

PD-ART-558

8/2/88

MAHAWELI ENVIRONMENT PROJECT
PROJECT ASSISTANCE COMPLETION REPORT

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Basic Project Identification Data:

1. **Country:** Sri Lanka
2. **Project Title:** Mahaweli Environment Project
3. **Project Number:** 383-0075
4. **Funding:** AID: Grant \$ 5,000,000
B/G \$ 1,900,000
5. **Project Dates:**
- | | |
|--------------------------|--------------------|
| Project Paper Approved: | September 17, 1982 |
| Project Agreement Signed | September 30, 1982 |
| PACD: Original | September 30, 1987 |
| Final | September 30, 1991 |
6. **Project Design:** Government of Sri Lanka
USAID/Colombo
International Union for Conservation of
Nature and Natural Resources
7. **Implementing Agency:** Ministry of State
Department of Wildlife Conservation
8. **Technical Assistance Contractor:** U.S. Fish and Wildlife Service
9. **Evaluations:** Mid-term Evaluation - December 1985
Project Evaluation - March 1987

OFFICE OF PROJECTS

JULY 1993

MAHAWELI ENVIRONMENT PROJECT (383-0075)

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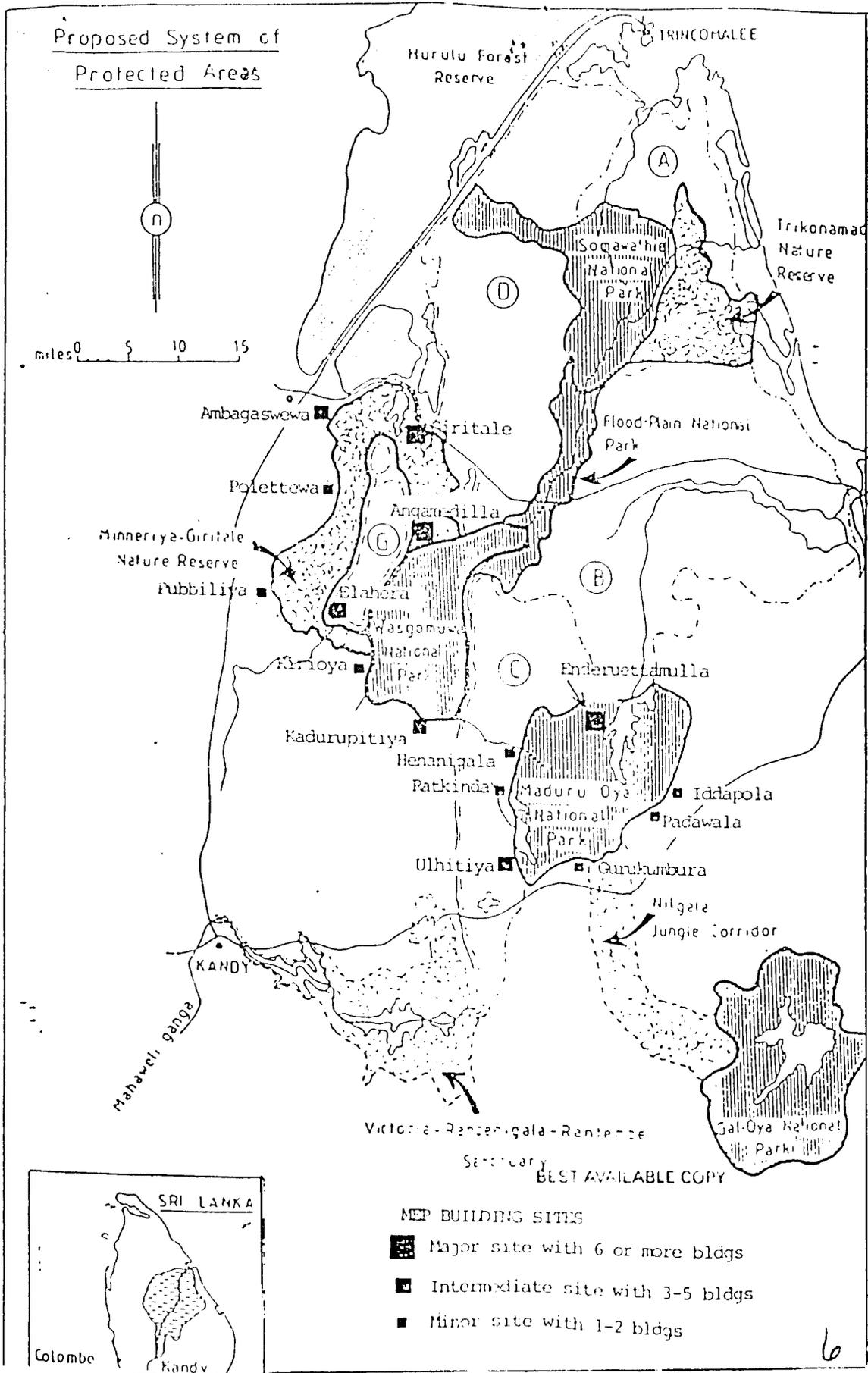
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Figure 1. System of Protected Areas Under MEP

ACRONYMS

AID	U.S. Agency of International Development/Colombo Mission
AMP	Accelerated Mahaweli Development Program
DWLC	Department of Wildlife Conservation
EOPS	End of Project Status
FAO	Food and Agriculture Organization
GSL	Government of Sri Lanka
LOP	Life of Project
MASL	Mahaweli Authority of Sri Lanka
MEA	Mahaweli Economic Agency
MECA	Mahaweli Engineering and Construction Agency
MEP	Mahaweli Environment Project
NAREPP	Natural Resources and Environmental Policy Project
PACD	Project Assistance Completion Date
PASA	Participating Agency Service Agreement
PSA	Procurement Service Agreement
PP	Project Paper
TA	Technical Assistance
TAMS	Tippetts-Abbett-McCarthy Stratton
TDD	Terminal Disbursement Date
UNDP	United Nations Development Program
USAID	U.S. Agency for International Development/Colombo Mission
USFWS	U.S. Fish and Wildlife Service

Figure 1



MAHAWELI ENVIRONMENT PROJECT (383-0075)

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1. BACKGROUND

The Mahaweli Project

Between 1965 and 1968 the Government of Sri Lanka with the assistance of the UNDP/FAO developed a master plan for the utilization of its major river the Mahaweli Ganga. The plan envisaged a 30 year program to construct fifteen reservoirs including eleven with power stations, and to develop 360,000 hectares of land for irrigation purposes. Initial work on the first phase of the program began in 1970. Under Phase 1, two diversion dams were constructed to supplement 50,000 hectares of partially irrigated existing lands.

Accelerated Mahaweli Program (AMP)

The new government coming to power in 1977 announced that its major development program to address unemployment, food self sufficiency, and shortages of electric power would be the completion of the Mahaweli Project in six years. This program known as the Accelerated Mahaweli Program (AMP) included five new dams and the development of 80,000 hectares of new lands.

Environmental issues

Five wildlife reserves of approximately 82,000 hectares and five forest reserves of approximately 421,000 hectares were situated wholly or partially within the AMP area. Construction of water works and other man-made modifications of the natural ecosystem in the AMP area were expected to reduce the prime wildlife habitat by about 27,000 hectares. Wildlife in these areas would conflict with settler farmers as they compete for space. In addition, it would result in the crop damage as well as damage to irrigation works. Furthermore, the important contribution that wildlife makes to national pride, and to the promotion of tourism had to be preserved.

In 1980, USAID sponsored an environmental assessment study* of the AMP which recommended feasible means of conserving wildlife and reducing vulnerability of agriculture and settlements. The Mahaweli Environment Project (MEP) was a direct response to a request made by the GSL for financial support to implement the action plan recommended by this report.

* Environmental Assessment, Accelerated Mahaweli Development Program, TIPPETTS-ABBETT-McCARTHY-STRACTION (TAMS) Oct. 1980

2. PROJECT PURPOSE AND GOALS

The purpose of the project was to 'ensure the stability of irrigated agricultural development and human settlements in the AMP area by providing alternative protected habitats for displaced wildlife in a manner that is ecologically sound and socially acceptable'. The project would contribute towards attaining the sector goal which would increase the opportunities for equitable economic development, employment, and food production through the protection of irrigation structures, crops and maintenance of hydro-power.

3. EXECUTIVE SUMMARY

The Mahaweli Environment Project was initiated in September 1982.

The project consisted of the following components.

- a. National park infrastructure development
- b. Strengthening the DWLC's planning and management system
- c. Develop DWLC's research and training capabilities.

