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THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
COLOMBO, SRI LANKA

A SYSTEM FOR
"PURPOSE-LEVEL" MONITORING
(PLM)
ECONOMIC & SOCIAL DEVELOPMENT
PROJECTS

CASE 2

HOUSING FINANCE SUPPORT;
DEVELOPMENT STUDIES & TRAINING (DS&T) PROJECT (383-0085)

(CONTRACT # 499-0000-0-00-1029-00)

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JUNE 1991

PREFACE

The purpose of the Scope of Work under this contract was to assist USAID/Sri Lanka develop a system for "purpose-level" monitoring (PLM) of the Mission's project portfolio. PLM is intended to provide USAID senior staff, project managers, project contract teams and Sri Lankan Government (GSL) counterparts with a semi-annual summary of information to assess project implementation progress and alert senior management to issues requiring their attention. PLM should thus serve as an "early warning" system to guide decision-making regarding modifications or adjustments, and future project directions.

Consistent with the intent of the Scope of Work, a prototype PLM System has been designed, developed, computerized and applied to two major components of the Development Studies & Training (DS&T) Project, as case studies. The initial case was the Irrigation Management Policy Support Activity (IMPSA). A full discussion of the System rationale, design, development, constraints and recommendations was contained in that document. This document presents the Housing Finance Support Activity¹ -- a newly emerging major sub-component of the DS&T Project -- as a second case to illustrate the PLM System.

Kenneth F. Smith
Colombo, Sri Lanka
5 June 1991

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¹An interactive Lotus 1-2-3 "Macro" System -- \PLM>HSG.WKO -- as requested by USAID.

PURPOSE-LEVEL MONITORING (PLM) SYSTEM DESCRIPTION

Policy Reform-type projects differ significantly from Technical "blueprint" type projects, in that the purpose of the project is selected intervention to bring about the means for change; rather than directly making such changes. Thus the process towards instituting the policy reform -- i.e. the critical events agenda -- is monitored; rather than recording quantitative statistical technical indicators in the environment and attempting to interpolate progress towards the "more/better" levels targetted in the Project's purpose-level EOPS.

The Purpose-Level Monitoring (PLM) System for USAID/Sri Lanka's Policy Reform-type Projects is primarily a chart and graphic checklist representation of the project. The chart/checklist is used in conjunction with an interactive Lotus 1-2-3 program to define the project plan and record the current status in statistical summary terms. The "Package" is comprised of eight major elements, as follows:

1. Project Background Statement -- Narrative Summary Statement of Project Purpose-Level Objectives and miscellaneous key statistical data¹
2. Activity Rationale & Critical Events Flow Chart²
3. Workplan and Schedule of Critical Events³

¹Essentially the type of information and format contained in the Mission's current Project Implementation Report (PIR) is appropriate. The data should be based on the Project Paper (PP), Project Agreement (ProAg), or -- in the case of a sub-project component -- the Project Implementation Order for Technical Assistance (PIO/T).

²A computer-developed format based on the PP, ProAg or PIO/T. Specifically the information in this chart is a modification of the Project Logframe to reflect current implementation experience and perceptions of what is realistic, and the major steps towards attaining those ends -- i.e. the Project Purpose.

³An interactive Lotus 1-2-3 matrix of target dates for accomplishing/reaching the critical events for major objectives (and/or listing of key components) -- based on estimates from the Project's current Implementation Plan. [The data could also be developed and/or derived from an updated time-phased Bar Chart or PERT/CPM Network.]

4. Project Manager's Periodic Reporting Format -
- Current Status of Critical Events⁴
5. Time Series Spreadsheet for recording and
computing Project Manager's Periodic Report,
and comparing Progress against Plan⁵
6. Analytical Worksheet of Project Manager's
Periodic Report⁶
7. Graphic Analysis (Time Series)⁷
 1. Project Progress towards Purpose-level End
of Project Status (EOPS) -- Cumulative Line
Graph
 2. Project Current Status vs Cumulative Plan
to Date -- Histogram of Percentage
Deviation from Plan
 3. Project Cumulative Performance of the rate
of accomplishing work and expending funds,
as compared to the Project Budget and Work
Plan -- "S-Curve"⁸
8. Narrative Analysis of Project Status⁹

Each of the foregoing is illustrated on the following pages with respect to DS&T's HSG component.

⁴A Manual Report Form. The format is computer-generated -- combined with the Activity Rationale & Critical Events Flowchart (identified as Item 2 on the previous page) -- for manual updating by the appropriate GSL manager, contractor, or project manager.

⁵An interactive checklist of critical events -- intrinsic to the Lotus 1-2-3 PLM>HSG.wk0 macro software program.

⁶Either computer-generated as a by-product of the Lotus 1-2-3 PLM>HSG.wk0 macro software program; or manually updated from the Lotus data.

⁷Produced by Lotus 1-2-3 as by-products of the Time Series Spreadsheet data.

⁸A sample format is provided to illustrate the pattern and analytical usage. However, although several key policy issues have been identified for study -- such as "Introduction of Market Interest Rates" -- USAID support is currently envisaged as a more diffuse "level-of-effort" to the sector, rather than programmed to produce specific results (Outputs). Thus such relational data is not currently available.

