

**MINISTRY OF COMMUNICATION, TRANSPORT,
POST AND CONSTRUCTION**

**MAINSTREAMING APPROPRIATE LOCAL ROAD
STANDARDS AND SPECIFICATIONS AND
DEVELOPING A STRATEGY FOR THE MCTPC
RESEARCH CAPACITY**

**PROGRESS REPORT 9
October 2007**

SEACAP 03

UNPUBLISHED PROJECT REPORT



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**Prepared for: Project Record: SEACAP 03. Mainstreaming Appropriate Local
Road Standards and Developing a Strategy for
the MCTPC Research Capacity**

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CONTENTS

1	Introduction	1
1.1	<i>General</i>	1
1.2	<i>Contractual Arrangements</i>	1
2	Work Undertaken	2
2.1	<i>General</i>	2
2.2	<i>Task Group 1: Standards and Specifications</i>	2
2.3	<i>Task Group 2: Training</i>	2
2.4	<i>Task Groups 3 and 4 Research Capacity and Dissemination</i>	2
3	Staff Resources	4
4	Programme and Status	4

ABBREVIATIONS & ACRONYMS

ADT	Average Daily Traffic
ASEAN	Association of South East Asian Nations
CBR	California Bearing Ratio
CNCTP	Cambodia National Community of Transport Practitioners
CSIR	Council for Scientific and Industrial Research (South Africa)
DBM	Dry Bound Macadam
DBST	Double Bituminous Surface Treatment
DCP	Dynamic Cone Penetrometer
DfID	Department for International Development
DoR	Department of Roads
EADT	Equivalent Average Daily Traffic
EDCs	Economically emerging and Developing Countries
ENS	Engineered Natural Surface
esa	equivalent standard axles
FHWA	Federal Highways Association (US)
FM	Fines Modulus
FWD	Falling Weight Deflectometer
GMSARN	Greater Mekong Sub-region Academic and Research Network
gTKP	global Transport Knowledge Partnership
HDM4	Highway Development and Management Model
HQ	Headquarters
HRD	Human Resource Development
IFG	International Focus Group
IFRTD	International Forum for Rural Transport Development
ILO	International Labour Organisation
IRI	International Roughness Index
Km	kilometre
LCS	Low Cost Surfacing
LRD	Local Roads Division (DoR)
LVRR	Low Volume Rural Road
m	metre(s)
MCTPC	Ministry of Communication, Transport, Post and Construction
mm	Millimetre(s)
MERLIN	M achine for E valuating R oughness using L ow-cost I Nstrumentation
MPa	Mega pascals
MoU	Memorandum of Understanding

NUOL	National University of Lao
OCTPC	Office of Communication Transport Posts and Construction (District Level)
ORN	Overseas Road Note
PAD	Personnel and Administration Division (MCTPC)
PCU	Passenger Car Unit
Pen Mac	Penetration Macadam
PIARC	World Road Association
PTD	Planning and Technical Division (DoR)
QA	Quality Assurance
Ref.	Reference
RRGAP	Rural Road Gravel Assessment Programme (Vietnam)
RRSR	Rural Road Surfacing Research (Vietnam)
RRST	Rural Road Surfacing Trials (Vietnam)
RT1	Rural Transport 1 st Project, Vietnam
RT2	Rural Transport 2 nd Project, Vietnam
RT3	Rural Transport 3 rd Project, Vietnam
SBST	Single Bituminous Surface Treatment
SCC	SEACAP Coordinating Committee
SEACAP	South East Asia Community Access Programme
SIDA	Swedish International Developments Cooperation Agency
SOE	State Owned Enterprise
TRL	Transport Research Laboratory
UK	United Kingdom
UNOPS	United Nations Office for Project Services
VN	Vietnam
VOCs	Vehicle Operating Costs
VPD	Vehicles per day
WBM	Water Bound Macadam
WLC	Whole Life Costs

1 Introduction

1.1 General

The SEACAP 3 project is part of the wider South East Asia Community Access Programme whose strategic theme is 'livelihoods of poor and vulnerable people in South East Asia, improved sustainability'. SEACAP 3 will contribute to this overall objective through the development and mainstreaming of local resource-based standards for low volume rural roads. The project seeks to achieve three key outcomes:

- Mainstream appropriate local road standards and specifications into the national road programme,
- Develop an affordable and sustainable strategy for attaining the necessary road (all road categories) research capacity,
- Increase the awareness of good practice experience from this project by disseminating the outcomes at the national, sub-regional and international levels.

