented to the 8th International Soil Conservation Conference on "Soil and Water Conservation: Challenges and Opportunities", December 4-8, 1994, New Delhi, India.
7.	Planting Trees along Roads, Stream and Canal Reservation and in Watershed Areas in Sri Lanka - Present Status and Issues for Consideration	***C.M. Wijayaratna*, Head, Sri Lanka Field Operations, IIMI, SCOR Project Leader** ***Anura S. Widanapathirana*** Monitoring and Evaluation Consultant, Participatory Forestry Project, Forest Department, Sri Lanka.

	Title	Author
8.	Information Technology for Policy Analysis and Change in Sustainable Integrated Watershed Resources Management	***Gamini P. Batuwitage*, M&E Specialist, SCOR** Paper presented at the Training Course on the Use of Information Technology for Sustainable Development organized by the Asian and Pacific Development Center, Kuala Lumpur, Malaysia, on 16.08.94.
9.	Review of the Monitoring and Evaluation, Organization and Theme Actualization of the Shared Control of Natural Resources (SCOR) Project	***Gerald J. Karaska*, Clark University,** Worcester, Massachusetts, USA.
10.	SCOR PROGRESS - 1st Quarter 1994	SCOR Project
11.	SCOR PROGRESS - 2nd Quarter 1994	
12.	SCOR PROGRESS - 3rd Quarter 1994	
13.	SCOR PROGRESS - 4th Quarter 1994	
14	SCOR Monitor - January - March 1994	
15.	SCOR Monitor - April - December 1994	
16.	SCOR Monitor - January - August 1995	
17.	SCOR PROGRESS - 1st Quarter 1995	
18.	SCOR PROGRESS - 2nd Quarter 1995	
19.	SCOR PROGRESS - 3rd Quarter 1995	
20.	SCOR PROGRESS - 4th Quarter 1995	
21.	SCOR PROGRESS - 1st Quarter 1996	
22.	SCOR PROGRESS - 2ND Quarter 1996	
23.	SCOR PROGRESS - 3RD Quarter 1996	
24.	Review of Progress of Shared Control of Natural Resources Project	***Marcus M. Karunanayake*** Senior Professor of Geography, Dept. of Geography, University of Sri Jayewardenepura, Sri Lanka.
25.	Adoption of Technology in the Tea Sector in Upper Nilwala Watershed	***Vijith Jayamanne*** Bsc Student, University of Ruhuna.

	Title	Author
26.	Huruluwewa Watershed: Present Status and Proposed Interventions under the Shared Control of Natural Resources (SCOR) project (Interim Report)	Land Use Policy Planning Division, Ministry of Lands.
27.	"Indigenous Rainwater Harvesting Systems in Sri Lanka: Current Status and An Eco System Approach to Revitalization".	***C.M. Wijayaratna*, Head, Sri Lanka Field Operations, IIMI, SCOR Project Leader** Paper presented to the 7th International Rainwater Catchment System Conference, June 19-25, 1995, Beijing, China.
28.	A Participatory Holistic Approach to Land and Water Management in Watersheds	***C.M. Wijayaratna*, Head, Sri Lanka Field Operations, IIMI, SCOR Project Leader** Paper presented to a special seminar on "Effective Water Use through Improved Irrigation Management Information System", Irrigation Engineering Center, NIA Compound, EDSA, Quezon City, Metro Manila, Philippines, 12-15 March 1995
29.	Data, Capacity Building, and Networking Needs for the use of Geographical Information Systems in Agricultural Research	***Gamini P. Batuwitage*, M&E Specialist, SCOR** Paper presented at ARENDAL II workshop on UNEP and CGIAR cooperation on 09.05.95 to 11.05.95 in Arendal, Norway.
30.	Seasonal Summary Report on Integrated Water Management in Huruluwewa Watershed (Maha 1994/95 season)	***N.U. Hemakumara***, Irrigation Engineer, Huruluwewa, ***Nihal Fernando***, Research Associate/Water Resources Engineer, SCOR, ***B.R. Ariyaratne***, Research Officer, SCOR
31.	Action Research Study on Special SCOR Interventions in the Huruluwewa Feeder Canal Area	***D.M. Ariyaratne,*** Former Director, Irrigation Management Division.
32.	Nilwala Watershed: Present Status and Proposed Interventions under the Shared Control of Natural Resources (SCOR) project (Interim Report)	Land Use Policy Planning Division, Ministry of Lands.
33.	Biodiversity of Medicinal and Other Tree Species in the Huruluwewa Watershed with Emphasis on their Economic Utility. (Reconnaissance Survey)	***B. Colin N. Peiris*** Senior Lecturer Horticulture, Faculty of Agric. University of Peradeniya.
34.	Biodiversity of Medicinal and Other Tree Species in the Huruluwewa Watershed with Emphasis on their Economic Utility. (Identification of Genetic Diversity)	***B. Colin N. Peiris*** Senior Lecturer Horticulture, Faculty of Agric. University of Peradeniya.
35.	Land Consolidation in Village Tanks (A study in Anuradhapura District)	***N.M.U. Nawaratna*** Chief Irrigation Engineer, Dept. of Agrarian Services