⁹Prepared by the implementing GSL project manager, contractor and/or USAID Project Officer.

HOUSING FINANCE SUPPORT

PROJECT BACKGROUND STATEMENT

The Purpose of the Development Studies & Training (DS&T) Project is to assist selected Sri Lankan agencies identify and implement sound development policies and programs, and to provide specialized short and long-term training.

Within that overall scope, the Housing Finance Support component is a \$750,000 to support the continued development of the Government of Sri Lanka's (GSL) efforts to improve public policies and increase access of low-income households to both public and private housing. Specifically, the objective is to assist the government in its efforts to achieve the following objectives:

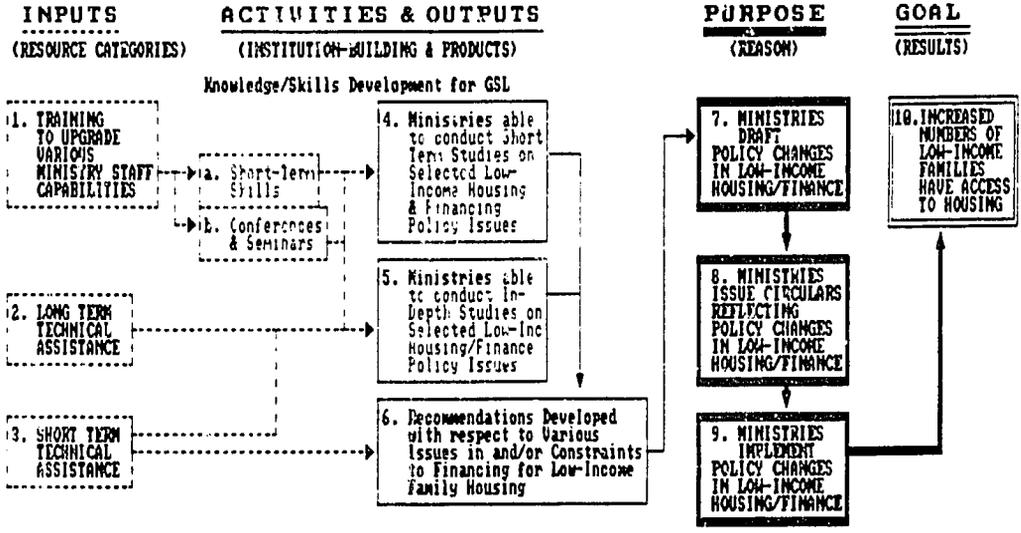
1. Introduce market interest rates for the low-income housing sector.
2. Increase the role of the private sector in providing housing finance.
3. Mobilize resources for long-term lending.
4. Move public sector institutions towards regulatory functions that will protect borrower and public interest in an open market.
5. More effective use of public budgetary resources.
6. Increase access of low-income households to both public and private housing finance resources.
7. Target subsidies for low-income housing.

The flow-chart on the following page outlines the Rationale and Critical Events of the Housing Support Activity to be monitored by the PLM System.¹

¹This Rationale and the Critical Events were developed through discussions with USAID/Sri Lanka's HSG Project Manager.

DEVELOPMENT STUDIES & TRAINING PROJECT
HOUSING FINANCE SUPPORT (303-0085)

ACTIVITY RATIONALE & CRITICAL EVENTS



HOUSING FINANCE SUPPORT ACTIVITY

CRITICAL EVENTS

INPUTS

- 1a. Short-term Skills Training
- 1b. Short-term Conferences & Seminars
2. Long-term Expatriate Technical Assistance
3. Short-term Expatriate Technical Assistance

ACTIVITIES & OUTPUTS

4. Ministries able to conduct Short Term Studies on selected Low-Income Housing & Financing Policy Issues
5. Ministries able to conduct In-Depth Studies on selected Low-Income Housing & Finance Policy Issues
6. Recommendations developed with respect to various Issues in and/or Constraints to Financing for Low-Income Family Housing

PURPOSE

7. GSL Ministries Draft Policy Changes in Low-Income Housing/Finance
8. Ministries Issue Circulars reflecting Policy Changes in Low-Income Housing/Finance
9. Ministries Implement Policy Changes in Low-Income Housing/Finance

GOAL

10. Increased Numbers of Low-Income Families have access to Housing

The progress of each of the major Policy thrusts outlined in the Project Background Statement will be monitored by the Purpose-Level Monitoring System.

**WORKPLAN & SCHEDULE OF
CRITICAL EVENTS
TO BE MONITORED**

1: [W9] ' TO MODIFY PLANNING DATES: Move Cursor to appropriate cell || READ

A B C D E F G

TO MODIFY PLANNING DATES: Move Cursor to appropriate cell
HIT F2 Key; Then EDIT @DATE(89,10,1) -- i.e. 1 Oct 89
WHEN UPDATING IS COMPLETE, HIT: [ENTER] [ENTER] [ALT] C

DEVELOPMENT STUDIES & TRAINING (DS&T) PROJECT (383-0085)
HOUSING FINANCE SUPPORT ACTIVITY
WORK PLAN - Estimated DATES to complete various critical events

	OUTPUTS			PURPOSE		
ACTIVITY	4	5	6	7	8	9
=====*						
MARKET IN	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
PRIVATE S	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
LONG TERM	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
REGULATOR	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
PUBLIC RE	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
ACCESS	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
SUBSIDIES	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93

4-Jun-91 09:13 AM UNDO

TIME-SERIES SPREADSHEET

For Recording and computing Project
Manager's Periodic Report, and comparing
Progress against Plan

The total number of items to be monitored -- i.e. the appropriate number of critical activities & events identified in the chart, multiplied by the number of major objective line items -- is converted to 100%. This constitutes the "agenda" to be monitored. For monitoring purposes, each item is then assigned an equal weighted percentage. [In this instance, there are 42 items; thus the weight for each item is 2.38%]¹

When the planned date for completing each item is reached, its weight is allocated to (and included in) the computation of the "planned percentage to date" for that item.