Until 1986, the project was implemented by the Ministry of State through a special unit set up within the Ministry. The project made little progress during its first three years. The major constraint was the lack of clear authority to the implementation agency, and poor coordination among the DWLC, the MEP unit of the Ministry of State and the MASL. In July 1986, the implementation of the MEP was fully entrusted to the DWLC which came under the Ministry of Land, Land Development, and Mahaweli Development. This switch over of authority showed immediate improvements in the implementation of the project. On a recommendation made in the project's mid-term evaluation conducted in December 1985, the PACD of the project was extended by two years to September 30, 1989. In June 1989, the original project paper was amended through a supplement to the project paper to resolve the following.

(a) The project needed additional time to achieve one of its primary objectives, that of strengthening the institutional capacity of the DWLC.

(b) little progress had been made in the construction component of the project.

(c) It was realized that the original End of Project Status (EOPS) were unrealistic: some because of the security situation and others because of the limited time frame. Therefore, the attainable project output indicators needed to be modified.

(d) Extend the PACD by two years to September 1991.

Despite functioning under difficult social and institutional conditions, the MEP accomplished a great deal and contributed substantially to the development of national park program in Sri Lanka. Training and work facilities have been constructed, agency personnel have received extensive training and educational opportunities, and more than 177,000 hectares of wildlife habitat are intact and natural communities are now held as protected reserves.

(See page 5 in this report for modified outputs and their status at PACD).

4. PROJECT COMPONENTS

The three components that were to be developed as required by the project paper were as follows.

4.1. National park infrastructure development

Establishment and development of the following areas.

- (a) Somawathiya Sanctuary (52,000 hectares)
- (b) Wasgomuwa Strict Natural Reserve (76,000 hectares)
- (c) Maduru Oya Reserve (40,000 hectares)
- (d) Flood Plain Reserve (15,0000 hectares)

The infrastructure development that needed to be undertaken in above areas were as follows.

- (a) survey and establish 500 miles of boundaries;
- (b) develop 700 acres of buffer zones and rehabilitated habitat;
- (c) develop 95 miles of new roads and upgrade 150 miles of existing roads;
- (d) construct 90,000 square feet of personnel housing and administrative buildings; and
- (e) Establish 380 signboards along park parameters.

4.2. Strengthening the DWLC Planning and Management System

The DWLC cadre of personnel was to be expanded by approximately 225 employees bringing the total staff to 850. Also, planning and management, research, training, education, and maintenance programs were to be established within the DWLC.

4.3. Developing DWLC Research and Training Capability

A Wildlife Conservation Unit was to be set up to undertake research studies on elephants and other wildlife populations. A

Wildlife training Center was to be established to provide training facilities for the DWLC personnel.

5. DEVELOPMENT OF PROJECT COMPONENTS AND STATUS AT PACD

Since its start up, the project experienced problems caused by GSL management deficiencies. Lack of clear authority to the implementing agencies was the major constraint. As a result, the project remained behind schedule during the initial years of its implementation. On a recommendation made by the project evaluation concluded in March 1987, the PACD was extended by two years to September 30, 1989. By June 1989, it was realized that the project required additional time to accomplish its objectives. In June 1989, the original MEP Project Paper was amended through a project paper supplement. This project paper supplement extended the PACD by further two years to September 1991. Also, the projects quantitative indicators were modified to suit more realistic goals.

The original output indicators, the modified output indicators and the achieved levels at the PACD are presented in page 5 of this report.

5.1. National Park Infrastructure Development.

Demarcation and physical establishment of the protected areas commenced in 1983. By June 1989 the following areas had been demarcated and physically established under the provisions of the Fauna and Flora Protection Ordinance.

Maduru Oya National Park	58,850 ha
Wasgomuwa National Park	37,063 ha
Floodplains National Park	17,350 ha
Somawathiya National Park	37,762 ha

(Note: The above figures are as per actual declared boundaries and therefore do not match with the figures stated in the project paper. The area under Minneriya -Giritale Nature Reserve was included under Wasgamuwa Park in the project paper).

In addition to above, the following areas which were not identified in the project paper, were subsequently included in the MEP Project Paper Supplement of June 1989 and were established and declared during the projects life.

Tirikonamadu Nature Reserve	25,019 ha
Victoria-Randenigala-Rantembe Sanctuary	41,600 ha
Minneriya-Giritale Nature Reserve	42,000 ha

5.2. Strengthening DWLC's Planning and Management System

The MEP originally set out to increase the DWLC by 225 personnel. As per the project paper, 81 of them were to be assigned to

Somawathiya National Park. Due to security situation, by June 1989, only four persons had been assigned to Somawathiya. On the recommendation of the Mid-term evaluation concluded in 1985 the new staff requirements were reduced to 148 from the original 225. At the PACD, 136 new personnel had been added to the DWLC staff.

5.3. Developing DWLC's Research and Training Capability

The project paper called for greatly expanded training including a wildlife training center. In 1987, a research committee was appointed to guide research policy and activities. The research carried out by the project included research programs to provide information needed to adapt management programs to changing conditions. A standard 'Research Agreement was prepared and a series of project proposals were submitted, screened and carried out.

A full time training officer was appointed at the assistant director level. The Wildlife Training Center at Giritale was established in 1991. The training center is equipped with research facilities, residential quarters for the trainees and academic staff. A training program to train 300 wildlife guards and 90 wildlife range assistants was inaugurated in November 1992. At the time of writing this report 120 wildlife guards and 30 wildlife range assistants have completed training at Giritale Training Center.

5.4 Status of output level indicators at PACD

Achieved	Planned LOP	Revised	
	(original pp)	LOP	at
PACD			
National Park Establishment	4 parks 183,000 ha	7 parks 225,600 ha	7 parks 225,600
ha			
Park Infrastructure			
Boundaries (miles)	500	880	880
Sign boards (Nos)	380	380	380
Buffer Zones (acres)	700	800	800*
Park roads (miles)	245	110	55
Buildings (sq. Ft)	90,000	120,000	100,000
Park Planning & Management			
System Plans	1	1	1
Management Plans	4	4	4

DWLC Personnel			
Professional Staff	9	8	8
Support Personnel	216	139	128
Trained DWLC Staff			
US/ Third Country	10	10	66
In-country	120	120	90

* The riverain reserves of Right bank of Mahaweli (along Wasgamuwa park) were considered as buffer zones. This is because DWLC did not have legal powers in their ordinance to declare buffer zones.

6. CONSTRUCTION OF PHYSICAL FACILITIES

6.1. AID funded construction: These include buildings and facilities for: park administration, training and education, and research and staff housing. 55 buildings (approximately 120,000 sq.ft) were planned under this category located in 16 construction sites. The design, contracting, and construction supervision were carried out by MECA. Because of their distant locations, nine construction sites were subsequently transferred to DWLC for their contract administration and supervision. The construction was funded under the FAR method. AID met 95 percent of the total cost of construction. By the PACD 47 buildings (approximately 100,000 sq. ft.) and related infrastructure facilities were completed. Six buildings which were partially completed on the PACD were completed in February 1992 utilizing GSL funds. These six buildings were reimbursed by AID on the basis of completed percentage on the PACD. Three of the 55 buildings were deleted from the construction program because of their close proximity to the unstable parts of the country. A complete listing of AID funded buildings and facilities, their status at the PACD, and the reimbursed amounts, is presented in Appendix A to this report.

6.2. DWLC funded construction: In addition to AID funded construction, the following categories of construction were carried out by the DWLC utilizing GSL funds.

- a. Improvements to existing park roads.
- b. Construction of new roads
- c. Improvements to existing buildings and facilities within the parks

6.3 Maintenance of construction facilities:

During subsequent visits by AID officials after the PACD, it was found that the most of the buildings constructed under the MEP were not being properly maintained by the DWLC. Some of the buildings contained shortcomings related to the finishes. These shortcomings were subsequently rectified by MECA on the request of AID. The DWLC did not have adequate staff for regular maintenance of these buildings. Therefore, the Mission stressed the need to establish a building maintenance unit within the DWLC. At the request of the Mission the Wildlife Management Study by LAMSCO (concluded in July 1993 under AID funded NAREP Project), recommended that the DWLC should set up a maintenance unit within the DWLC, to take care of the maintenance of the buildings and other infrastructure facilities.

The Projects Office of the Mission is currently in the process of making a study of the shortcomings related to the finishes of the MEP buildings and the status of maintenance of MEP buildings. The study will recommend improved procedures to ensure proper finishes and proper maintenance.

7. TECHNICAL ASSISTANCE

In June 1983, AID contracted with U.S. National Park Service of Department of Interior through a PASA to assist in identifying and designing the life-of project technical assistance requirements. In July 1984, a PASA was signed with the U.S. National Park Service to provide DWLC 19.5 person months of short-term technical assistance and 9.75 months of U.S. training. The services of U.S. National Park Services was increased by an amendment to the PASA in July 1986, to include a long-term resident advisor. Commodities required by the long-term advisor also were procured through the PASA with National Park Service.

In addition to the above technical services, in July 1990, a PASA was signed with the US Fish and Wildlife Service, to allow presentation of eleven workshops to the DWLC. The purpose of these workshops was to strengthen the technical capability of the DWLC.s.

