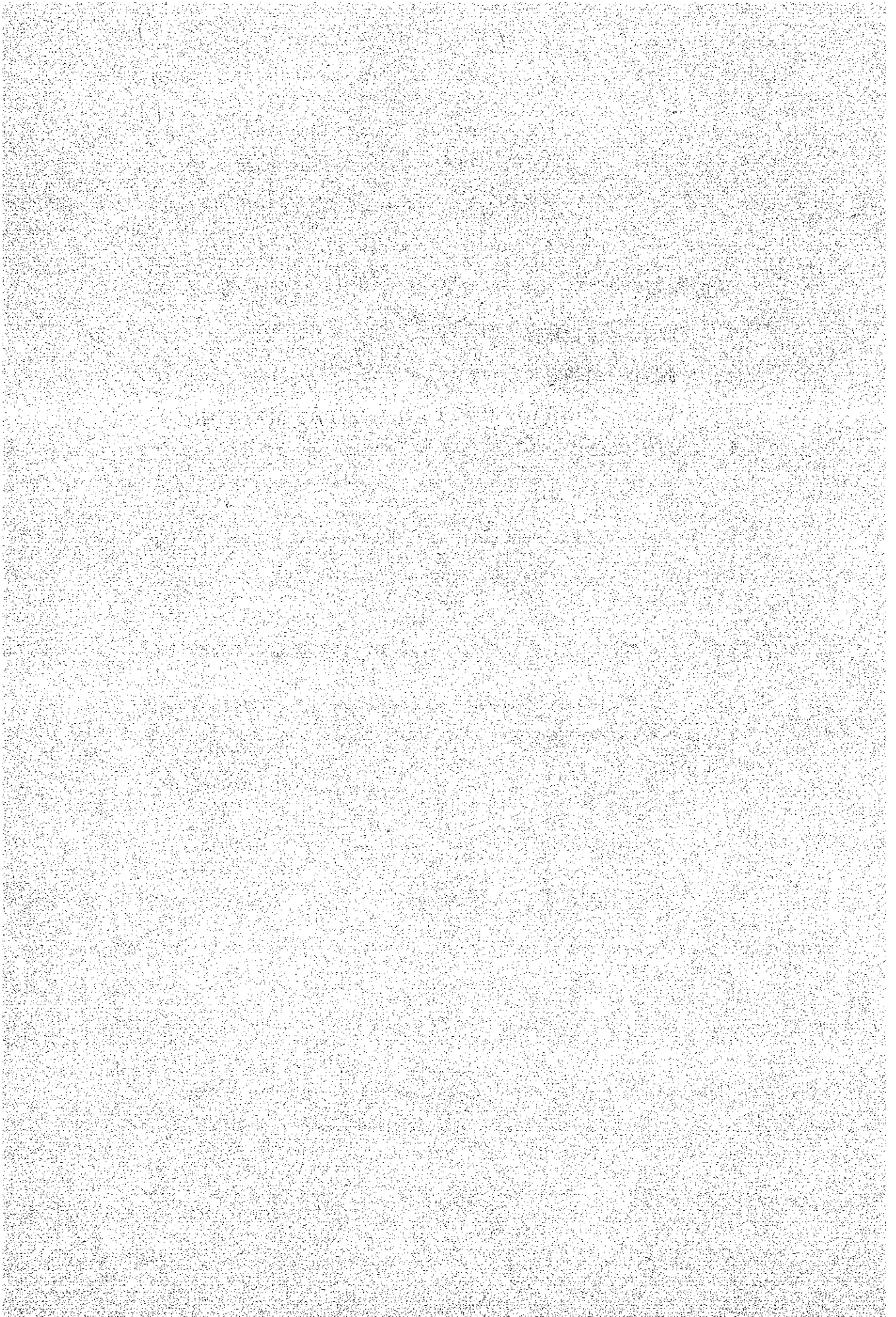


(付属资料)

1. プロジェクト概要表
2. 日本側投入実績表
3. AGENDA POINTS・JOINT COMMITTEE MEETING
4. CMTCパンフレット



## 1. プロジェクト概要表

(日付: 63年10月 1日現在)

[プロジェクト名] パキスタン建設機械技術訓練センター  
(The Construction Machinery Training Centre/CMTC)