When the activity is checked "X" -- i.e. as having been satisfactorily completed -- weighted credit is given for that item in computing "progress to date".

A comparison of the summations for the Actual and Planned columns thus reveals the performance against plan in percentage terms.²

¹Although obviously not all agenda items are of equal importance, attempting to assign relative weights is a highly subjective process which complicates the monitoring process -- for relatively little immediate benefit, as discussed in footnote 2 below.

²If individual agenda items were weighted differently, since performance is monitored primarily in terms of deviation from the plan rather than simply as a percentage of the total life-of-project, differential weights for agenda items would be balanced in this process. Therefore, initially, the major difference would be the shape of the curve representing the rate of planned progress. Thus, although differential weighting may ultimately be desired, it is not recommended at this time. A significant benefit is that differential weighting would highlight the need for management attention on priority agenda items that fell behind schedule. [Note: It is an easy process to modify the Lotus 1-2-3 \PLM>HSG.WK0 Macro to accommodate differential weighting, when needed.]

**ANALYTICAL WORKSHEET OF
PROJECT MANAGER'S PERIODIC
REPORT**

Computer-generated as a by-product of
the Lotus 1-2-3 \PLM>HSG.wk0 macro
software program

DEVELOPMENT STUDIES & TRAINING (DS&T) PROJECT (383-0085)
HOUSING FINANCE SUPPORT ACTIVITY
USAID/SRI LANKA

SUMMARY PROGRESS TABLE

AS OF:	2ndQ FY91	4thQ FY91	2ndQ FY92	4thQ FY92	2ndQ FY93	4thQ FY93	2ndQ
MONTH:	Mar-91	Sep-91	Mar-92	Sep-92	Mar-93	Sep-93	Ma
PLAN	0%	33%	67%	83%	100%	100%	
ACTUAL	0%	0%	0%	0%	0%	0%	
%DEVIATION	0%	-100%	-100%	-100%	-100%	-100%	

GRAPHIC ANALYSIS

1. Line Graph of Cumulative Performance for Life of Project -- comparing Actual Progress vs Plan
2. Periodic Histogram of % Deviation from Plan for Life of Project -- comparing Actual vs Plan [i.e. 0 baseline in center of chart]

These charts are computer-generated as a by-product of the Lotus 1-2-3 \PLM>HSG.wk0 macro software program for viewing on-screen. However, normal Lotus menu procedures must be utilized to name & save the graphics as unique charts and files; and Lotus PrintGraph subsequently invoked to print copies for documents.

3. "S-Curve" of Cumulative Budget Expenditures for Work Performed for Life of Project -- comparing Actual Progress vs Plan

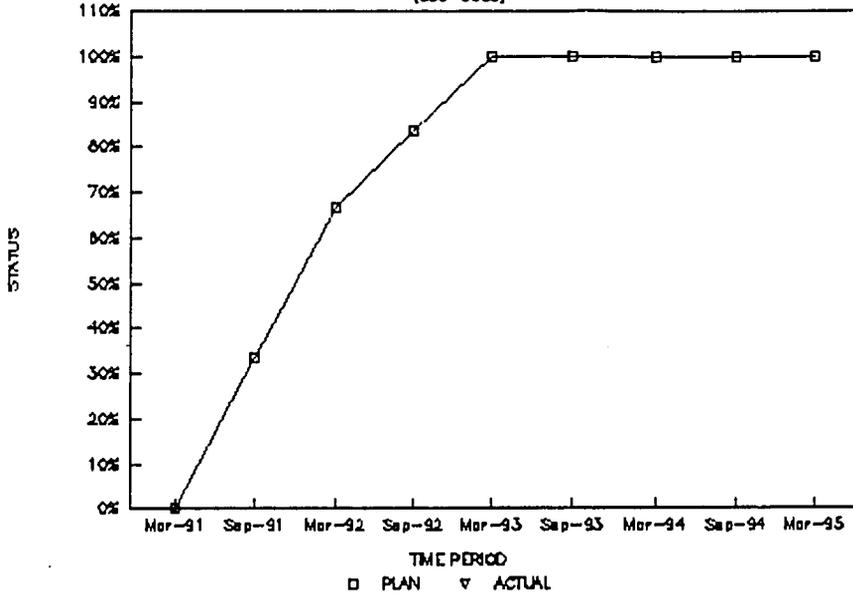
[Note: "X" axis = % of planned work performed
"Y" axis = % of planned budget expended]

The intercepts for these two values is then plotted for particular time periods -- as the data becomes available -- for the semi-annual review]

This chart can be produced from the Lotus 1-2-3 \PLM>SCURVE.wk0 macro software program. However, although budgetary, work plan & performance data are entered interactively, and the graph is automatically generated from this information, S-CURVE.wk0 is a Stand-Alone Program and is not linked to HSG.wk0.