The final report of the U.S. Fish and Wildlife Service (USFWS) activities is presented in Appendix B to this report.

8. TRAINING

8.1. Overseas Training

The project provided training and study tours for 66 DWLC personnel in the US and in third countries. These training included long-term training in wildlife management and natural conservation management, short-term training on elephant capture,

wet-land management, and study tours and symposiums on ecology biology management etc. A listing of these tours, their duration, course/program titles, number of participants and their assignments on return, is presented as Appendix C to this report.

8.2. In-country training

In-country training was provided to the DWLC personnel in the form of workshops conducted by the USFWS. Nine workshops were conducted to cover the following subjects.

Training/Staff Development
Geographic Information Systems
Elephant Management
Interpretation/Trail Development
Environmental Education
Training for Trainees
International Conventions
Wetland Assessment
Computers in Wildlife Management

Workshop support materials including software, manuals, and disks were provided to the DWLC by the USFWS.

9. FINANCIAL MATTERS

9.1 AID contribution

As per project agreement LOP funding of \$ 5,000,000 was provided as grant by the USAID. Total expenditure was \$ 4,701,014. The remaining \$ 298,986 were de-obligated.

9.2 Host Country Contribution

The required Host Country Contribution (HCC) as per project agreement was \$ 1,900,000. The HCC was monitored through the quarterly statements of DWLC's recurrent expenditures. A percentage, (varying from 90 percent in 1983, to 10 percent in 1991), of these recurrent expenditures was reimbursed by USAID. The remaining percentage of expenditure was considered as the Host Country Contribution. On this basis, as verified by the AID Controller Office, the DWLC's total cash contribution at end 1990 was Rs. 44,691,000. In addition, Rs. 3,600,000 was reported as in-kind contributions. Therefore, the total HCC contribution is Rs. 48,291,000 (or \$ 2,246,000 at the exchange rate of the date of signing of the project grant agreement).

Statement by the AID Controller on the review of the Host Country Contribution is presented as Annex C to this report.

9.3 Unresolved Financial Issues

All financial issues have been resolved and closed by the Terminal Disbursement Date of The MEP.

10. PROCUREMENT OF COMMODITIES

Commodities procured for the MEP were of the following categories.

- Vehicles and boats
- Drafting equipment
- Field and camp equipment
- Scientific and research equipment
- Office equipment
- Educational materials

In view of the DWLC's relative lack of expertise and knowledge concerning US procurement of commodities and technical assistance, commodities such as drafting equipment, scientific and research equipment, field and camp equipment etc. were procured through a Procurement Services Agent (PSA) agreement contracted with a Washington based US firm (Franklin Export Trading Co., Inc., New Jersey). Office furniture, computer hardware/software, stationery, and vehicles were purchased by the DWLC and the Ministry of State following accepted AID regulations. Because of the transfer of the implementing agencies of MEP between State Ministries, and also because of the large amount of commodities received in 1989, it was felt that a comprehensive audit of all project commodities was required. Accordingly, USAID contracted with the National Institute of Business Management of Sri Lanka to carry out an inventory of commodities and to recommend an inventory control system. The NIBM report recommended procedures for custody of items, inventorization, and a monitoring system which were implemented by the DWLC (The NIBM report is available in the Projects Office of USAID, Sri Lanka).

11. THE SECURITY SITUATION AND THE MADURU OYA PARK

The Maduru Oya Park was declared by gazette notification in November 1983. Construction of the park headquarters complex commenced in 1986 and completed in 1989. After commissioning the headquarters in 1989, sufficient staff have been assigned to the park to maintain basic requirements. However, the park could not be open to public due to the security situation prevailing in the area. Furthermore, the military training camp 'Maduru Oya Unit of the Counter-revolutionary Warfare Wing' is located inside the

park approximately one mile away from the park's northern boundary. The camp was established in April 1986. In 1988, USAID decided to suspend new project commitments until GSL provided an undertaking to resolve the issue of military activities inside the park. As a result, the DWLC (with the help of the Department of Education), conducted a series of programs to educate all levels of military personnel about the value and purpose of the national park system in the Mahaweli. These educational programs resulted in the restraint of the military activities within the park. Also, the presence of the army inside the park had not been an impediment to the DWLC staff in carrying out their regular functions. Given the security situation prevailed in the area, the army showed reasonable restraint. As pointed out in the MEP Final Evaluation Report, the situation could have been worse without the army. (In May 1985, 24 members of the DWLC at the Wilpattu National Park were killed by the terrorists resulting in the closure of the park.)

However, the Mission was concerned about the buildings and facilities constructed under the MEP inside Maduru Oya Park which had not been put into utilization due to the closure of the park. Consequently, the DWLC had a series of discussions with the Army which resulted in the opening of the park. The Maduru Oya Park was declared open to the public on August 12, 1993.

12. PROJECT ACCOMPLISHMENTS

1. The project was reasonably successful towards meeting project objectives despite the security situation and GSL's initial problems in the implementation of the project. Exceptional progress was made toward establishing seven protected areas in the AMP, totalling about 250,000 hectares or nearly 45 percent of the lower Mahaweli Basin. This represents a significant contribution towards conservation of the island's biological resources, with the seven reserves covering around 30 percent of the existing area under wildlife conservation in the country.

2. Approximately 90 percent of planned MEP construction was completed before the PACD, although behind planned schedule. The facilities constructed include buildings for park administration, training and education, research and staff housing. These facilities support nationwide programs of the DWLC and thereby serve to fill an important niche in the conservation efforts of the DWLC. The training and education center forms the focus for all training programs of the DWLC. Additionally DWLC, with GSL funds set up a training facility at Randenigala as one of the six TREE (Training, Research, Education and Extension) centers planned to be established by the DWLC for its promotional programs.

3. The technical Assistance package was designed to enhance the capabilities of the DWLC to manage its wildlife and natural

resources with increased responsibility. Technical assistance was provided in the form of task-oriented workshops, and reasonable success was achieved particularly through the PASA with the Fish and Wildlife Service. Through this component the DWLC has today a comprehensive staff development and training plan which forms the basis for future training within the DWLC. USAID is confident that the relationship established between DWLC and USFWS would be further strengthened in the next years under USAID's Natural Resources and Environmental Policy Project (NAREPP). The training and technical assistance provided by the USFWS helped establish DWLC in-house capacity to conduct its own staff development and training programs. This was clearly evident in the quality and nature of the staff training conducted by DWLC at the DWLC's training center at Giritale.

4. One important impact of the project is the re-organization that has emerged as a consequence. While in the past the DWLC had only one science graduate (the Director) within it, today there has been a strengthening of the middle level cadres of the DWLC with trained and qualified staff. Additional staff functions that have been added are park planner, research officers, training officer, education officer, for which none existed in the past. The creation of these specialized positions has helped DWLC meet the increasingly new challenges it has been called upon to shoulder.

5. The project has helped recognize and formalize the need to manage protected areas on a scientific basis and within a regional context. This is strikingly different to the manner in which protected areas in the past were managed. In the past, protected areas were dealt with (not actually managed, but with limited interventions) exclusively for wildlife protection and in isolation from regional influences. Under the MEP an attempt was made to recognize protected areas for their contribution to conservation and sustainable development and as an integral component of the regional development. This was possible because of the increasing tendency to recognize protected areas not only for their value in preserving wildlife and genetic diversity, but also for the socio-benefits conservation can generate. The MEP parks were planned and managed for water and soil conservation, tourism, and as opportunities for rural development. Although the GSI has expressed interest in this idea, better coordination and participation with all parties involved and effected by parks are necessary to actually maximize the protection of those areas for socio-economic benefit.

6. The project has provided the first opportunity for the DWLC to actively supporting research for management purposes. Four research projects funded under MEP have helped create the climate for local university research personnel and DWLC to work collaboratively in finding solutions to protected area problems.

A definite has been established between the DWLC and the Post Graduate Institute of Agriculture of the University of Peradeniya. As a result five additional research topics have been worked on at the Victoria-Randenigala-Rantembe nature reserve and the collaboration is continuing.

7. The project has helped increase the cadre of DWLC by 136 new positions despite the overall GSL staff cut on the advise of the World Bank.

8. The project has helped catalyze the decentralization of DWLC administration. This process was set in motion during the project with limited devolution of functions to the MEP areas. Full decentralization of administration to the regional division was completed by December 31, 1991.

9. The MEP presents the first attempt in Sri Lanka to manage protected areas not as isolated units but as components of a larger network. The MEP represents seven protected areas that were planned and managed as a single conservation unit. Today, under the proposed DWLC 5-year investment program with UNDP support, the cluster management of protected wildlife and forest reserves being advocated. The MEP has provided the learning experience. In addition, the recently completed (October 1991) National Environmental Action Plan by the Ministry of Environment and Parliamentary Affairs following on the World Bank supported Environmental Action Plan lays emphasis on management of cluster groups of reserves.