- 1. R/D等署名日: 60. 4. 29
- 2. 協力期間: 60. 4. 29~65. 4. 28
- 3. 所在地: Sector I-12, Islamabad, the Islamic Republic of Pakistan
- 4. 先方関係機関: 運輸通信省 (Ministry of Communications/MOC)
- 5. 我が方協力機関: 建設省
- 6. 要請の背景: パ国政府は、第6次(1983-1988)経済開発5ヶ年計画において、道路、ダム等のインフラ整備を重要課題とし、積極的に建設機械の導入を図っており、57年2月、建設機械技術者養成を目的とした訓練センター設立を計画し、同センターへの技術協力と無償資金協力を要請してきた。
- 7. 目的・内容: オペレーターコース(3ヶ月、年3回、120名)、メカニックⅢコース(3ヶ月、年3回、60名)、メカニックⅠⅠ・エンジンコースおよびシャシーコース(5ヶ月、年2回、各40名)のインストラクター養成について協力する。4コースとも入学資格年齢は18才以上。上限は民間28歳、官公庁35歳まで。
- 8. 現状・目標達成: 現在、チームリーダー、調整員及び専門家4名を派遣中。  
オペレーターコース及びメカニックⅢコースは、61年7月に、メカニックⅡコース(エンジン及びシャシー)は、61年8月に開講し、現在、各々第7期及び第5期が開講中。
- 9. 問題点: 訓練コースの応募率が低く、訓練生が定員に満たないことがある。
- 10. 対処方針: 調査団等、機会あるごとに改善を要望した結果、バ側と専門家チームの努力(各種PR等)により今期コースはほぼ定員を満たすに至った。

11. 専門家派遣 :  
研修員  
機材供与

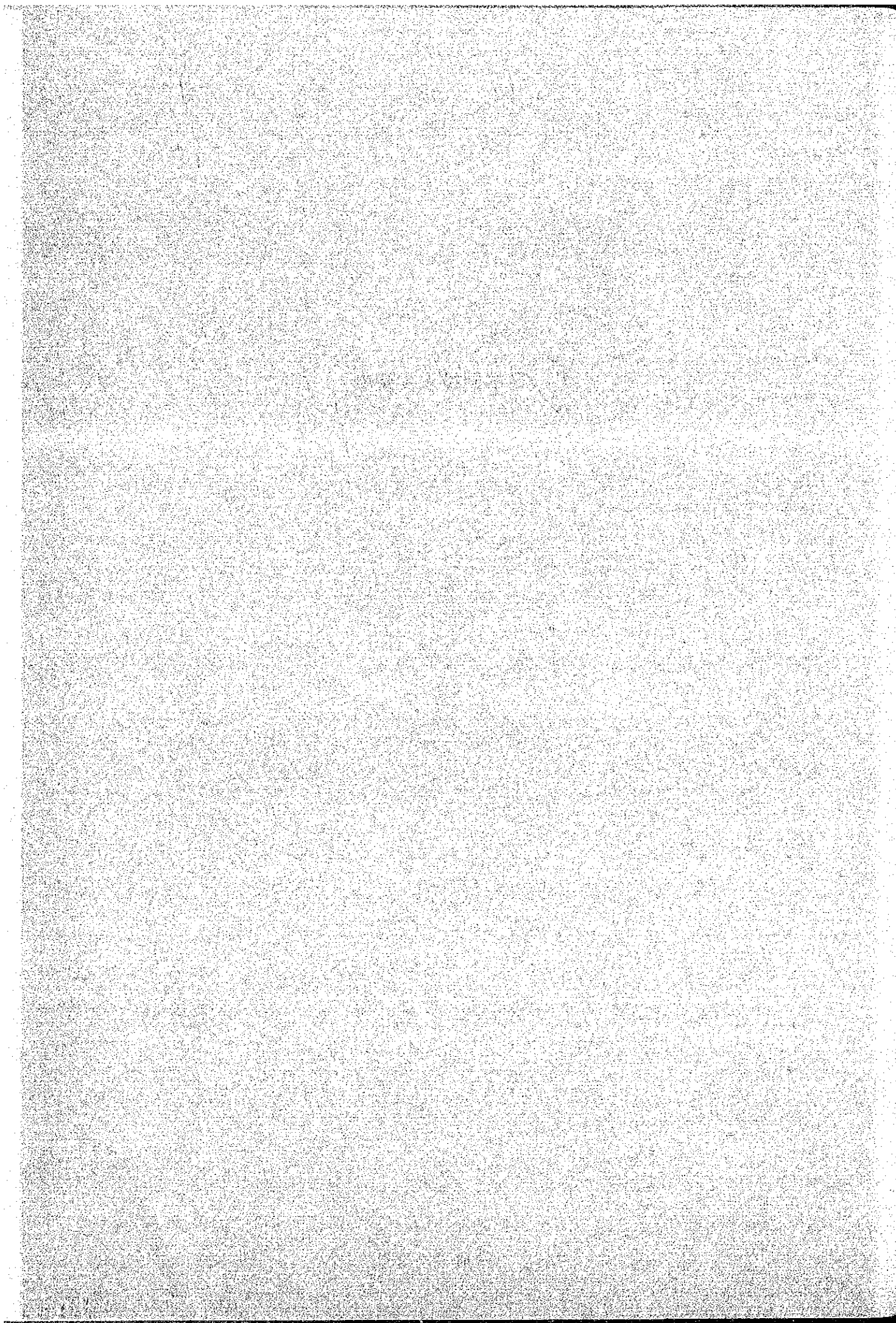
年度	59	60	61	62	合計	63
長期	0	5	6	7	18	6
短期	1	0	0	0	1	0
研修員	0	3	2	3	8	3
機材	0	5.7	4.4	1.0	20.1	4.5