This report outlines the work undertaken on the SEACAP 3 project during October 2007; presents a summary of staff resources used and outlines the anticipated programme for the coming month.

1.2 Contractual Arrangements

The Agreement for the project to be undertaken was established under a Memorandum of Understanding (MoU) between the Ministry of Communication, Transport, Post and Construction (MCTPC) on behalf of the Government of Lao PDR and the Department for International Development (DfID), UK. The MoU defines the scope of the project, that it will be undertaken by TRL Limited as the Consultant and implemented under Terms of Reference, and that the Consultant will be appointed by DfID. The MoU also expresses certain Exemptions and Facilities to be provided by MCTPC to the Consultant to facilitate implementation of the project. The MoU was signed on the 16th October 2006.

Thereafter, TRL provided a comprehensive technical proposal and a financial proposal for carrying out the project to DfID and subsequently entered into a contractual arrangement with DfID. TRL were appointed on 21st November 2006. The duration of the project is 12 calendar months.

TRL is supported in its undertaking of the project by associate firms and by competent and experienced individual consultants. The principal associate firm is Lao Transport Engineering Consultants (LTEC) who are providing comprehensive local consulting services.

TRL have entered into a contractual agreement with LTEC to provide a total of 68 person months of services over the duration of the project. Forty-Four (44) person months are for engineering and translation services and 24 person months are for administrative, secretarial and coordination services.

The other associate firm is Intech Associates consulting engineers who have worked extensively with TRL on other SEACAP projects in the region. Intech will provide a short-term specialist role on this project similar to that to be provided by the individual consultants.

2 Work Undertaken

2.1 General

The following sections summarise the work undertaken on SEACAP 3 during October 2007. Principal focus was on Task Group 1 and Task Group 2, although progress was also recorded on the other two Task Groups. The Progress on individual Modules within the Project Task Groups is summarised in Table 1. Project meetings are summarised in Table 2.

2.2 Task Group 1: Standards and Specifications

Work was centred on the drafting of the key Standards and Specifications documents; as follows:

Document 1, Classification and Geometric Standards

Document 2: Technical Specifications –technical specifications for an initial short list of pavement options and an associated matrix of standard designs.

Document 3: Guidelines – containing advice on the application of Documents 1 and 2 within a Lao PDR Environmentally Optimised Design (EOD) Strategy

Document 1 was submitted for comment to the SEACAP Coordinating on 24th October

2.3 Task Group 2: Training

Simon Done, the TRL Training Specialist continued with preparing materials for the Pilot Training Modules as follows:

Module 1: LVRR Background - complete and reviewed by J R Cook

Module 2: LVRR Environment.-.complete and reviewed by J R Cook

Module 3: LVRR Design process.- outline only until Standards and Specifications documentation reviewed at workshop

Module 4: LVRR Design in practice.-. programme designed and road identified for site work exercise in Vientiane Municipality

2.4 Task Groups 3 and 4 Research Capacity and Dissemination

Andreas Beusch completed his short review to identify key HRD issues specific to the Lao PDR and the MCTPC with respect to implementing current SEACAP research into mainstream practice.

Two SEACAP 3 technical papers were issued to the SEACAP Coordinating Committee for comments, namely:

Technical Paper 2 - Website Recommendations by Trevor Bradbury

Technical Paper No 3; “Disseminating, Mainstreaming and Training Strategy Review” by Andreas Beusch

Two presentations for the proposed SEACAP 17 Knowledge Exchange Workshop were prepared and submitted for translations; these were:

1. Appropriate Low Volume Rural Road Standards and Specifications, by Dr J R Cook
2. Low Cost Structures, by Rob Petts

Table 1 Summary of Module Progress

No.	Module Description	Completed	Programme	Activity in October 2007
Task Group I: Develop Standards and Specifications				
1	Review current situation	95%	100%	Minor updating of review
2	Research to fill knowledge gaps	100%	100%	Minor updating
3	Draft technical standards	90%	100%	Drafting of standards.
4	Finalise technical standards	0%	10%	No activity this month
Task Group II: Develop a Relevant Training Programme				
5	Training needs assessment	100%	100%	No activity this month
6	Training programme elaborated	85%	100%	Drafting of training materials
7	Training course tested and trialled	10%	40%	Preparations for pilot course. Course rescheduled
Task Group III: Develop an Appropriate Research Capability:				
8	Gaps in research capacity identified	100%	100%	No activity this month
9	Strategy for strengthening research capacity	95%	100%	Technical paper issued
10	Adoption of strategy by MCTPC	70%	70%	Ongoing discussions with DoR and NUOL
Task Group IV: Initiate Dissemination				
11	Materials for Dissemination	30%	50%	Website content drafted. Technical paper issued

Table 2: Key Meetings, October

Date	Organisation	Key Personnel	Comment
3/10	LRD	Sengdarith Kattignasack (Director, LRD)	Training course discussions Workshop on 16 th November
12/10	LRD	Sengdarith Kattignasack (Director, LRD)	Training course discussions
15/10	PTD	Ounheuan Siriamphone (Project Coordinator, PTD)	Training course discussions Lao and English language
24/10	LRD	Sengdarith Kattignasack (Director, LRD)	Submission of Document 1
26/10	DoR	Laokham Somphet Chairman of Coordinating Committee	Initial discussion on Document 1
29/10	LRD	Sengdarith Kattignasack (Director, LRD)	Training course schedule change Document 2&3 discussion

3 Staff Resources

A summary of the SEACAP 3 staff resources utilised in October 2007 is presented in the following Table 3.

4 Programme and Status

The SEACAP 3 programme is included as Appendix A to this report, together with a manning schedule for the remaining months of the programme.

Table 1 indicates that the project progress is generally satisfactory, although the drafting of the Standards and Specifications has utilised more resources than envisaged. The programme was adjusted to accommodate some delay in this task.

The following points should be noted with respect to project work in the coming months

1. A workshop is planned for 16th November to review the Standards and Specification Documents 1 to 3.
2. There has been a further slight rescheduling of the Pilot Training Course which will now run from 27th to 30th November. This will be followed by a review phase and report.
3. TRL-LTEC will support the SEACAP 17 workshop in Bokeo on 6th-8th November. Presentations will be made by Dr J R Cook (LVRR Standards and Specifications) and Rob Petts (Low Cost Structures Manual).

Table 4: Staff Resources October s

Name	Position	Project Time : October
Dr Jasper Cook (TRL)	Team Leader Geotechnical Specialist	21 st -30 th October
Michael O'Connell (TRL)	Transport and Road Engineering Specialist and Deputy Team Leader	27 th -31 st October
Simon Done (TRL)	Training Specialist	1 st -9 th October
Akram Ahmedi	Panel Reviewer	23 rd -28 th October
Andreas Beusch	Training and Research Reviewer	1 st -5 th October
Bounta Meksavanh (LTEC)	Local Team Leader and Road Engineer Specialist	1 st -31 st October
Saysongkham Manodham (LTEC)	Road Engineering Specialist	1 st -31 st October
Somphit B (LTEC)	Training Support	1 st -31 st October
Mr. Keithiphan Senamahmounry (LTEC)	IT Support	1 st -31 st October
Mr. Bounhom K. (LTEC)	Translator	1 st -31 st October
Ms Chanthida Ph (LTEC)	Office Management	1 st -31 st October
Mr. Thipdavanh V. (LTEC)	Project Coordinator	1 st -31 st October