10. Perhaps one of the most significant actions of the MEP has been the development of Sustainability Action Plan and follow on activities that have been initiated in order to ensure that AID financed activities under the MEP would continue in a sustained way. The Sustainability Action Plan looked beyond the MEP and identified further actions needed to substantially increase national capabilities to secure new investments, apply new ideas and skills, and expand community, public and private involvement in sustainable wildlife and natural management in Sri Lanka.

11. Following on the preparation of the Sustainability Action Plan, AID assisted the GSL establish a Wildlife Trust to support and facilitate educational, technical assistance, fund raising, and innovative public-private approaches to sustaining wildlife resources in Sri Lanka. The trust provides the first opportunity in Sri Lankan wildlife conservation efforts to seek support from the private sector in establishing and maintaining educational and technical programs and services, and visitor facilities and services. The Trust will also facilitate actions that enhance and encourage private sector investments in wildlife conservation.

13. LESSONS LEARNED

1. One of the major lessons learned from the implementation of the project, and confirmed by the DWLC, was the over-ambitious expectations of the project given DWLC's inadequate technical, institutional and financial capabilities at the beginning of the project in 1982. This is clearly exemplified by the financial expenditures in the early years of the project implementation. At the end of the fifth year of the project implementation (the original was for 5 years) only fifteen percent of the budget had been spent. The project was extended (in two year tranches) for a total of four additional years and project implementation and financial expenditure actually progressed in these last four years.

It was felt that the LOP span of five years was not adequate to achieve project goals for reasons stated above. The initial years (at least two) should have been devoted to build DWLC's institutional and technical capabilities through technical assistance, training and re-organization rather than have been to actually implement park development and construction activities as was the case. Consequently, DWLC experienced great difficulty in getting basic buildings and boundary surveys completed in the initial years, and did not have the institutional capability to adequately manage the parks after they were surveyed and legally defined.

It was only in the last two or three years that many of the actual benefits of the project did emerge. The now strengthened DWLC with increased middle level trained cadres and enhanced technical capabilities is better able to move project activities that had lagged behind in the first half or more of the project. Construction, park development, training and research progress was rapid and far exceeded expectations as is evident from the increased expenditure in the last 2-3 years, with over 35 percent LOP financial expenditure was in the last twelve months of the project.

2. Although the project was to be executed by the DWLC, actual implementation of it was done through a small MEP unit created within the then Ministry of State (DWLC was a line agency under the Ministry of State) and composed of a few staff members who were seconded from DWLC. However, project activities were implemented by the MEP unit in isolation of the DWLC. This bifurcation of the DWLC created a certain amount of antagonism to the project which has not been totally eliminated. Consequently, actual integration or amalgamation of the DWLC and the MEP did not progress smoothly and in the desired manner when it was initiated in 1990, and project implementation was affected. Total integration of DWLC and MEP have now however been satisfactorily completed.

The lesson learned here is that the project should have been executed from the beginning by the DWLC even though there were institutional and technical inadequacies in the DWLC. Furthermore, full participation by the implementing agency from the beginning of the project would have created a better sense of the ownership of the project.

14. SUSTAINMENT

Sustainment of MEP largely depends on DWLC's effective management capabilities of the protected areas. At the time of the PACD, the DWLC has an increased staff of 8 new professional positions and 128 support personnel. The project provided overseas training and study tours for 66 DWLC personnel who are currently engaged in park management activities. The Wildlife Training Center established at

Giritale provides in-house training to middle-level DWLC staff in the areas of ecology and park management skills. Through a training program commenced in November 1992, the Center has already trained 30 wildlife range assistants and 150 wildlife guards.

The USAID financial assistance provided to the DWLC for its recurrent expenditure had a steady decrease from 90 percent in 1983 to 10 percent in 1991. The DWLC has been up graded in its status which has resulted in increased budget allocations from the GSL.

15. EVALUATION

A mid-term evaluation of the project was concluded in December 1985. The evaluation recommended measures to correct implementation problems the project experienced in its initial stage and modified the projects end-of-project status conditions (EOPS). Also, on the recommendation of the mid-term evaluation the PACD of MEP was extended by two years to September 1989.

A subsequent evaluation of MEP was conducted in March 1987. The evaluation found that the MEP was making satisfactory progress towards achieving its goals. Also, the evaluation recommended measures to rectify shortcomings in the implementation of the project. These recommendations were implemented.

16. AUDIT

Commodities: An audit was conducted in June 1990 by the National Institute of Business Management (a local agency), on the AID funded commodities. The audit recommended procedures for custody of items, inventorization and monitoring systems for procurement and USAID procurement of commodities. These recommendations were implemented.

Construction: A construction audit was carried out in April 1992 on all AID funded construction of USAID Sri Lanka. At the time of the audit 12 buildings constructed under the MEP were not being fully utilized as planned by the project. The reason being that the Maduru Oya park had not been open to public. The audit recommended that a bill of collection be issued if these buildings are not put into effective use before a prescribed time. As a result of continued dialogue between the Mission and the GSL, the DWLC is now making arrangements to open the Maduru Oya park in August 1993.

17. FOLLOW ON ACTIVITIES

NAREPP: The Natural Resources and Environment Policy Project (NAREPP) commenced in 1990 works closely with the DWLC on major environmental policies, research, and natural resources management.

LAMSCO Report: Under the NAREP Project, a local firm (LAMSCO) was engaged to carry out a study of the DWLC and to recommend measures to improve DWLC's management capabilities. The draft report is under review by AID at the time of writing this report.

Maintenance: The Mission is following up with the relevant GSL agencies on the maintenance issues of the infrastructure facilities constructed under the MEP.

18. VALIDITY OF ASSUMPTIONS

All important assumptions for achieving project goal targets have been successfully met. These assumptions were verified through the means suggested in the project paper. See page 16 of this report for listing of assumptions.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project
From FY 1983 to FY 1987
Total U.S. Funding \$ 5,000,000
Date Prepared: 30 July, 1982

Project Title & Number: Mahawell Environment Project 383 - 0075

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes;</p> <p>Increase the opportunities for equitable economic development, employment and food production.</p>	<p>Measures of Goal Achievement;</p> <p>117,000 hectares of land cultivated, 465,000 people voluntarily settled.</p>	<p>CSL reports</p> <p>Consultant reports.</p> <p>Mission observations</p> <p>Field visits.</p>	<p>Assumptions for achieving goal targets:</p> <p>a) Total AMP program will be adequately financed.</p> <p>b) People will voluntarily apply for resettlement.</p> <p>c) Mahawell water will reach settlers in a timely manner.</p> <p>d) Rainfall follows historical trends.</p>
<p>Project Purpose;</p> <p>The purpose of the project is to ensure the stability of irrigated agricultural development and human settlement in the AMP area, by providing alternative, ecologically sound, socially acceptable habitats for wildlife displaced by AMP development activities.</p>	<p>Conditions that will indicate purpose has been achieved; End of project status:</p> <p>(a) Crop records collected by MEA show that crop losses caused by wild life will be reduced by 70-80 percent of the current level of losses.</p> <p>(b) None of the seven current "endangered" species of animals become eliminated.</p> <p>(c) None of the two current "threatened" species of animals become endangered or eliminated.</p> <p>(d) Park buffer zones are being utilized productively by AMP people.</p> <p>(e) Off-farm employment opportunities available for 2000 people by 1987 in maintenance and park related tourism and for 3000 people during construction (1983-1987).</p>	<p>a) Crop records from MEA.</p> <p>b) Interviews with MEA, DWLC.</p> <p>c) Baseline monitoring system of DWLC.</p> <p>d) Management of information system of MEA.</p> <p>e) DWLC reports of poaching and illegal cutting; reports of buffer zone uses by people.</p> <p>f) Interviews with settlers; DWLC and MEA records on employment.</p>	<p>Assumptions for achieving purpose:</p> <p>a) Regulations and laws for park management accepted and enforced.</p> <p>b) DWLC and MASH continue to cooperate in settlement, irrigation planning and demarcation of park boundaries.</p> <p>c) CSL commitment to AMP environment continues with budgetary support for maintenance.</p> <p>d) Tourism develops.</p> <p>e) Shift in habitat will not result in long term negative impact on wildlife.</p>
<p>OUTPUTS:</p> <p>a) Protected wildlife habitats in and around AMP area.</p> <p>b) Research and training capacity within DWLC strengthened.</p> <p>c) A System plan for park development.</p> <p>d) Strengthened DWLC management capability.</p> <p>e) Trained DWLC personnel</p>	<p>MAGNITUDE OF OUTPUTS</p> <p>(a) Four National parks established and developed. b) Wildlife Conservation Unit and Training Centre. c) Park Management Plan developed for each protected area. d) 225 new personnel recruited and working. e) 120 middle grade officers trained locally; 10 high grade officers trained in U.S. & third countries.</p>	<p>Consultant reports.</p> <p>CSL reports.</p> <p>Site Visits.</p> <p>Evaluations.</p> <p>Examination of Park Development Plan</p>	<p>ASSUMPTIONS FOR ACHIEVING OUTPUTS</p> <p>a) CSL officially and legally prescribe areas as protected wildlife habitats.</p> <p>b) CSL will accept the system plan.</p> <p>c) Local population respect new park boundaries.</p>
<p>INPUTS:</p> <p>a) Survey and demarcation of four parks.</p> <p>b) Construction (Roads & buildings).</p> <p>c) Personnel.</p> <p>d) Technical Assistance.</p> <p>e) Training & Education.</p> <p>f) Equipment.</p> <p>g) Contingencies.</p>	<p>"See budget"</p>	<p>AID records</p> <p>CSL records</p>	<p>ASSUMPTIONS FOR PROVIDING INPUTS</p> <p>a) AID will provide funds.</p> <p>b) GSL will make their contributions in a timely manner.</p> <p>c) T.A. will provide people with "hands on" approach.</p> <p>d) CSL will be able to recruit motivated people and retain them.</p>