	Title	Author
36.	Integrated Water Management in Huruluwewa Watershed - Maha 1994/95 season (Detailed report)	***N.U. Hemakumara***, Irrigation Engineer, Huruluwewa, ***Nihal Fernando***, Research Associate/Water Resources Engineer, SCOR, ***B.R. Ariyaratne***, Research Officer, SCOR
37.	GIS Application on Sustainable Development: Review of Current Programs, National Trends Experience from Sri Lanka and Shared Control of Natural Resources Project	***Gamini P. Batuwitage***, M&E Specialist, SCOR Paper presented at International Conference on GIS Applications - GIS AM/FM Asia 95, Bangkok.
38.	Managing Watershed Environment	***C.M. Wijayaratna***, Program Leader, Social & Environmental Analysis and SCOR Project Leader. Paper presented to the "Watershed Management Forum", University of the Philippines, Los Banos, 4-6 October, 1995.
39.	Evaluation of SCOR Interventions on Resources Management and Profitability - Upper Nilwala Watershed (an interim report)	Department of Agriculture Economics, Faculty of Agriculture, University of Ruhuna, October 1995.
40.	Biodiversity of Medicinal and Other Tree Species in the Huruluwewa Watershed with Emphasis on their Economic Utility. (Final Report)	***B. Colin N. Peiris*** Senior Lecturer Horticulture, Faculty of Agricultural University of Peradeniya. November 1995.
41.	Participatory Micro Hydro-Electric Power Generation	***N. Edirisinghe***, Research Officer (SCOR) ***D. Wijenayake***, Watershed Management Coordinator (SCOR), ***Oscar Amarasinghe***, Senior Lecturer, Dept of Economic & Extension, Faculty of Agriculture, University of Ruhuna, ***C.M. Wijayaratna***, National Program Leader & SCOR Project Leader, IIMI. Paper presented to the Symposium on Rehabilitation of the Nilwala Basin, jointly organised by The Institution of Engineers, Sri Lanka and Engineering Research Unit, Faculty of Engineering Technology, The Open University of Sri Lanka, January 26 & 27, 1996.
42.	Development & sustainability of user organizations in watershed management in Huruluwewa Watershed	***P.G. Somaratna***, Consultant March, 1996
43.	Evaluation of Technology adoption in balancing Production & Protection in Huruluwewa Watershed	***P.G. Somaratna***, Consultant March, 1996
44.	Development & sustainability of user organizations in watershed management in Nilwala Watershed	***L.R. Perera***, Consultant March, 1996