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APPENDIX A

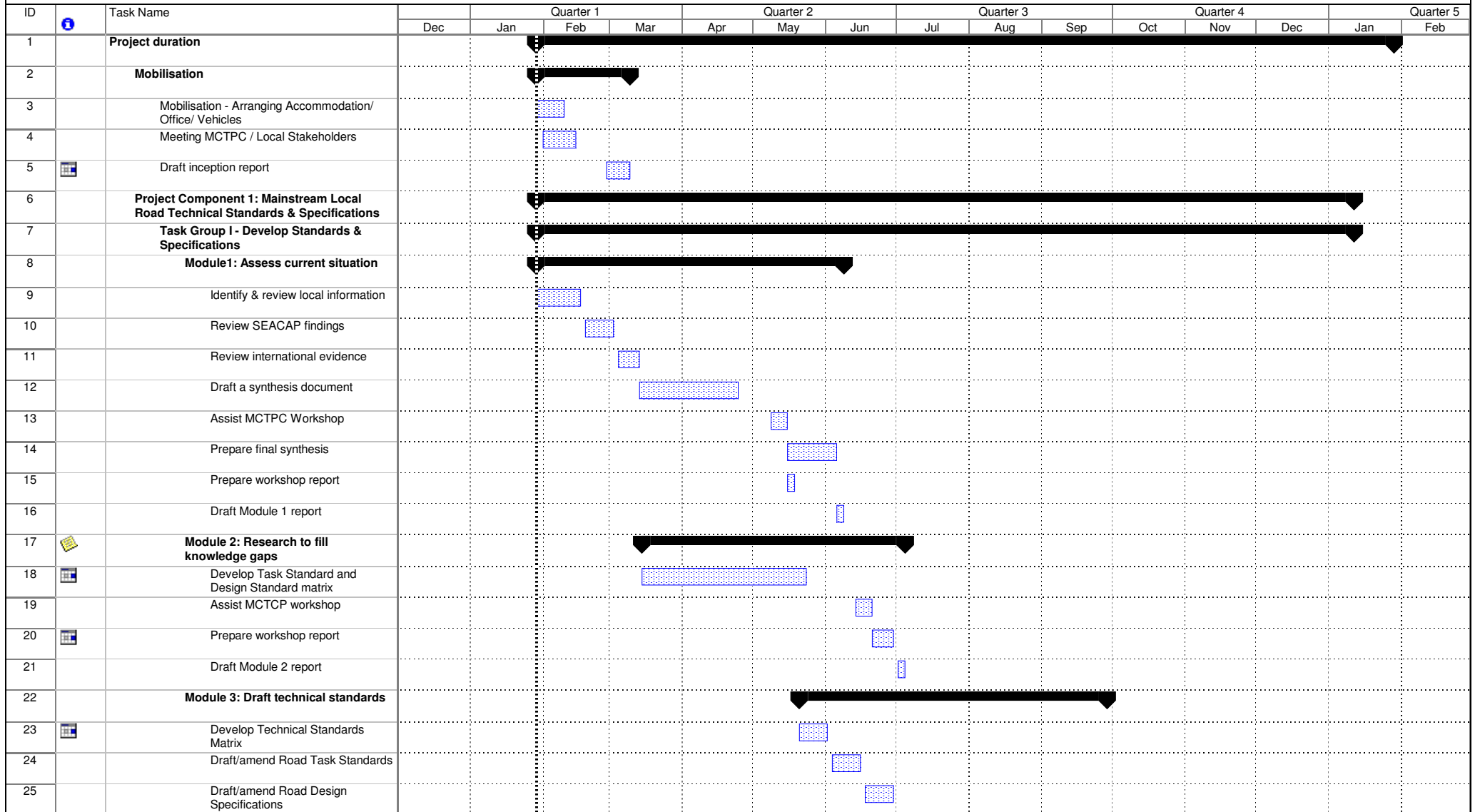
Programme

Schedule of Staff Inputs

		Project Months		
		Nov	Dec	Jan
J Cook	Team Leader	■ ■■■■	■ ■■■■	■ ■■■■
M O'Connell	Deputy Team Leader	■■■■■■■■■■	■■■■■■■■■■	■■■■■■■■■■
S Done	Training Specialist	■■■■■■■■■■	■■■■■■■■■■	■■■■■■■■■■
R C Petts	Quality Review	■■■■■■■■■■	■■■■■■■■■■	■■■■■■■■■■
Bounta Meksavanh	Local Team Leader	■■■■■■■■■■	■■■■■■■■■■	■■■■■■■■■■
Saysongkham Manodham	Road Engineer	■■■■■■■■■■	■■■■■■■■■■	■■■■■■■■■■
Somphit B	Training	■■■■■■■■■■	■■■■■■■■■■	■■■■■■■■■■
Keithiphan S	IT Engineer	■■■■■■■■■■	■■■■■■■■■■	■■■■■■■■■■
Bounhom K.	Translation	■■■■■■■■■■	■■■■■■■■■■	■■■■■■■■■■
Chanthida Ph	Office Manager	■■■■■■■■■■	■■■■■■■■■■	■■■■■■■■■■
Thipdavanh V.	Project Coordinator	■■■■■■■■■■	■■■■■■■■■■	■■■■■■■■■■