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Appendix A
AID Funded Buildings and Facilities

MAHAWELI ENVIRONMENT PROJECT. 383-0075
STATUS OF CONSTRUCTION AS AT PACD (SEP.30,1991)

Page 1/6

PIL No.	Item	Sub Items	Agreed FAR	Bench Mark	Reimbursable	Remarks
			Amount Rs	achieved on Sep 30, '91	Amount (FAR x B.H. achvd on PACD)	
21	Construction of buildings and related facilities at Enderuettamulla	Circuit Bungalow	627,155	100	627,155	
		Lodge Keepers Qrts.	454,212	100	454,212	
		Combined Qrts.	671,408	100	671,408	
		Stores cum Garage	284,082	100	284,082	
		Park Bungalow	802,142	100	802,142	
		Watch Hut	117,768	100	117,768	
		Park Office	972,279	100	972,279	
		Hostel/Jungle Lodge	1,184,204	100	1,184,204	
		Social Centre	1,387,625	100	1,387,625	
		Park Warden's Residence	442,394	100	442,394	
		Ranger's Residence	490,375	100	490,375	
	Ambalama (Resting place)	66,159	0	0	/j.Dropped from constr.program.	
	Sub Total	7,499,803		7,433,644		
24	Construction of buildings and facilities at Ulhitiya	Combind Qrts	671,408	100	671,408	
		Stores cum Garage	284,082	100	284,082	
		Rangers Residence	490,375	100	490,375	
		Supply of electricity	289,670	100	288,670	
		Supply of water	93,580	100	93,580	
		Internal roads	182,456	100	182,456	
	Landscaping	19,613	100	18,613		
	Sub Total	2,029,184		2,029,184		
25	Construction of & facilities at	Supply of electricity	1,335,115	100	1,335,115	
		Supply of water	233,032	100	233,032	
55	Enderuettamulla	Internal roads	561,575	100	561,575	
		Landscaping	154,296	100	154,296	
	Sub Total	2,284,018		2,284,018		
36	Construction of buildings and related structures at Giritale	Administrative Building.	655,626	100	655,626	
		Garages	392,505	100	392,505	
		Wild Life Research Unit	769,540	100	769,540	
		Combined Qrts,bachelors	1,208,828	100	1,208,828	
		Asst.Director's Bung.No.1	829,172	100	829,172	
		Asst.Director's Bung.No.2	829,172	100	829,172	
		Asst.Director's Bung.No.3	829,172	90	746,255 /k	
		Asst.Director's Bung.No.4	829,172	70	580,420 /k	/k. Reimburse on achieved B.H.
		Asst.Director's Bung.No.5	829,172	70	580,420 /k	
		Junior Combined Qrts.No.1	611,304	100	611,304	
		Junior Combined Qrts.No.2	611,304	100	611,304	
		Junior Combined Qrts.No.3	611,304	100	611,304	
			Junior Combined Qrts.No.4	611,304	70	427,913 /k
	Sub Total	9,617,574		8,853,762		

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PIL No.	Item	Sub Items	Agreed FAR Amount Rs	BenchMark achieved Sep 30, '91	Total		Remarks
					Reimbursement (FAR x B.M. achvd on PACD)		
47	Construction of buildings and related facilities at Ratkinda and Henanigala	Ratkinda					
		Combined Orts.	735,819	100	735,819		
		Well	89,775	100	89,775		
		Inter.roads/Landscaping	30,459	100	30,459		
		Henanigala					
		Combined Orts.	735,819	100	735,819		
		Well	89,775	100	89,775		
		Watch hut	156,695	0	0 /m/m. Dropped from constr.program		
		Inter.roads/Landscaping	36,872	100	36,872		
				1,875,214		1,718,519	

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PIL No.	Item	Sub Items	Agreed FAR	BenchMark	Total	Remarks	
			Amount Rs	achieved Sep 30, '91	Reimbursement (FAR x B.M. achvd on PACD)		
48 (rev.) by PIL 79) Ministry of State. (i.e. Work sites managed by DWLC)	Construction of buildings and related facilities by	Gurukumbura	825,203	100	825,203		
		Combined Qrts.	200,934	100	200,934		
		Watch Hut	102,600	100	102,600		
		Well	109,013	100	109,013		
		Inter.Roads/Landscaping					
		Sub Total	1,237,750		1,237,750		
		Padawala /n.					
		Combined Qrts.	881,602	20	0 /n	/n. Dropped from program due to	
		Watch Hut	176,303	20	0 /n	security reasons; Reimburse-	
		Well	103,882	0	0	ments not recommended.	
		Inter.Roads/Landscaping	70,537	0	0		
		Sub Total	1,232,324		0		
		Iddapola /n.					
		Combined Qrts.	884,261	20	0 /n	/n. Dropped from program due to	
		Well	103,882	0	0	security reasons; Reimburse-	
		Inter.Roads/Landscaping	51,300	0	0	ments not recommended.	
		Sub Total	1,039,443		0		
		Elahera					
		Ranger's Residence	612,210	100	612,210		
		Combined Quarters	855,134	100	855,134	/a. Construction of wells could	
		Stores/Garage	366,838	100	366,838	not be completed due to	
		Wells (2Nos) /a	204,559	100	204,559 /a	unfavourable site conditions.	
		Inter.Roads/Landscaping	96,188	100	96,188	A tubewell was constructed	
Sub Total	2,134,929		2,134,929	in lieu of the two wells.			
Ambagaswewa							
Ranger's Residence	555,690	100	555,690				
Combined Quarters	742,938	100	742,938				
Stores/Garage	347,917	100	347,917	/b			
Wells (2Nos)	179,550	100	89,775 /b	Only one well was constructed			
Inter.Roads/Landscaping	32,063	100	32,063	as it was found to be adequate			
Sub Total	1,858,158		1,763,383				

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PIL No.	Item	Sub Items	Agreed FAR Amount Rs	Benchmark achieved Sep 30, '91	Total Reimbursement (FAR x B.M. achvd on PACD)	Remarks	
48 (rev. by PIL 79)	Construction of buildings and related facilities by Ministry of State. (i.e. Work sites managed by DWLC)	Kadurupitiya					
		Ranger's Residence	555,690	100	555,690		
		Combined Quarters	742,938	100	742,938		
		Stores/Garage	347,917	100	347,917	/b	
		Wells (2Nos)	179,550	100	89,775	/b Only one well was constructed as it was found to be adequate	
		Inter.Roads/Landscaping	32,062	100	32,062		
		Watch hut	200,934	100	200,934		
		Sub Total	2,059,091		1,969,316		
		Kiri Oya					
		Combined Qrts.	968,350	100	968,350		
		Well	103,882	100	103,882		
		Inter.Roads/Landscaping	253,294	100	253,294		
		Sub Total	1,325,526		1,325,526		
		Pubbiliya					
		Combined Qrts.	968,342	100	968,342		
Well	103,883	100	103,883				
Inter.Roads/Landscaping	58,995	100	58,995				
Sub Total	1,131,220		1,131,220				
Polettewa							
Combined Qrts.	742,938	100	742,938				
Well	89,775	100	89,775				
Inter.Roads/Landscaping	22,444	100	22,444				
Sub Total	855,157		855,157				
Total for PILS 48 & 79			12,873,598		10,422,281		