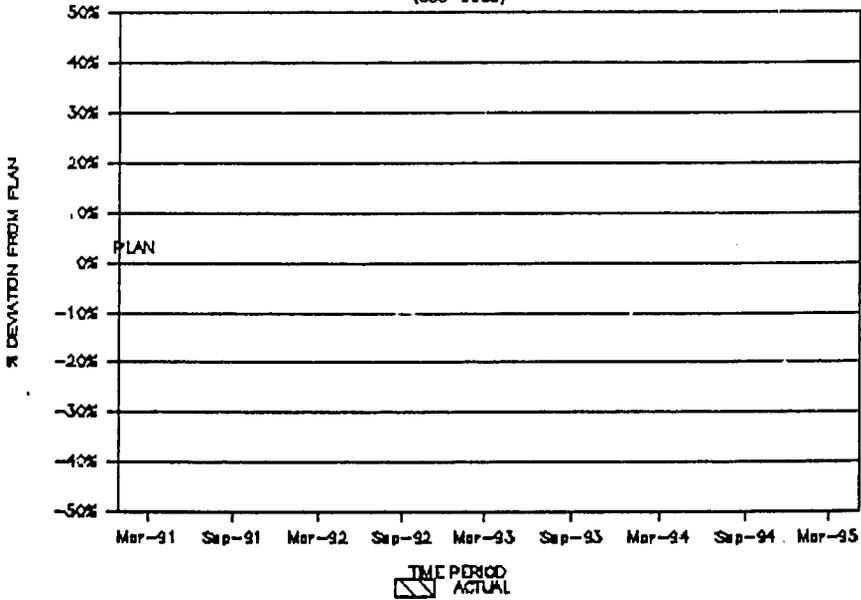
DS&T PROJECT - HOUSING FINANCE SUPPORT

(383-0065)



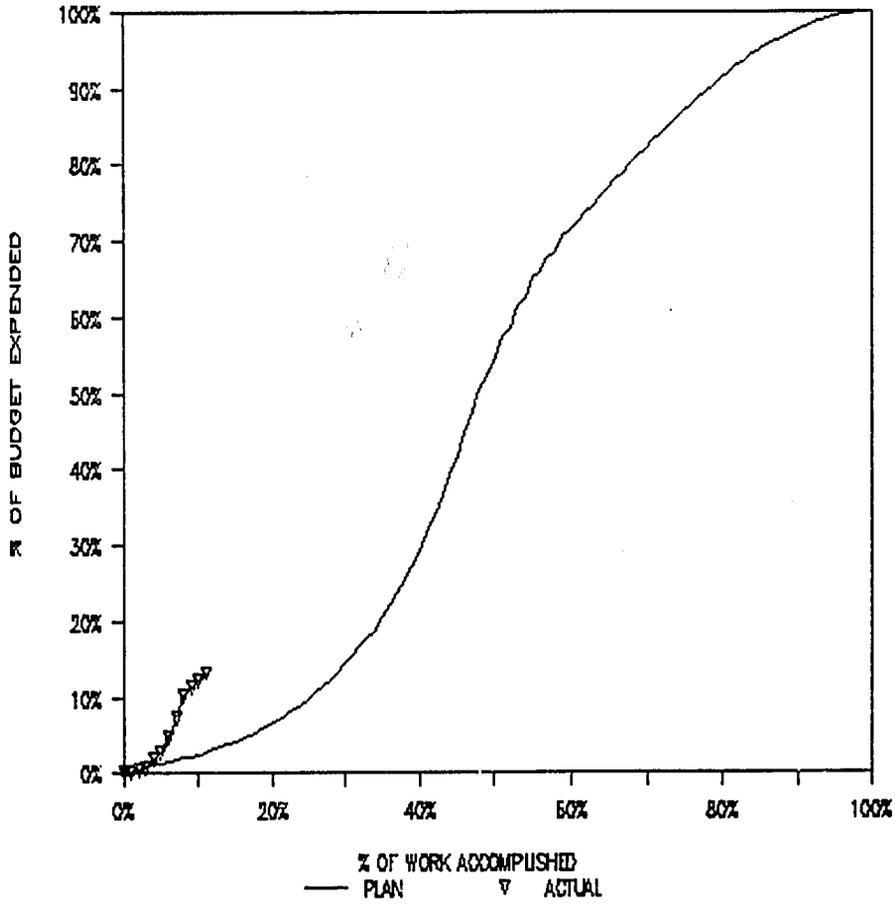
DS&T PROJECT - HOUSING FINANCE SUPPORT

(383-0065)



SAMPLE S-CURVE PERFORMANCE ANALYSIS

EXPENDITURE RATES vs WORK ACCOMPLISHED



SUMMARY, LESSONS LEARNED & RECOMMENDATIONS

SUMMARY

The foregoing pages outline a basic working method for systematically monitoring the performance and progress of a Policy Reform-type Project towards attaining its Purpose-level objectives.