SEACAP - 3

Mainstreaming appropriate local road standards and specifications & developing strategy for MCTPC research capacity



Project: SEACAP 03 - Lao PDR

Task		Summary		Rolled Up Progress		Project Summary	
Progress		Rolled Up Task		Split		Group By Summary	
Milestone		Rolled Up Milestone		External Tasks			

SEACAP - 3

Mainstreaming appropriate local road standards and specifications & developing strategy for MCTPC research capacity

ID	Task Name	Quarter 1			Quarter 2			Quarter 3			Quarter 4			Quarter 5		
		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
26	Prepare first draft															
27	Assist MCTPC in stakeholder review															
28	Draft Module 3 report															
29	Module 4: Final technical standards															
30	Receive stakeholder feedback and Finalise Technical Standards															
31	Mainstream by assisting in takeup and adoption															
32	Draft Module 4 Report															
33	Task Group II -Develop Training Programme															
34	Module 5: Training needs assessment															
35	Review job descriptions of MCTPC staff															
36	Assess skill levels of sample staff															
37	Identify gaps (between descriptions and skills)															
38	Draft training needs assessment															
39	Draft Module 5 report															
40	Module 6: Elaborate Training program															
41	Prepare training programme															
42	Identify support resource materials															
43	Draft Module 6 report															
44	Module 7: Training Course & Trainers trained															
45	Organise a trial training course															
46	Conduct training															
47	Evaluation of the train the trainers program															
48	Draft Module 7 report															
49	Project Component 2: Develop an affordable and sustainable strategy for attaining the															
50	Task Group III - Develop Research Capacity															

Project: SEACAP 03 - Lao PDR

Task		Summary		Rolled Up Progress		Project Summary	
Progress		Rolled Up Task		Split		Group By Summary	
Milestone		Rolled Up Milestone		External Tasks			

SEACAP - 3

Mainstreaming appropriate local road standards and specifications & developing strategy for MCTPC research capacity