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PIL No.	Item	Sub Items	Agreed FAR Amount Rs	Ber.chMark achieved Sep 30,'91	Total Reimbursement (FAR x B.M. achvd on PACD)	Remarks
50	Construction of Hostel and Training Center at Giritale	Training & Education Ctr.	3,208,888	100	3,208,888	
		Hostel/Dormitory	5,114,204	100	5,114,204	
			8,323,092		8,323,092	
68	Construction of buildings at Angamedilla	Circuit Bungalow	919,708	100	919,708	
		Generator Room	59,643	70	41,750 /c	/c.Reimburse on achieved B.M.
		Parkwardens Residence	669,004	0	0 /d	/d.dropped from programme
		Stores cum garage	425,097	100	425,097	
		Comb.Qrts./bachelors	1,518,702	100	1,518,702	
		Comb.Qrts.JSF NO.1	753,084	100	753,084	
		Comb.Qrts.JSF NO.2	753,084	70	527,159 /c	/c.Reimburse on achieved B.M.
	5,098,322		4,185,500			
73	Construction of roads & culverts at Giritale	Internal roads	304,406	100	304,406	
		Culverts	403,437	100	403,437	
		Landscaping	257,185	100	257,185	
			965,028		965,028	
77	Provision of electricity supply to Giritale complex	Jungle clearing	85,261	100	85,261	
		HT & LT Lines	1,563,320	100	1,563,320	
		Cons.of substation	96,188	0	0 /d	/d.Not constructed as it was found unnecessary
			1,744,769	100	1,648,581	
87	Construction of additional bldg. at Angamedilla	Park Warden's Residence	665,730	0	0 /e	/e.Dropped from constr.program
91	Supply of Electricity to Angamedilla	Generator and powerlines	1,437,760	100	1,437,760	
92	Water supply to Giritale complex	Overhead tank	109,250	100	109,250	
		Cons.of sump	129,257	100	129,257	
		Distributory Lines	278,861	100	278,861	
			517,368		517,368	

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PIL No.	Item	Sub Items	Agreed FAR Amount Rs	BenchMark achieved Sep 30, '91	Total Reimbursement (FAR x B.M. achvd on PACD)	Remarks	
94	Water supply to Angamedilla	Overhead tank	74,642	100	74,642		
		Distributory Lines	114,656	100	114,656		
		Cons. of well	128,250	100	128,250		
		Tubewell & handpump	144,281	0	0 /f		/f. Not constructed as it was found unnecessary
		Pump and pumphouse	22,444	100	22,444		
		484,273		339,992			
95	Constr. of water supply facility to Giritale	Install. pump tubewell	26,485	100	26,485		
		Install. pump dug well	21,165	100	21,165		
			47,650		47,650		
98	Landscaping at Angamedilla		392,900	100	392,900		
104	Landscaping at Giritale		1,147,920	Approx. 50% /g	0 /g	/g. Landscaping works not based on Bench Mark funding; Completion on PACD less than 50% Reimbursements not recommended	
		Total construction by MECA and DWLC	Rs. 57,004,203		50,755,974		
97	Construction of elephant control fence		2,715,710	100% /h	2,715,710 /h	/h. Not based on Bench Mark funding. Payments have been made direct to the supplier.	

OFFICE OF PROJECTS/AID

FINAL REPORT
 U.S. FISH AND WILDLIFE SERVICE ACTIVITIES
 UNDER MAHAWELI ENVIRONMENT PROJECT (383-0075)
 PASA NUMBER 382-0075-P-IF-0056-00

Background: On July 16, 1990, a Participating Agency Service Agreement (PASA) was signed between the Agency for International Development (AID) and the U.S. Fish and Wildlife Service (FWS) to allow presentation of eleven workshops to the Sri Lankan Department of Wildlife Conservation (DWLC). The purpose of these workshops was to strengthen the technical capability of the DWLC. These workshops were to be completed by September 31, 1991. The workshops originally planned for completion under this PASA were to cover the following subjects.

Training/Staff Development	Resource Assessment
Elephant Management	International Conventions
Habitat Management	Computer Programming
Interpretation/Trail Development	Park Planning
Audio Visual Training	

Accomplishments:

Following the initial workshop on training and staff development, the subjects to be covered under the agreement were changed, with the concurrence of AID/Sri Lanka and DWLC, to the following.

Training/Staff Development	Training For Trainers
Elephant Management	International Conventions
Geographic Information Systems	Wetland Assessment
Interpretation/Trail Development	Computers In Wildlife
Environmental Education	Management

One workshop had been conducted in each of these subject areas by September 31, 1991. A brief description of each of these workshops follows.

Training/Staff Development - This work session involved a multi - agency team from the United States assisting the DWLC in the identification of the Department's training needs and the development of recommendations that will assist DWLC in meeting the goals established in the National Policy for Wildlife Conservation of Sri Lanka. The team assigned for this task included Roger Johnson, Klamath Basin National Wildlife Refuge, and Charles Solomon, National Ecology Research Center, both of the FWS, and Dr. R. Rudran, Conservation Officer, Smithsonian Institution. To fulfill its responsibilities, the team held several meetings and interviews with government officials, nongovernmental organizations, and private consultants in Sri Lanka from January 15 to 29, 1991. The goals of the team were to determine training needs and define their priorities, determine availability of

training staff and expertise within Sri Lanka, and to submit recommendations to enhance the technical and operational capabilities of the DWLC and make the Department self-reliant in satisfying its own training needs. The above goals were accomplished through submission of a final report.

Elephant Management - Dr Rudi Rudran of the Smithsonian Institution and five members of the Malaysian Department of Wildlife and National Parks presented a workshop on the capture, handling, and transport of wild elephants from January 29 to February 14, 1991. The operation began with a workshop to discuss various aspects of elephant capture using chemical immobilization techniques. The second phase included the actual process of capture and transportation of elephants. This effort resulted in the capture of four wild elephants. The capture operations provided numerous opportunities to evaluate logistic arrangements, organization and field techniques and recommend ways to improve similar operations in the future.

Geographic Information Systems (GIS) - As the DWLC was predisposed to using GIS, this work session was aimed at providing information on the capability of the technology and advice on how to implement and integrate it with the DWLC program. Over a 5 day period (May 20-24, 1991) Don Hunter of the FWS met with individuals from DWLC and other organizations to gather information on their needs for GIS technology and their plans for obtaining that technology. Following this, Mr. Hunter developed a report which advised the DWLC on the following matters: developing a GIS coordinating group within the Ministry of Lands, Irrigation, and Mahaweli Development; hiring and training of DWLC staff to develop a GIS capability; use of the Institute for Computer Technology (ICT) by the Ministry as a GIS training facility; preparation of a GIS workload analyses and implementation plan; and purchase of introductory GIS software for the DWLC's microcomputer.

Interpretation/Trail Development - This work session was conducted by Messrs. Dick Kuehner (Team Leader) and Pete Weher, both of the FWS, and Dr. Tom Hudspeth of the University of Vermont. It ran from May 10 to 25, 1991, and included a three day workshop on interpretation planning and design. The workshop covered the use of the interpretive media with an emphasis on development of leaflets, booklets and posters; the interpretive design process utilizing Randenigala Wildlife Sanctuary as a case study; the design of interpretive trails; and the development of interpretation plans.

Environmental Education - This workshop was conducted from June 30 through July 5, 1991. Participants included representatives from the DWLC plus representatives from the Central Environment Authority, Forestry Department and March for Conservation. Instructors were Ed McCrea and Joan Heidelberg from the North American Association for Environmental Education (NAAEE) and Eeasha Nanayakkara of the DWLC. The workshop's primary purpose was to familiarize resource personnel with educational methods and media

which can be useful tools in resource management. A secondary purpose was to review ongoing environmental education programs in Sri Lanka and discuss possible enhancements and/or new initiatives.

Following the completion of this workshop, Joan Heidelberg developed a manual for using educational media and methods in support of resource management objectives. This manual is intended to be used by Sri Lankans to conduct workshops similar to that presented by Joan Heidelberg and Ed McCrea.

Techniques Of Workshop Presentation - Janice Anderson and Dennis Oaks of the Bureau of Land Management's Phoenix Training Center worked in Sri Lanka from June 25 to July 14, 1991, on this effort. During that period they conducted a five day workshop (July 8 - 12, 1991) which was intended to enhance the skills of the future trainers of the DWLC. Throughout the course, the instructors modeled the skills, knowledge and attitudes of effective trainers. The course concluded with all fourteen participants developing and presenting training in a thirty minute lesson which included a written objective, a written lesson plan, two participative delivery methods, and two visual aids. Video-tapes of their presentations were viewed privately with the education specialists as a form of feedback. Completion of this workshop will aid the trainees in increasing involvement and learning among their workshop participants.

International Conventions - This workshop consisted of a component on the Convention On Wetlands Of International Importance Especially As Waterfowl Habitat (Ramsar, 1971), conducted August 27 - 28, 1991, and a component on the Convention On International Trade In Endangered Species (CITES), conducted August 28 - 30, 1991. These sessions were led respectively by Daniel Navid and Mireille Katz, both of the Ramsar Convention Bureau and Dr. Susan Lieberman, CITES Specialist, FWS. They were designed to provide an overview of the objectives of various conservation conventions and a review of the specific obligations Sri Lanka had assumed in joining the Ramsar and CITES conventions.