	Title	Author
45.	An analysis of demand, supply and price relations aimed at production scheduling	***M.A.B. Anawaratna,*** Student, Ruhuna University
46.	Evaluation of profitability and productivity of onions, tomato and rice under different irrigation and technology regimes	***M.A.B. Anawaratna*** Student, Ruhuna University
47.	Evaluation of Technology adoption in balancing Production & Protection in Nilwala Watershed	***L.R. Perera***, Consultant July, 1996
48.	Harvesting and Soil & Water Conservation Practices in the Dry Zone Watersheds of Sri Lanka.	***C.M. Wijayaratna***, Paper presented to the Consultation on Small Water Harvesting Schemes, organized by the Society for Promotion of Waterlands Development, New Delhi, India, 12 March 1996
49.	Nature of Small Tank Cascade Systems and a Framework for Rehabilitation of Tanks within Them, International Irrigation Management Institute, IIMI, Country Paper, Sri Lanka No. 13.	***C.M. Wijayaratna*** , (Co-author) 1996
50.	Energy & Environment: Micro Hydroelectric Power Generation as an Integrated Component of Participatory Watershed Management.	***C.M. Wijayaratna***, Paper presented at the First Philippine International Conference and Exhibition on Agricultural Engineering and Related Technologies under the Theme "Energy and Environment: Sustainability and Development Challenges". 22-26 April, 1996 Central Auzon State University, Philippines.
51.	Rural Appraisal and Sustainable Development	***C.M. Wijayaratna***, Paper presented a the Wrokshop on Participatory Rural Appraisal, organized by the Forest Department of Sri Lanka and sponsored by Asia Pacific Agroforestry Network, APAN, Sri Lanka Forestry Institute, Nuwara Eliya. 27-31 May 1996.
52.	Tenurial Security and Natural Resources Management in a Watershed Context Part I - Evaluation of Natural Resources Tenurial Forms Part II - Impact of Tenurial Security on Productivity	***C.M. Wijayaratna***, SCOR Project Leader, ***Gamini Batuwitage***, Deputy Project Leader, ***Paul Rajasekara***, Human Resources Coordinator, SCOR ***C.M. Wijayaratna***, SCOR Project Leader ***Paul Rajasekara***, Human Resources Coordinator. ***Kumudini Jayawardana***, Research Officer
53.	Groundwater use and Management for Agriculture in Hardrock Terrains	***Nihal Fernando***, Research Associate/Water Resources Engineer, SCOR.

	Title	Author
54.	Participatory Planning for Sustainable Natural Resources Management in Watershed.	***C.M. Wijayaratna***, SCOR Project Leader ***J.M. Samarakoon Banda***, Research Associate ***Gamini Batuwitage***, Deputy Project Leader, SCOR
55.	Complete the review of land use and prepare land use maps for Huruluwewa Watershed	Land Use Policy Planning Division
56.	Complete the review of land use and prepare land use maps for Nilwala Watershed	Land Use Policy Planning Division
57.	GIS for Collaborative Planning and Monitoring of Watershed Resources for sustainable productivity: A case from Sri Lanka	***Gamini Batuwitage***, Deputy Project Leader, SCOR. Paper presented at Supplementary Proceedings of the Seventeenth Asian Conference on Remote Sensing, Nov. 4-8, 1996 Colombo, Sri Lanka.
58.	Upstream-Downstream Linkages of Watersheds with Reference to Irrigation: SCOR experience using GIS	*Gamini Batuwitage*, Deputy Project Leader, SCOR Paper presented at Workshop on Environmental Intervention in Irrigation Development & Management 5-6 December, 1996, Colombo.
59.	Rainfall trends, surface water balance and vegetation change in the Maha Meegaswewa sub-watershed.	*Prof. Basnayake*
60.	An Evaluation System for Sustainable Watershed Management	*C.M. Wijayaratna*, SCOR Project Leader Paper presented at the International Seminar on Tools for Analysis and Evaluation of Sustainable Land Use in Rural Development, organized by the Food and Agriculture Development Centre (ZEL) of the German Foundation for International Development (DSE), Zschortau, Federal Republic of Germany, 2-14 December 1996.