(注) 専門家・研修員は延人員、機材は金額で単位百万円。

- 12. 他の経済協力との関係(無償・有償・個別専門家派遣・その他)  
: 無償資金協力 29.7億円(うち機材12億円) 61年 3月27日完成
- 13. 評価 :
- 14. 調査団 : 1) 予備調査 58. 11. 14~58. 11. 26  
2) 事前調査 59. 3. 16~59. 3. 29  
3) 実施協議 60. 4. 22~60. 5. 1  
4) 計画打合 61. 8. 25~9. 4/63. 9. 11~9. 21  
5) 巡回指導 62. 9. 6~9. 16  
6) エヴァリュエーション
- 15. 国内支援 : 国内支援体制整備費 (なし)  
視聴覚教材等整備費 (なし)



## 2. 日本側投入実績表



日本側投入実績表 (63. 7月現在)

1. 専門家派遣

(1) 長期専門家

No.	担当業務	氏名	派遣期間	所属先
1	チーフ・アドバイザー	溝畑 喜由	60.12.9~63.12.8 (65.4.29)	(社)日本建設機械化協会
2	調整員	古賀 達朗	60.12.9~63.3.8	なし
	(予定)	小野寺良朗	63.8.29~65.4.29	なし
3	オペレーターコース	山名 良	61.3.3~63.3.2	建設省
		浅尾 兼一	63.3.11~65.4.29	(株)KIP
4	メカニック I コース	岡本 勝治	61.5.12~64.5.11	マルマ重車輛(株)
5	メカニック II エンジンコース	松村 進	61.3.3~64.3.2	(株)小松製作所
6	メカニック II シャシーコース	久野 允義	61.3.3~64.3.2	(株)小松製作所

(2) 短期専門家

1	技術協力	川端 徹哉	59.6.23~59.7.1	建設省
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(R/D 前調査)

2. 研修員受入

年度	氏名	研修期間	研修科目
60	Mr. Ahmed Gazi Imtiaz	61.3.3~61.5.2	建設機械技術訓練
	Mr. Yar Mahammad Khan	"	"
	Mr. Mukhtar Ahamd Tariq	"	"
61	Mr. Shuja Abbas Zaidi	61.5.7.~61.11.7	建設機械
	Mr. Muhammad Arshad	"	"
62	Mr. Mir Alam Din	62.9.9~62.12.18	建設機械操作
	Mr. Muhammad Bashir Cheema	"	建設機械保守
	Mr. Iftikhar Hussain	"	"
63	Mr. Zulfiqar Ali Rana	63.5.12~63.8.8	建設機械整備コース
	Mr. Ismail Khan	"	"
	Mr. Abdul Salam Awan	"	"