Wetland Assessments - Dr. Janet Keough, U.S. Fish and Wildlife Service, and Mr. Mitchell Bennett, Department of Water Resources, NSW, Australia (on contract from the Asian Wetlands Bureau), conducted this workshop with the assistance of three Sri Lankan biologists. It consisted of one week of classroom training (September 8-13) and several days (September 16-18) of field exercises, followed by a wrap-up session at the DWLC office in Colombo. Topics for the classroom portion of the workshop included wetland mapping, hydrologic functions, water quality functions, wetland vegetation, wetland wildlife, sustainable human uses in wetlands and planning. The field exercises included expertise in the conduct of waterbird surveys, vegetation analysis, general hydrologic observations, water quality measurements, aquatic fauna survey and salinity and oxygen measurements. Approximately half the workshop participants were DWLC staff; the remaining half came from other natural resource agencies.

Computers In Wildlife Management - This workshop was conducted by Dr. Michael Stuewe, Conservation and Research Center, Smithsonian Institution, from September 19-29, 1991. It was designed to teach the basics of database management and to demonstrate possible applications of computers in wildlife science. Data of an all-Sri Lanka bird survey were used throughout the workshop to teach basic methods of data analysis, and demonstrate the use of a Geographic Information System (GIS). Prior to the workshop the 10km X 10km grid used for the bird survey was digitized in the ARC/INFO 3.4 Geographic Information System at the Smithsonian Institution's Conservation and Research Center and a complete coverage with the grid cell labels used in the bird survey was created. Database formats for the analysis of the bird survey data were developed and an extensive course manual for all necessary operations was written. In addition, workshop support materials including software, manuals, disks, and disk boxes were purchased by FWS and shipped to DWLC. Ten students participated in the course. Seven of these were from the DWLC and the remainder were from the Forest Department, Survey Department and NGOs.

Expenditure Of Project Funds - Project funds were expended by the FWS, the Asian Wetlands Bureau, the Malaysian Department of Wildlife and National Parks, and the Conservation Treaty Support Fund. In order to allow for very rapid payment of expenses when necessary, a portion of the PASA funds were provided to the Conservation Treaty Support Fund under a grant. Upon the request of FWS these funds were then expended. This is the mechanism used to provide funds to both the Asian Wetlands Bureau and the Malaysian Department of Wildlife and National Parks.

MAHAWELI ENVIRONMENT PROJECT

Summary of Overseas Training and Study Tours

TITLE OF PROGRAMME	DURATION	COST	OBJECTIVE	OFFICERS PARTICIPATION OF THE TRAINED OFFICERS	PRESENT UTILIZATION OF THE TRAINED OFFICER
01 Two year certification Course in Wildlife Mgt College of African Wildlife Management *USA, Tanzania	1982 August (2 years)		Training in Wildlife Management	1. C.D.S.K. Javawardene 2. M.E. Wilson	Head Office wetlands Div. the Dept. Asst. Director (C.R)
02 17th International Seminar on National Parks and Equivalent reserves in Canada and U.S.A	1983.7.31 to 1983.9.31 (one month)	\$ 16,129	Study Tour	1. M.M.D. Perera 2. E.D. White	Killed by terrorists while on duty in Eastern Region Asst. Director Eastern Region Retired
03 National Conservation Mgt. Course - school of Environmental Conservation Mgt. CIW41, Indonesia	1983.11.15 (10 months)	\$ 17,084	Training in Wildlife Management	1. B.A. Muthubanda 2. Anura Sarathchandra 3. J.H.S. Tissera	Park Warden Yala Left the Department P.W. Khalla-Paliakele
04 Wildlife Conservation and Mgt Training Programme Conservation & Research Centre, Front Royal Virginia, USA	1984.6.7 to 1984.7.16 (40 DAYS)	\$ 10,742	Training in Wildlife Management	1. R.B.L. St. John 2. S.P.A.G.V. Sagarakoon	Left the Dept, Conservation Unit in Head Office
05 18th International Seminar on National Parks & Equivalent Reserves in Canada and U.S.A.	1984.8.7 to 1984.9.7 (one month)	\$ 11,995	Study Tour	1. D.V. Seneviratne 2. M.A.B. Jansen MEA	Retired
06 1st Meeting of the Technical Sub-committee of DITES Brussels, Belgium	84 June 25-30 (5 day)	\$ 4,148	Participation to the Meeting	1. Dr. Shelton Atapatlu 2. C.P. Attanayake :	Retired Dyp. Director (F.0)
07 Training Programme in Wildlife Management	1985 May 24 to July 06 (42 days)		Study tour in Wildlife Reserves	1. K.C. Samson 2. S. Wazeer 3. S.R.B. Dissanayake 4. D.W.P.K. Padmalai 5. I.H.T. Nanayakkara 6. S.W. Perera	Asst. Director/Mahaweli Retired A.D./Research On study leave A.D/E & P Retired

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08	19th International Seminar on National Parks and other protected areas in Canada and U.S.A.	1985 Aug 5 to Sept. 03 (28 days)	\$ 6,062	Study tour in Wild. Reserves	1. K.A. Amaratunga	A.D/Eastern Region
09	Two year Diploma Course in Wildlife Mgt. College of Africa. Wildlife Mgt MwE.A, Tanzania	1986 Aug 1 to 1988 June (2 Year)	\$ 39,768	Training in Wildlife Management	1. A.H. Sumanasena	WLR Attached to Conservation Unit
10	Two year certification Course in Wildlife Mgt College of African Wildlife Management. MwE.A, Tanzania	1986 Aug.01 to 1988 June (2 years)		Training in Wildlife Management	1. Ranjith Jayasinghe	WLR Park Warden, Maduru Oya
11	Training Course in Environmental Conservation Management Bogor Indonesia	1985 Sept. 30 (9 months)	\$ 35,580	Training in Wildlife Management	1. M.H. Chitrasena 2. N.S.M. Senanayake 3. S.D.D. Luxman 4. N.Senasinghe	WLR (Training) WLR N.W. Provincial Council W. Wasgomuwa N.P. P.W. Wilpattu
12	Three months Course in Wildlife Mgt, Wildlife Institute of India, Hyderabad	1986 Jan.01 (Three months)	\$ 2642	Training in Wildlife Management	1. U.S. Ambithiya	WLR killed by Terrorists while on duty in 1989
13	Certificate course in Wildlife Mgt, WI Institute of India Dehradun	1986 May 1st to July 31 (3 months)	\$ 300	Training in Wildlife Management	1. K.T.P. Perera	Killed by Terrorists while on duty
14	Study of Elephant Control and Mgt in India - Indian Institute of Science Bangalore, India	1986 Dec. 31 to 1987 Jan 13 (14 days)	\$ 6275	Observation tour to study Elephant control in India	1. Dr. Shelton Atapattu 2. Dr. Nandana Atapattu 3. K.G.A.P. Kirinda 4. P.H.S. Fernando 5. H.D.S.de Alwis	Retired Retired Left the Dept A.D/Southern MECA
15	20th International seminar on National Parks and other protected areas, Canada, USA, Costa Rich	1987 Aug. 18 to Sept 09 (3 weeks)	\$ 2425	Study tour	1. Maj.Gen.M.Madawaia	Retired

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16	The 4th World wilderness Congress, Colorado, USA	87 Sept 11-18 (One week)	Participation to the Congress	1	Maj.Gen.M Madawala	Retired
17	Training Programme in W.L. Mgt	1988 (one month)	Study tour to the WL Reserves in USA	1.	M.H.S. Fernando	<i>Transferred out of the dept.</i>
				2.	H.D.V.S. Vattala	A.D/Park Planning
				3.	M.H.W.D.S. Perera	A.D/Training
				4.	H.T.S. Fernando	A.D/N.W
				5.	W.S. Weragana	WL Ranger/Puttalama
				6.	M.H.S.K. Weerakoon	WL Ranger/Park Planning
				7.	A.B. Ariyadasa	P.W/Horton Plains
18	Symposium on Ecology Biology, Mgt and desenses of the Asian Elephant Kerala Agriculture University Mudumalai W.L Sanctuary Willi - Dehradun	1989 Jan 16-31 \$ 7008 (2 weeks)	Study tour	1.	U.K.G.K. Padmalal	On study leave
				2.	S.A. Weerasinghe	WLR Hantantota
				3.	Y.G.P. Karunaratne	Dep.P.W/Uhitiya
				4.	M. Dissanayake	Retired
				5.	Padmasiri Fonseka	R.A/Research Unit
				6.	H.P. Jayatileke	R.A/Polonnaruwa
19	Training in Elephant Capture Unimobilization and Translocation, Dept. of Wildlife & National Park Malaysia	1989 May 15 to June 13 (One month)	\$ 17950 On the ground training in elephant capture unimobilization at translocation	1.	U.K.G.K. Padmalal	On study leave
				2.	S.R.D.B. Dissanayake	A.D/Research
				3.	H.D.V.S. Vattala	A.D/Park Planning
				4.	W.S. Weragana	WL Ranger/Puttalama
				5.	A.B. Ariyadasa	P.W/Horton Plains
				6.	S.D.D. Luxman	P.W/Wasgoda
				7.	Y.G.P. Karunaratne	Dv.P.W/Uhitiya
				8.	Ranjith Jayasinghe	P.W/Maduru Oya
				9.	A.K.M.M.G.P. Banda	Retired
				10.	W.A. Sarath	WL Ranger/Park Planning
20	Certificate course in Wildlife Management wildlife institute of India Dehradun	1991 May 01 to July 31 (3 months)	\$ 5622 Training in WL Mgt	1.	S.P.A.G.V.Samarakoon	Head Conservation Unit
				2.	M.H. Chitrasena	WL Ranger/Training
21	Study of Elephant Safari Operation in Botswana	91 July 27 to Aug. 09 (2 weeks)	\$ 11856 Study Tour	1.	Dr.S.W. Kotagama	Director DWLC
				2.	Bradly Fernando	Director, Zoo
22	Study tour on Environmental Trust and other environmental facilities , arranged by USFWS	91 Sep.14-29 (2 weeks)	\$ 10994 -do-	1.	C.G. Wickramasinghe	Adl.Security
				2.	D.G. Premachandra	Security, M/L.I. & M.D

