

シンガポール生産性向上プロジェクト エバリュエーション調査報告書

昭和63年3月

国際協力事業団

鉾開技

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シンガポール生産性向上プロジェクト エバリュエーション調査報告書

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ま え が き

シンガポール生産性向上プロジェクトは昭和58年6月11日に、R/Dが署名され、シンガポールにおける生産性向上運動の指導的役割を果たすべき国家生産性庁（National Productivity Board）の活動の拡充、強化を目的として、5カ年間に亘る協力が開始された。ハードを介在しない、いわゆるソフト技術の移転が主であることを特徴とする本プロジェクトの実施は、日シ双方にとって初めての経験であったが、関係者の多大な努力及び日シ双方の積極的な取組みにより多くの困難が克服され、着実に成果をあげるようになり、高い評価を得るに至った。

本年は協力実施の最終年であり、これまでの協力実績、成果の確認等評価を行い、今後の対応を検討する時期にあたる。評価の実施にあたっては、関係各位の協力を得て評価案、評価基準の策定等の検討から始まり、シ側との最終的な評価報告書の調印に至るまで約1年の年月を要した。

本報告書は、昭和62年10月評価の基準、手法等についてシ側との最終調整を行うことを目的に派遣した巡回指導調査団、および昭和63年2月派遣したエヴァリュエーション調査団の活動結果を取纏めたものである。今回実施した評価が、今後のいわゆるソフト技術移転協力プロジェクトの実施の参考となることを期待するものである。

最後に今回の評価の実施にあたり御協力いただいた関係各省、各支援機関その他関係各位、並びに在シンガポール日本大使館及び派遣専門家各位に対し、深甚の謝意を表す次第である。

昭和63年3月

国際協力事業団

鉦工業開発協力部長

角 野 祥 三

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1. 巡回指導調査団およびエバリュエーション調査団派遣

1-1 巡回指導調査団の派遣

1-1-1 調査団派遣の経緯と目的

昭和62年3月に派遣した巡回指導調査団により、シンガポール側と評価レポートの全体構成、内容、評価方法、評価基準等について一応合意し、8月を目途に評価準備作業を行うこととしたが、この作業が予定通りの進捗をみせず、本格エバリュエーションの実施に多大の影響を与えかねない状況となった。

このため、作業の進捗状況を把握し、手法等の詳細について再度整理、調整を行い、今後の方角付けを行うと共に作業の進捗を計ることを目的として、調査団を派遣することとした。

1-1-2 調査団の構成

団長(総括)	隅田 栄亮	国際協力事業団鉦工業開発協力部調査役
団員(評価手法)	佐藤 和親	" 国際協力専門員
団員(業務調整)	和田 晴夫	" 鉦工業開発協力部開発技術課

1-1-3 調査日程

日時	活動
10月1日(木)	移動(東京-シンガポール)
2日(金)	JICA 事務所訪問, 大使館表敬, NP B CHAIRMAN 表敬, NP B PDPI Division
3日(土)	NP B PDPI Division (長期専門家主催 PDP Evening)
4日(日)	団内打合わせ
5日(月)	長期専門家との会議 NP B PDPI Division
6日(火)	NP B PDPI Division Ministry of Labour, OSH Training & Promotion Div.(調査団主催懇談会)
7日(水)	NP B PDPI Division NP B PDPI Division
8日(木)	NP B PDPI Division JICA 事務所/大使館報告
9日(金)	移動(シンガポール-東京)

1-1-4 主要面談者

National Productivity Board

Mr Mar Bow Tan, Chairman
Mr Koh Juan Kiat, Executive Director
Mr Winston Teow, Director, PDP Implementation Division
Ms Jennifer Teo, Staff, PDP Implementation Division
Ms Sharon, Staff PDP Implementation Division
Ms Sylvia, Staff PDP Implementation Division

Ministry of Labour

Mr Choy Chan Pong, Director, OSH Training and Promotion
Mr Liaw You Hin, OSH Training and Promotion