The methodology is relatively easy to apply -- and can be used either manually, or semi-automatically, by modifying the two interactively designed LOTUS 1-2-3 Macros:

\PLM>HSG.WK0 and \PLM>SCURVE.WK0

The basic pre-requisites for using the complete System are:

1. A Clearly Defined Objective, and the Means for Attaining it -- i.e. an Updated Logical Framework Statement
2. A Time-Phased Plan of Action -- i.e. A Project Workplan, with major Milestones and Critical Events/Activities and estimated dates for attaining them
3. A Time-Phased Budget related to the WorkPlan

LESSONS LEARNED

Six major lessons¹ were learned during the development of this prototype system, which Mission Management should take into consideration in deciding whether to continue pursuing this system:

1. Policy-type Projects are largely dependent upon monitoring output Critical Events as indicators towards attainment of the Project Purpose. Few quantitative leading-indicators of progress are apparent.
2. Even where potentially measurable quantitative leading indicators can be identified, no quantifiably-attributable cause-effect linkage exists between policy level "studies and training" and the fluctuation -- either positive or negative -- of such indices. While the avowed Purpose may be Policy Reform, -- USAID's manageable interest in Policy Projects -- the aspects over which AID exercises managerial control and can (and should) legitimately be held accountable (i.e. the Outputs) -- extends only to the production of recommendations for implementation. Ultimately, it is the Host Country's
3. Project Log-Frames and Work Plans are not always consistent or current. Thus, depending upon their state, it may take considerable time and effort on the part of the USAID Project Officer, the implementing contractor and GSL counterparts to review and rethink the Project through conceptually; rework the Project Log-Frame, and develop a new Work Plan.
4. Although not all Critical Events in the process are of equal importance, attempting to assign relative weights to the different steps is a difficult, highly subjective and time-consuming exercise which does not immediately enhance the efficacy of the monitoring process, only the shape of the curve -- i.e. the rate of planned progress, since performance is monitored primarily in terms of deviation from the plan rather than simply as a percentage of the total life-of-project. [Ultimately, differential weighting might be desired as it could highlight the need for management attention on priority agenda items behind schedule.]

¹These are modifications of, and an addition (i.e. lesson # 2 below regarding quantitative leading indicator identification and attribution) to the five lessons discussed in the initial report of the same title -- CASE # 1 Irrigation Management Policy Support Activity (IMPSA), Development Studies & Training (DS&T) Project (383-0085), 31 May 1991.

5. The S-Curve Technique (and Graph) is a powerful tool for monitoring performance. The S-Curve shows whether Project's costs are going out of control compared to the planned estimates for accomplishing specific items of work -- not simply the rate of disbursement provided by standard financial monitoring approaches. However, if the project was not designed to relate specific items of planned work with planned cost -- as is the case with the DS&T Housing Finance Support Activity and other Policy Reform projects -- it may be extremely difficult if not impossible to retroactively apply the S-Curve concept.

6. Attainment of most of the Purpose-level objectives is beyond the Life-of-Project for USAID involvement. Thus, unless AID can devote additional resources and attention to monitor the status and progress of completed projects, some project Purposes may be less than 100% achieved at the PACD, even if the projects adhere to their plan. Consequently, subsequent evaluation and audits will have no USAID time-series Purpose-level progress data generated by this system, beyond the PACD.

RECOMMENDATIONS

Based on my experience in developing this PLM system, the following four recommendations are offered:

1. This Purpose-Level Monitoring System (PLM) should be integrated with the Mission's present Project Implementation Report (PIR) System -- as much of the data is required for both.

2. The 2nd and 4th Quarters of the Fiscal Year (i.e. as of the end of March and September) reporting cycles should be used for PLM -- as opposed to the Quarterly Review of Inputs, Outputs, Pipeline Analysis, and/or other aspects under the PIR -- if semi-annual attention is to be focussed on the Project's Purpose-Level. This cycle would minimize difficulties for reporting and review during the Mission's personnel-constrained seasons of Home Leave and Christmas.

3. With the possible exception of the S-Curve Technique, I recommend that the PLM System be retrofitted to most of the Mission's major project components.

4. The work and budgets of new Projects -- and major new components of existing projects -- should be related during the planning phase, and the S-Curve technique applied thereafter to monitor progress. [A Bar Chart (and/or PERT/CPM Networking) System can be used to plan and develop this aspect.²]

²Time-line and Microsoft Project are two relatively inexpensive and easy-to-use microcomputer software packages for this purpose. Primavera is a more sophisticated software program which incorporates a wide variety of options for comprehensive project planning, design, budgeting and management analysis, and produces superior quality graphics.