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memorandum

DATE: July 5, 1991.

REPLY TO
ATTN OF: Siraj Abeysekera, Financial Analyst

SUBJECT: Review of the Host country Contribution of
the Mahaweli Environment Project

TO: Project Files

Discussions held with: Mr. S. Herde Vitharana - Asst. Director
Field Operations
Dept. of Wildlife

Mr. A Damoragama - Project Accountant
Mahaweli Economic Agency

The department of Wildlife Conservation is the implementing agency of the Mahaweli Enterprise project. The funds of the project are controlled by the Mahaweli Economic Agency and the GSL contribution of the project is also from the budget allocation of the Mahaweli Economic Agency. At the beginning of the year the department of Wildlife conservation submits the workplan and the cash requirements of the project to MEA and funds are drawn down accordingly.

The department of Wildlife maintains a separate cash book and votes ledgers (General Ledger maintained according to budget line items) for capital and recurrent expenditure of the project. Payments are made on serially numbered payment vouchers and the votes ledger entered at the time the voucher is prepared. The details are entered in the cash book after the voucher is approved and prior to writing of the check. The voucher is assigned a serial number only at this stage and the voucher number is recorded in the cash book. However, the voucher number is not recorded in the votes ledger, as, the votes ledger entry is made prior to assigning the number to the voucher. Further, there is no reference in the ledger to the cash book folio. As a result it is difficult to trace a payment from the ledger to the cash book. The only reference from the ledger to the cash book is the date. Entries from the cash book to the ledger is also difficult to trace, as the ledger folio column in the cash book is not entered in most cases.

The cash book is maintained in an orderly manner excepting for the lack of cross referencing mentioned above. Bank reconciliations are prepared monthly and a separate bank account operated for the project.

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At the end of each quarter a detailed expenditure statement (according to budget line items) is prepared from the individual vouchers and reconciled with the cash book by the Asst. Director of the Department of Wildlife and sent to the Mahaweli Economic Agency. The project accountant of MEA applies the expenditure to the advance given to DWLC and prepares a claim for reimbursement to USAID. Thereafter, the accountant MEA prepares a statement showing the total expenditure, the amount claimed from USAID and the difference. The difference is considered as the Host Country Contribution.

Capital expenditure covered by a PIL authorizing the expenditure is reimbursed by USAID and the capital expenditure not authorized by a PIL is considered as the Host Country Contribution. With regard to recurrent expenditure a percentage is reimbursed by AID each year and the balance is considered as the Host Country Contribution. The percentages of recurrent expenditure of the project borne by the Host country is as follows:

1986 = 10%, 1984 = 30%, 1985 = 50%, 1986 = 50%, 1987 = 70%, 1988 = 80%
1989 = 80%, 1990 = 80%, 1991 = 90%

During the review it was noted that the votes ledgers were not maintained properly, and as such the Host Country Contribution could not be checked with the ledgers. Therefore, the Host Country Contribution was checked with the statements prepared by the project accountant of MEA based on the quarterly expenditure statement (prepared from the cash book) sent by the department of Wildlife and the reimbursement claims made to USAID. Based on the above the annual Host Country Contribution was re-computed and is Attachment 1 to this memorandum. We verified these figures with the cash book on a sample basis.

As per this computation the total Host Country Contribution for the period 1983 to 1990 is Rs.44,691,000. In addition there is an amount of Rs.3,683,000 claimed to be the in kind contribution of Buildings and roads which is an off budget item. The budget in the amended amplified project description shows the total Co-operating Country contribution as \$1,900,000. It also states that it is based on official exchange rate as at the date of signing of the Project Grant Agreement which was 1 US \$ = Rs.21.50. As per the above exchange rate, the budgeted Co-operating Country Contribution required is Rs.40,850,000.

The detailed statements obtained during the review, from the DWLC and MEP are available for inspection in the file.

cc:USAID/Controller *John*
Projects Office

AID:CTR:SA:ta:07/05/91
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HOST COUNTRY CONTRIBUTION
MAHAWELI ENTERPRISE PROJECT
(RS. '000)

ITEM	1983	1984	1985	1986	1987	1988	1989	1990	TOTAL
A-1 SURVEYING	0	0	0	0	1	0	9	2	12
A-2 SIGN BOARDS	35	0	0	0	0	0	(79)	12	(32)
A-3 BUFFER ZONES	0	0	0	0	0	0	0	0	0
A-4 HABITAT ENRICHMENT	0	0	0	194	0	0	0	0	200
A-5 -	0	0	0	0	0	0	0	0	0
A-6 CONSERVATION EDUCATION	0	0	0	32	5	16	(12)	(10)	29
SUB TOTAL	35	0	0	226	4	16	(82)	10	209
B-1 BUILDING	300	0	0	741	456	1,199	1,313	7,908	11,917
B-2 ROADS	0	0	0	0	259	100	0	0	409
B-3 BRIDGE	0	0	0	0	0	0	0	0	0
B-4 TUBE WELLS	0	0	0	63	0	4	1	0	74
SUB TOTAL	300	0	0	804	715	1,303	1,314	7,908	12,400
C-1 VEHICLE & MACHINERY	0	0	0	1,243	1,000	291	1,746	0	4,280
C-2 OFFICE LAND FIELD EQUIP.	69	32	0	401	0	200	2,043	2,570	5,300
SUB TOTAL	69	32	0	1,644	1,000	491	3,789	2,570	9,680
D-1 TRAINING (LOCAL)	45	0	0	0	70	68	0	0	183
D-2 TRAINING (FOREIGN)	0	178	0	70	0	32	60	0	300
SUB TOTAL	45	178	0	70	70	90	60	0	583
E-1 TECHNICAL ASSISTANT WORK.	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	0	0	0	0	0	0	0
F-1 ELEPHANT CONSERVATION	0	0	0	10	0	44	76	30	170
F-1.1 PERSONNEL EMPLOYMENT	30	347	0	317	1,364	2,441	4,391	3,386	14,911
F-1.2 OVERTIME & DAY'S PAYE	0	0	0	40	44	114	68	123	447
F-1.3 TRAVELLING	10	60	111	260	316	711	440	604	2,694
F-1.4 SUPPLIES & REQUISITES	7	40	190	170	331	633	191	1,109	3,104
F-1.5 REPAIRS & MAINTENANCE OF CAPITAL ASSETS	0	0	60	164	334	362	190	830	2,080
F-1.6 TRANSPORTATION, SHEDS, UTILITY AND OTHER COST	0	10	30	60	147	208	609	300	1,087
F-1.7 FUEL	0	30	100	100	410	500	400	640	2,080
F-1.8 THUNDER FLASHES	0	0	0	0	0	100	0	140	400
F-1.9 ALLOWANCES	0	7	30	34	33	310	300	31	1,100
F-1.10 SALARIES FOR CASUAL LABORERS	0	61	300	300	1,201	1,637	600	647	5,348
SUB TOTAL	100	627	1,300	2,799	4,721	7,872	7,609	6,409	30,778
G-1 RESEARCH	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	0	0	0	0	0	0	0
GRAND TOTAL	537	810	1,300	5,557	6,568	9,500	12,765	16,308	66,600

* THIS AMOUNT WILL HAVE TO BE DEDUCTED FROM THE HOST COUNTRY CONTRIBUTION AS IT WILL BE REIMBURSED ONCE THE CONSTRUCTION IS COMPLETE. THEREFORE, THE HOST COUNTRY CONTRIBUTION SHOULD BE RS. 1,181,000.

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