以上、合計11名

(C/P枠受入のみ)

\*上記の他、集団コースの枠で61年度にCMTCより1名(Iqbal)を約3ヵ月間(5~7月)受入れた。



3. 機材供与 (プロ技協分)

年度	機材名	金額
60	連絡用車輛	1,531,600 円
	8ミリビデオカメラ VCR セット	1,399,200
	トルクレンチセット	394,200
	工具セット	1,955,000
	小計	5,280,000
	輸送費	421,135
	合計	5,701,135
61	コピー機	1,113,000
	電動タイプライター	164,000
	磁粉探傷装置	2,073,000
	特殊工具 (油圧・部品取外)	790,000
	小計	4,140,000
	輸送費	219,914
	合計	4,359,914
62	調査用ジープ	1,650,000
	工具, 部品セット	7,400,000
	教材作成用カメラ, プロジェクター他	626,000
	小計	9,676,000
	輸送費	345,348
	合計	10,021,348
総合計		20,082,397

* 63年度予定 (概算)	カットモデル	5,650,000 円
	燃料輸送車	6,500,000
	移動式 VTR セット	1,000,000
	教材用カセットテープ	600,000
	掘削機	5,800,000
	ディーゼルエンジン	4,700,000
	調査用車輛	2,500,000
	スプリンクラー	8,000,000
	測定機器その他	6,000,000
	小計	40,750,000
	輸送費	4,250,000
	合計	45,000,000

(専門家携行機材)

年度	金額(含.輸送費)	主な品目
60	2,356,968 円	書籍, 文具, カタログ
61	1,038,408	書籍, 文具
62	41,000	書籍
63	141,440	書籍, ビデオテープ
合計	3,577,816	

#### 4. ローカルコスト負担

専門家チームに対し、月10万円の貧困対策費及び専門家1人当たり月2万円の現地業務費が支給されている他、次の2件を実施。

61年度	技術普及広報費(英文パンフレット)	505,000円
62年度	現地語教科書作成費(英文テキスト)	1,000,000円

#### 5. 調査団派遣

##### (1) 予備調査団 58年11月14日～58年11月26日(13日間)

担当業務	団員氏名	所属先
総括	星 秀 明	外務省技術協力第二課
無償	福 田 晴 耕	〃 経済協力第二課
協力企画	沢 田 茂 良	建設省中部地方建設局
訓練計画	樋 下 敏 雄	〃 東北地方建設局
業務調整	鈴 木 徹 也	JICA 海外センター課

##### (2) 事前調査団 59年 3月16日～59年 3月29日(14日間)

総括	本 田 宣 史	建設省北陸地方建設局
メカニックI訓練計画	中 村 靖 雄	〃 建設機械課
メカニックII訓練計画	太 田 宏	〃 中部地方建設局
オペレーター訓練計画	本 郷 忠 宏	日本建設機械化協会
協力企画	後 藤 洋	JICA 海外センター課
業務調整	鈴 木 徹 也	〃

##### (3) 実施協議調査団 60年 4月22日～60年 5月 1日(10日間)

総括	渡 辺 和 夫	建設省建設機械課長
技術協力	菊 池 稔	外務省技術協力課
訓練計画メカニック	岡 崎 治 義	建設省中国地建機械課長
訓練計画オペレーター	溝 畑 喜 由	(社)日本建設機械化協会
業務調整	山 本 泉	JICA 海外センター課