APPENDICES

SAMPLE COMPUTER "SCREENS"

FROM

\PLM>HSG.WKO

&

\PLM>SCURVE.WKO

A41: [W9]

ii

READY

	A	B	C	D	E	F	G
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A PROTOTYPE PURPOSE-LEVEL MONITORING (PLM) SYSTEM
FOR POLICY DEVELOPMENT/REFORM-TYPE PROJECTS

CASE # 2
DEVELOPMENT STUDIES & TRAINING (DS&T) PROJECT (383-0085)
HOUSING FINANCE SUPPORT ACTIVITY
USAID/SRI LANKA

(Contract # 499-0000-0-00-1029-00)

Dr. Kenneth F. Smith, Project Management Consultant
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Phone: 703-978-1876

JUNE 1991

UNDO

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INTRODUCTION

Unlike typical AID Technical "Blueprint" projects -- which have physical END PRODUCTS of "More" or "Better" levels of "Something" for a pre-targetted group of beneficiaries -- POLICY REFORM projects usually have no precise quantitative Purpose-level objectives which can be monitored over time.

Therefore this system has been developed as a method for monitoring the PROCESS of accomplishing a series of Critical steps (compared to a project plan) which lead to the ultimate PURPOSE of DEVELOPING &/or IMPLEMENTING macro-POLICY reforms.

The Critical Events, Work Plan and initial Status were developed through close consultation with the USAID Project Manager.

WHEN YOU ARE READY TO CONTINUE, HIT THE [ENTER] KEY

78
79

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A84: [W9]

iv

MENU

UPDATE TARGET GRAPHICS PRINT SAVE QUIT
Update the Current Status of the Project

A B C D E F G

- 84
- 85 DO YOU WANT TO:
- 86
- 87 U - UPDATE the Project's Current Status
- 88
- 89 T - Review and/or Modify the Project's Planned TARGET
- 90 Schedule for accomplishing "Critical Events"
- 91
- 92 G - View GRAPHICS of the Current Status vs Project Plan
- 93
- 94 P - PRINT the Current Status Table of Indicators
- 95
- 96 S - SAVE the New Data entered in the Target Schedule
- 97 and/or Update
- 98
- 99 Q - QUIT the Program

100
101 SELECT FROM THE MENU ABOVE THE "FRAME" or TYPE THE LETTER

102
103 NOTE: HIT the [ALT] C keys TO RETURN AND USE THIS MENU
04-Jun-91 09:16 AM CMD

21

B11: (D3) U [W10] @DATE(91,3,1)

v

READY

```

1      A          B          C          D          E          F          G
2  TO MODIFY PLANNING DATES: Move Cursor to appropriate cell
3  HIT F2 Key; Then EDIT @DATE(89,10,1) -- i.e. 1 Oct 89
4  WHEN UPDATING IS COMPLETE, HIT: [ENTER] [ENTER] [ALT] C
5  -----
6  DEVELOPMENT STUDIES & TRAINING (DS&T) PROJECT (383-0085)
7  HOUSING FINANCE SUPPORT ACTIVITY
8  WORK PLAN - Estimated DATES to complete various critical events

```

	A	B	C	D	E	F	G
8	OUTPUTS			PURPOSE			
9	ACTIVITY	4	5	6	7	8	9
11	MARKET IN	Mar-91	Mar-91	Mar-91	Mar-92	May-92	Mar-93
12	PRIVATE S	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
13	LONG TERM	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
14	REGULATOR	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
15	PUBLIC RE	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
16	ACCESS	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93
17	SUBSIDIES	Aug-91	Sep-91	Oct-91	Mar-92	May-92	Mar-93

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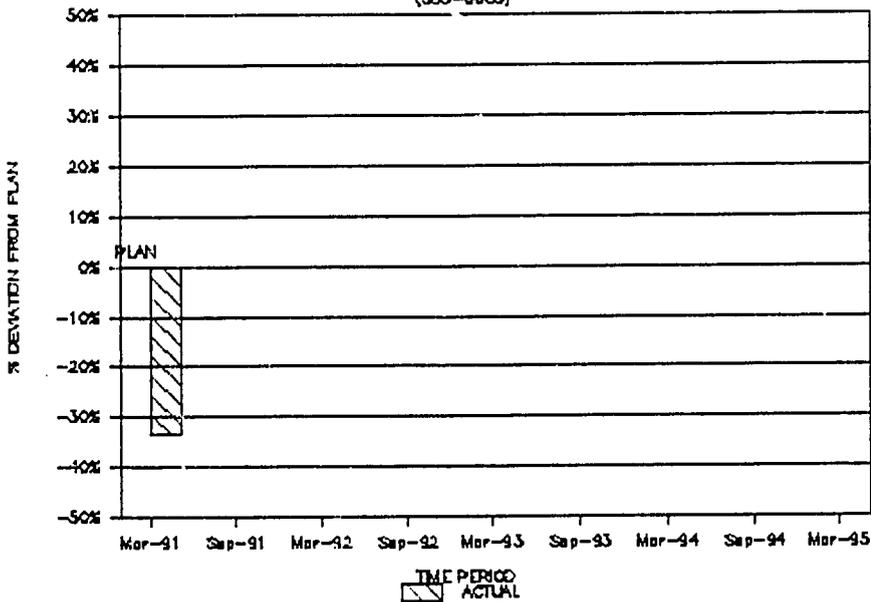
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CMD