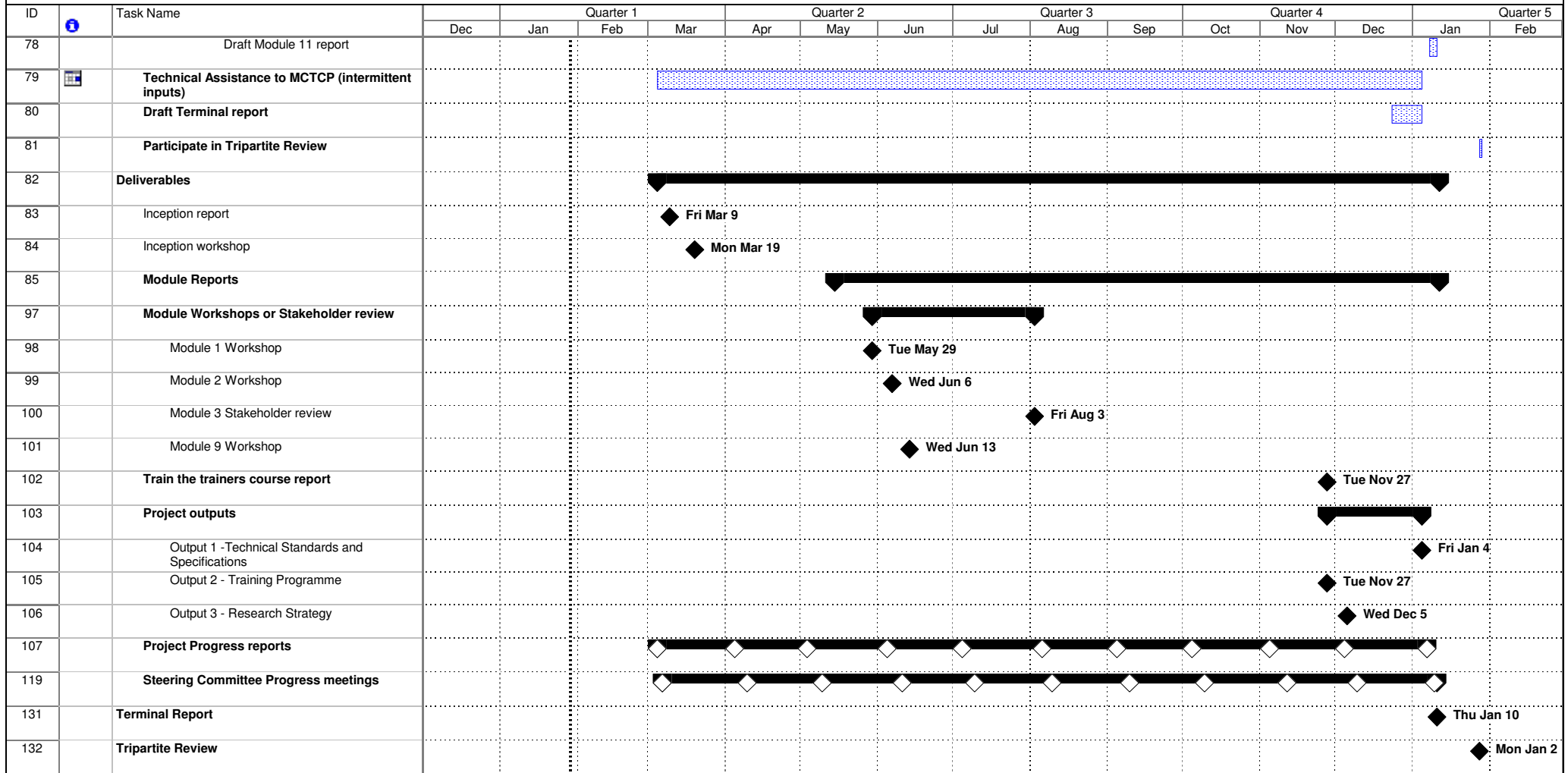
ID	Task Name	Quarter 1		Quarter 2			Quarter 3			Quarter 4			Quarter 5			
		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
51	Module 8: Gaps in research capacity				▶		▶									
52	Identify key research topics and institutional capacity				■											
53	Options for developing research capacity				■											
54	Draft first synthesis					■										
55	Assist MCTCP in feedback/workshop exercise						■									
56	Finalise synthesis of research capacity						■									
57	Draft Module 8 report							■								
58	Module 9: Draft strategy for strengthening the research and institutional capacity				▶		▶									
59	Prepare a draft strategy				■											
60	Assist MCTCP in feedback/workshop exercise						■									
61	Draft Module 9 report							■								
62	Module 10: Adoption of strategy by MCTPC							▶		▶		▶		▶		
63	Finalise strategy								■							
64	Adoption & Mainstream									■						
65	Draft Module 10 report														■	
66	Project Component 3: Disseminate the outcomes at the national, sub-regional and international levels								▶		▶		▶		▶	
67	Task Group IV - Initiate and Conduct Dissemination								▶		▶		▶		▶	
68	Module 11: Prepare Packages for local, sub-regional and international dissemination								▶		▶		▶		▶	
69	Prepare technical materials (for dissemination)									■						
70	Prepare sub-regional seminar paper															
71	Prepare International Conference paper										■					
72	Contribute to Websites/Newsletters									■		■		■		■
77	Prepare specified standard presentations									■						

Project: SEACAP 03 - Lao PDR

Task		Summary		Rolled Up Progress		Project Summary	
Progress		Rolled Up Task		Split		Group By Summary	
Milestone		Rolled Up Milestone		External Tasks			

SEACAP - 3

Mainstreaming appropriate local road standards and specifications & developing strategy for MCTPC research capacity



Project: SEACAP 03 - Lao PDR	Task		Summary		Rolled Up Progress		Project Summary	
	Progress		Rolled Up Task		Split		Group By Summary	
	Milestone		Rolled Up Milestone		External Tasks			