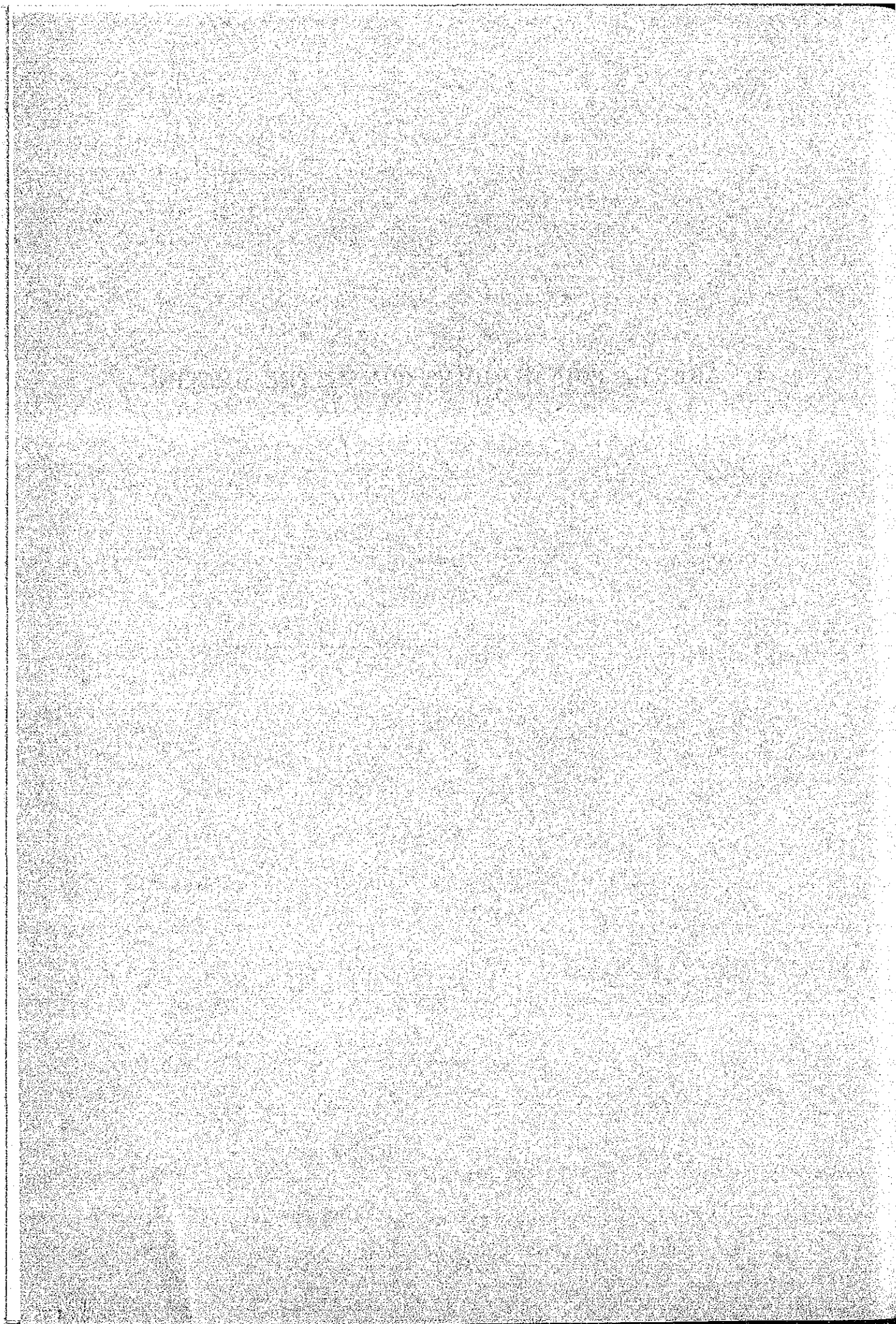
(4) 計画打合せ調査団 61年 8月25日～61年 9月 3日 (10日間)

総括兼訓練用機材	磯部 金治	建設省東北地建東北技術事務所長
訓練計画	高島 一彦	〃 建設機械課課長補佐
業務調整	林 和昭	JICA 海外センター課

(5) 巡回指導調査団 62年 9月 6日～62年 9月16日 (11日間)

総括兼機材	谷口 肇	建設省近畿地建近畿技術事務所長
訓練計画	萩原 哲雄	〃 中国地建機械課長
業務調整	石岡 秀敏	JICA 海外センター課

**3. AGENDA POINTS • JOINT COMMITTEE MEETING**



AGENDA POINTS  
JOINT COMMITTEE MEETING  
TO BE HELD ON 19 SEPTEMBER 1988

1. Briefing by Director CMTC.
2. CMTC inauguration ceremony.
3. Machines supplementary to the existing facilities at CMTC.
4. Necessity of Equipment repair team from Japan.
5. Review of courses.
6. Training textbook.
7. Members change among Japanese experts.
8. Improvement of job ratio for CMTC graduates.
9. Miscellaneous.