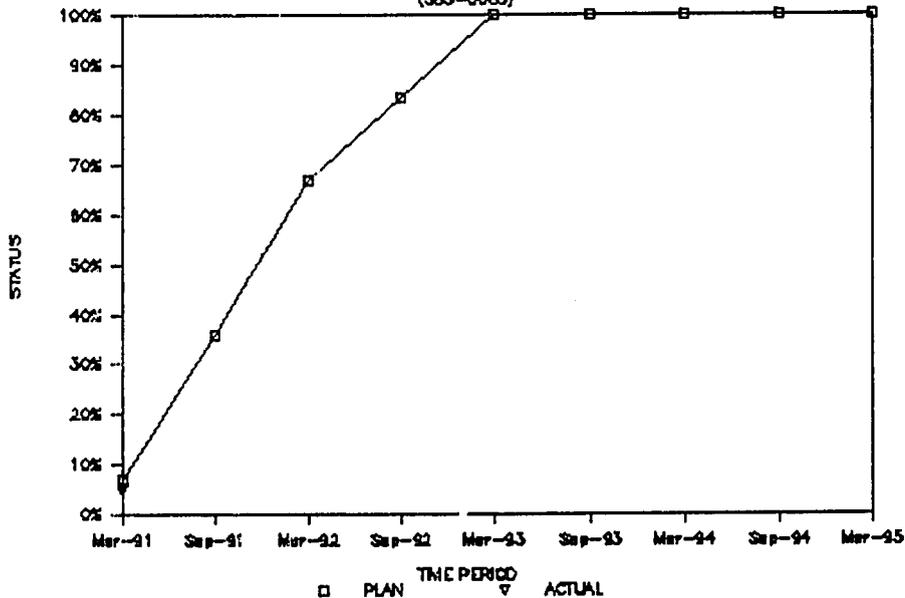
NUM

22

DS&T PROJECT - HOUSING FINANCE SUPPORT
(363-0085)



DS&T PROJECT - HOUSING FINANCE SUPPORT
(363-0085)



24

I	J	K	L	M	N	O
40	MACRO MENU					
41						
42	\M	{GOTO}I40~				
43						
44	\O	{GOTO}A40~{WAIT @NOW+@TIME(0,0,5)}{PGDN}{?}{START}				
45	\I					
46						
47	START	{GOTO}A84~{MENUBRANCH A81}				
48						
49	SCHEDULE	{HOME}{goto}a8~/wwh{window}/WGPE{GOTO}B10~/WTB				
50		/rib11.G17~{?}{?}{GOTO}B11~{CONTROL}				
51						
52	\C	{window}/wwc/WTC/WGPD{BRANCH START}				
53	CONTROL					
54	UPDATE	{GOTO}Z1~{GOTO}Z8~/WWH(WINDOW)/WGPE{GOTO}AE14~/WTB				
55		{GOTO}AE16~				
56						
57	PRINT	/PPRL77.V89~OS\015~mr200~QAG{ESC}{ESC}{ESC}{START}				
58						
59	GRAPHICS	/gv				
04-Jun-91	09:20 AM	UNDO				

APPENDIX

II

SAMPLE COMPUTER "SCREENS"

FROM

\PLM>SCURVE.WKO

26

A B C D E F G H

THE S-CURVE

=====

A GRAPHIC ANALYSIS
OF
PROJECT PERFORMANCE

COMPARING
RATES OF EXPENDITURE vs WORK ACCOMPLISHED

by
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MAY 1991

4-Jun-91 02:53 AM

- 21

7: [W12]

PLAN UPDATE GRAPH SAVE QUIT

want to Enter the Planning Data for the Budgetted Rates of Expenditure

B C D E F G H I J K

DO YOU WANT TO:

- P = PLAN the RATES OF EXPENDITURE
for the PERCENTAGE OF WORK TO BE ACCOMPLISHED
- U = UPDATE -- Report the ACTUAL EXPENDITURES
for the PERCENTAGE OF WORK ACTUALLY COMPLETED
- G = View the S-Curve GRAPH for the current data on file.
[NOTE: To Return and USE THIS MENU after viewing
the GRAPH, Hit: [ESC] [ESC] [ALT] C]
- S = SAVE the New Plan or Actual Data Just Entered
- Q = Just QUIT without Saving anything

USE THE ARROW KEYS TO SELECT ONE OF THE MENU OPTIONS ABOVE,
THEN HIT the [ENTER] KEY;

OR: Type the appropriate corresponding initial letter

4-Jun-91 02:52 AM

CMD

NUM

-28-

A B C D E F G H

DATA REQUIRED TO PREPARE AN "S-CURVE" GRAPH

PLANNING DATA: For appropriate percentage increments of work planned,
 Type the Budget estimated to achieve that level of work.

NOTE: Make data entries with ARROW KEYS only. DO NOT USE [ENTER] KEY
 WHEN DATA ENTRY IS FINISHED, HIT: [ENTER] Twice -- i.e. [ENT] [ENT]

	A	B	C	D	E	F	G	H
	% of PLANNED WORK ACCOMPLISHED							
				0%	1%	2%	3%	4%
	BUDGET (\$000's) *			====	====	====	====	====
0	ESTIMATED COST:			0	2	4	15	8
1	CUMULATIVE COST:			0	2	6	21	29
2	TOTAL BUDGET = \$2,264,000							
3	CUMULATIVE % of Budget:			0	0%	0%	1%	1%
4	-----							
5	ACTUAL: Incremental Expenses							
6	since last Cumulative report: *			0	3	3	11	25
7	CUMULATIVE EXPENSES TO DATE:			0	3	6	17	42
8	TOTAL EXPENDITURES = \$322,000							
9	CUMULATIVE % Expended:			0%	0%	0%	1%	2%