① BRIEFING BY DIRECTOR CMTC

1) It is great pleasure that I take this opportunity to give a brief resume of the CMTC which started functioning as a training centre on 5 July 1986 with cooperation and assistance of our Japanese friends. According to the Record of Discussion (RD), we receive a mutual consultation team from Japan, every year. The team goes around the centre, observe its functioning and finally meeting of the Joint Committee is held as we have gathered here today. Last meeting of the Joint Committee was held on 14 September 1987. First of all I shall present a review of the minutes of the last meeting.

a. Agenda Item NO.1-Briefing Director CMTC. The only point requiring implementation was standerdisation of courses by the National Training Bureau, Government of Pakistan. The matter was got processed and National Occupational Skill Standards for the construction machinery trades have been prepared and approved by Technical Committee of the National Training Bureau. Though, final approval of the standards by National Training Board is still awaited, we have been informed by National Training Development Institute (NTDI) vide Letter 3(13) SS-NTDI/85 of 26 May 1988 (Appendix ii) that these standards can be applied to implement training. Training at the centre is being imparted in accordance with these skill standards.

b. Agenda Item No.2-CMTC Inauguration Ceremony. Case for formal inauguration ceremony of the centre was got processed and the ex Prime Minister had, very kindly, consented to perform the opening ceremony of the centre on 2 July 1988. The ceremony, however, could not be held due to dissolution of assemblies.

c. Agenda Item No.3-Requirement of some Training/Administrative Items and Some Components/Machines Supplementary to the Existing Facilities at CMTC. A-4 Form for the items have been prepared and got processed.

d. Agenda Item No.4 and 5- Operation, Maintenance and Repairs, Including Provision of Spares for Equipment/Training Aids at CMTC. Training of Pakistani staff was arranged by the Chief Advisor as discussed.

e. Agenda Item No.6-Review of Courses. The only implementation point was amendment in the entry qualifications for Mechanic-II Courses. The needful has been done, RD has been amended accordingly and is being followed.

f. Agenda Item No.7-Fixation of Upper Age Limit for Trainees. The point has been implemented, RD amended accordingly and is being followed.

g. Agenda Item No.8-Counterparts Training in Japan. The possibility of getting vacancies on a few additional courses - management of training, production of training aids and understanding/repair of certain specific equipment - was explored. We were informed that no such courses are organised/run by JICA.

h. Agenda Item No.9-Transfer of Technology. Transfer of technology and counterpart training were explained by the Chief Adviser CMTC.

2. Progress of Training. 404 trainees have, so far, been trained at CMTC, out of which 238 trainees were from public sector organisations and 166 trainees were from private sector. These trainees have been trained in six Operator courses and Mechanic-I courses, four Mechanic-II (Engine) and Mechanic-II (Chassis) courses during the period 5 July 1986 to 5 July 1988. Presently, 98 trainees are receiving training at the centre; 45 in Operator

Course, 12 in Mechanic-I Course, both Serial 7, 21 in Mechanic-II (Engine) Course and 20 in Mechanic-II (Chassis) Course, both Serial 5.

3. Offer of Courses for Counterpart Training in Japan. It would be appreciated if the offer of vacancies of courses for counterpart training for 1989 is received during December 1988 to avoid delay in selection etc.

That's all I wanted to say at this moment. Thank you.

② CMTIC INAUGURATION CEREMONY

As said earlier, formal inauguration ceremony of the centre was to be performed, on July 88, by the then Prime Minister but the ceremony could not be held. The case was then submitted to the President for consent to perform the ceremony. Unfortunately we could not get the date due to reasons well known. Over two years have passed since the centre started functioning and it is suggested, that holding of the inauguration ceremony of the centre at this belated stage may not be pressed any further.

③ MACHINES SUPPLEMENTARY TO THE EXISTING FACILITIES AT CMTIC

1. Whenever a new institution is established, one cannot really put in every thing that is required for the smooth functioning of the institution. It is by experience, gained during the operation /running of the institution that one comes to know about the requirement of certain additional items, supplementary to the existing or available facilities, to ensure efficient working.

2. Accordingly we have received, in the past, certain additional items of equipment, training aids, tools/parts under the technical cooperation programme. The items so far received are:-

a. 1985

- (1) Car Toyota Cressida
- (2) 8m /m Video Camera
- (3) Torque wrench set
- (4) Tool set

b. 1986

- (1) Photo-copy machine
- (2) Electric typewriter
- (3) Magnetic powder detector



(4) Special tools (for removal fo hydraulic parts and components)

c. 1987

- (1) Jeep, Pajero
- (2) Spare parts, Komatsu Bulldozer D85A
- (3) 'Nikon' Camera, with accessories
- (4) 'Elmo' Projector slide film

3. Items suggested for the Year 1988-89 are:-

- a. Bowser
- b. Portable VCR set
- c. Video tapes for use with the portable VCR set
- d. Cutaway models
- e. Water Sprinkler
- f. Hydraulic Excavator
- g. 4-Wheel Drive Car
- h. Diesel Engine
- j. Torque Converter
- k. Piston Pump Assembly
- i. Box Type Surface Plate
- m. Measuring Instruments & Hand Tools etc.

4. NECESSITY OF EQUIPMENT REPAIR TEAM FROM JAPAN

This point is under consideration. The list of items requiring repair is being prepared, in consultation with the Japanese Advisory Team, and will be discussed with Mutual Consultation Team on 18 September 1988. In case there is some unresolved issue, it will be discussed in the Joint Committee Meeting on 19 September 1988.

5. REVIEW OF COURSES

1. Redesignation of Mechanic-I Course as Mechanic-III Course. In all technical trades including mechanics in Pakistan, the basic level is Grade-III, then Grade-II and the most advanced level, attained after gaining lot of experience and passing the prescribed examination, is Grade-I. This is also the classification followed by the National Training bureau, Government of Pakistan, in preparation of National Occupational Skill Standerds and their implementation.

2. At CMTC, we run Mechanic-I, Mechanic-II, (Engine and Chassis) courses. Mechanic-I is a basic course in field maintenance of construction machinery and of three months duration.

Calling this basic course as Mechanic-I appears to be misnomer. It is suggested that this course may be re-designated as Mechanic-III Course. This was also the recommendation of the Technical Committee of National Training Bureau constituted for the construction machinery trades.

3. Redesignation of Mechanic-II (Chassis) Course as Hydraulic Mechanic Course. Mechanic-II (Chassis) Course is also not fully understood in Pakistan. People do understand normal automobile chassis but that is insignificant. Efforts have been made to make the employers / employees understand Mechanic-II (Chassis) Course but results are not very encouraging. It would be appreciated that Chassis, in construction machinery, is mostly hydraulic system. It is felt that if Mechanic-II (Chassis) Course is re-designated as Hydraulic Course, it would be understood better in the market. It may also increase the response and more number of trainees may start joining the course.

6. TRAINING TEXTBOOK

1. We completed textbooks, in English, for the four courses by the end of March 1988. These textbooks are being used, effectively, for imparting instructions at the centre,
2. I believe that Urdu textbook, to be prepared at CMTTC, should be the final target in the future, because written Urdu is much better understood by the trainees as compared to English.
3. I wish that by the time the Technical Cooperation Programme for the CMTTC expires, the centre has the Urdu textbook available besides English textbooks.

7. MEMBERS CHANGE AMONG JAPANESE EXPERTS

1. Mr.R.YAMANA, Advisor of Operator Course, completed his tenure of duty on 1 March 88.
- 2 Mr.K. ASAO assumed duties as Advisor of Operator Course on 11 March 88.
3. Mr.T. KOGA, Coordinator Advisory Team, completed his tenure of duty on 8 March 88.
4. Mr.Y.ONODERA assumed duties as Coordinator of the Advisory Team on 29 August 88.

8.

IMPROVEMENT OF JOB RATIOS FOR CMTC GRADUATES

As per RD, this training centre was donated to Pakistan basically for training of employees of public sector and not for private sector. However, because of poor response from public sector, trainees from private sector are inducted so that the vacancies do not go waste. This training centre can train the individuals in the respective fields (course) but cannot guarantee the jobs. So far, out of the manpower trained at this centre, 62% were from public sector ie already in service. Efforts have to be made at Ministerial level for induction of trainees into various Government organisations undertaking various development projects in the country.