04-Jun-91 02:49 AM

CMD

NUM

29

A B C D E F G H

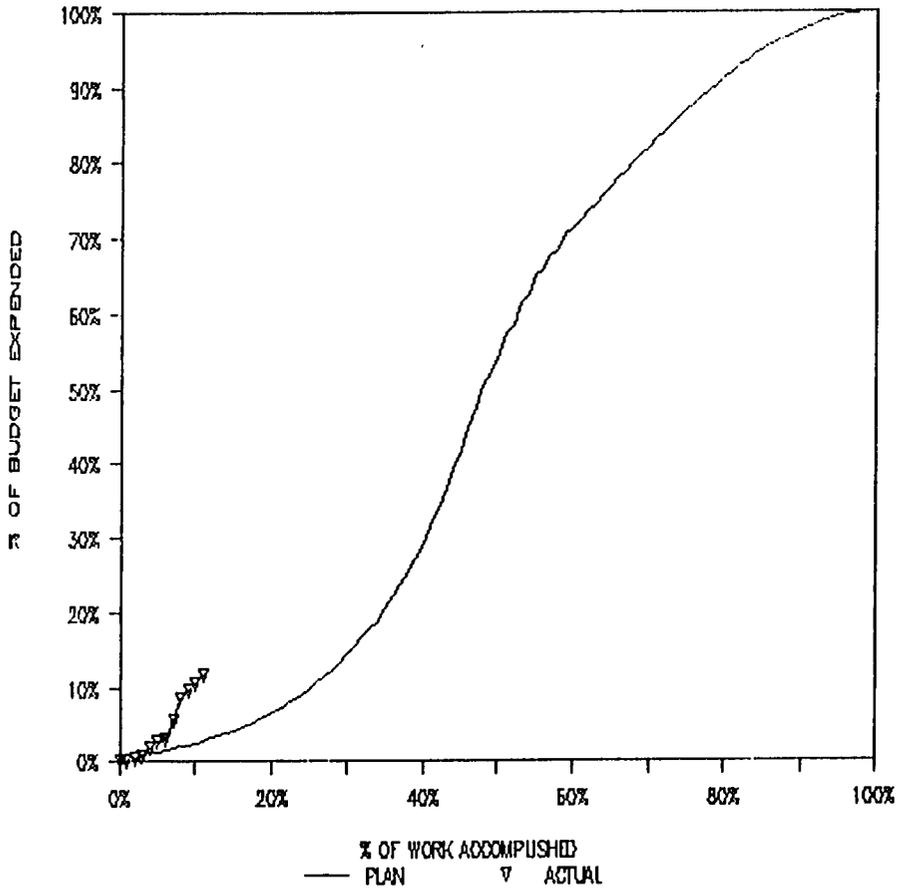
DATA REQUIRED TO PREPARE AN "S-CURVE" GRAPH
 UPDATING: Type the EXPENDITURES INCURRED Since the LAST UPDATE
 UNDER THE APPROPRIATE PERCENTAGE OF WORK ACCOMPLISHED
 NOTE: Make data entries with ARROW KEYS only. DO NOT USE [ENTER] KEY
 WHEN DATA ENTRY IS FINISHED, HIT: [ENTER] Twice -- i.e. [ENT] [ENT]

A	B	C	D	E	F	G	H	
% of PLANNED WORK ACCOMPLISHED:				% of PLANNED WORK ACCOMPLISHED				
BUDGET (\$000's)				0%	1%	2%	3%	4%
ESTIMATED COST:				0	2	4	15	8
CUMULATIVE COST:				0	2	6	21	29
TOTAL BUDGET = \$2,264,000								
CUMULATIVE % of Budget:				0	0%	0%	1%	1%

ACTUAL: Incremental Expenses								
since last Cumulative report: *				0	3	3	11	25
CUMULATIVE EXPENSES TO DATE:				0	3	6	17	42
TOTAL EXPENDITURES = \$322,000								
CUMULATIVE % Expended:				0%	0%	0%	1%	2%
04-Jun-91 02:50 AM				CMD			NUM	

"S-CURVE" PERFORMANCE ANALYSIS

EXPENDITURE RATES for WORK ACCOMPLISHED



MACRO MENU

\M {GOTO}L24~

\O {GOTO}A24~{WAIT @NOW+@TIME(0,0,5)}{branch start}
 \I

START {goto}b47~{menubbranch b44}

\C {window}/wwc/WTC/WGPD{BRANCH START}
 CONTINUE

PLAN {HOME}{GOTO}A6~/WWH
 /WWU{WINDOW}{GOTO}C9~/WTB{GOTO}c10~/WGPE/RIC10.CZ10~
 {?}{CONTINUE}

GRAPHIC/gv

UPDATE {HOME}{GOTO}A67~{GOTO}A72~/WWH
 /WWU{WINDOW}{GOTO}A6~{GOTO}c9~{GOTO}C16~/wtb
 {GOTO}c16~/WGPE/ric16.c216~
 {?}{CONTINUE}