日本大使館

佐渡書記官
成宮書記官

JICA事務所

石崎所長
小野所員

1-2 エバリュエーション調査団派遣

1-2-1 調査団派遣の経緯と目的

昭和62年10月派遣した調査団により評価準備作業の進捗を見たので、プロジェクトの全体評価および部門別評価を実施、各部門の達成度を把握し未達成部門のフォローアップ協力についての検討を行うことを目的としてエバリュエーション調査団を派遣した。

1-2-2 調査団の構成

団長(総括)	坂田武徳	JICA 鉱工業開発協力部調査役
生産性部門評価	徳増有治	通産省通商政策局経済協力課補佐
"	谷口恒明	日本生産性本部海外技術協力部課長
"	河崎明	日本生産性本部海外技術協力部専任課長
労働安全衛生部門評価	狩野幸司	労働省労働基準局安全衛生部主任技術審査官
"	岡村一成	中央労働災害防止協会衛生管理部次長
リソースセンター評価	伊藤哲	郵政省通信政策局国際協力課国際協力調査官
"	田中豊夫	日本放送協会放送技術研究所主任研究員

研修評価 新井博之 JICA 研修事業部研修第三課
業務調整 和田晴夫 JICA 鉦工業開発協力部開発技術課

1-2-3 調査団の日程

日時	活動
2月 1日(月)	移動(東京-シンガポール)
2日(火)	JICA 事務所訪問, 大使館表敬, 長期専門家との打合わせ, NPB ビル視察
3日(水)	NPB との打合わせ, NPB 長官表敬, 全体評価, 部門別評価
4日(木)	部門別評価及びフォローアップ計画
5日(金)	フォローアップ計画及び評価報告書案検討
6日(土)	議事録案検討
8日(月)	議事録及び評価報告書最終取纏め(調査団主催レセプション)
9日(火)	議事録及び評価報告書調印式, JICA 事務所, 大使館報告(長官主催 PDP Evening)
10日(水)	移動(シンガポール-東京)

1-2-4 主要面談者

National Productivity Board

Mr Mar Bow Tan,	Chairman
Mr Koh Juan Kiat,	Executive Director,
Mr Winston Teow,	Director, PDP Division
Mr Jimmy Low,	Director, Training Centre
Mr Freddy Soon,	Director, Promotion Centre
Mr David Wee,	Acting Director, Resource Centre
Mr Chew Whye,	Director, Management Guidance Centre
Mr Chan Hwa Loon,	Director, Research & Development Centre
Ms Choo Lee Heng,	Director, Administration Div.
Mrs Aleth Wee,	Head, Productivity Measurement Section
Mr Danny Lam,	Deputy Director, Programmes, Training Centre
Mr Lam Chun See,	Trainer, Productivity Guidance Svcs. Sect.
Mr Woon Kin Chung,	Head, Worker Training Research Section

Ministry of Labour

Mr Choy Chan Pong,	Director, OSH Training and Promotion
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Mr Liaw You Hin,

OSH Training and Promotion

日本大使館

村山公使

佐渡書記官

成宮書記官

JICA事務所

石崎所長

小野所員

2. シンガポール生産性向上プロジェクトの概要

2-1 プロジェクトの目的

経済発展の基礎は生産性の向上にあるとの観点から、シンガポール政府はNPBの組織を拡充し、シンガポールの生産性向上運動における指導的役割を強化することを目的としている。高付加価値および高度技術産業社会を実現するためには、生産性運動と労働生産性向上のための人材育成が不可欠であるとし、本プロジェクトを通じ生産性の人間的側面の向上を計り、シンガポールの生産性向上運動に貢献する人造りをするを目的とする。

2-2 プロジェクトの概要

R / D 署名日 : 昭和 58 年 6 月 11 日

協力期間 : 昭和 58 年 6 月 11 日～昭和 63 年 6 月 10 日

シン側実施機関 : National Productivity Board

所在地 : 2, Bukit Merah Central, Singapore 0315

日本側協力機関 : 通産省, 郵政省, 労働省, 日本生産性本部, 中央労働災害防止協会, 日本放送協会

調査団派遣 :	1) 予備調査	56. 8. 9～ 8. 15	(7 名)
	2) 事前調査	57. 11. 21～12. 2	(12 名)
	3) 長期調査員	58. 2. 27～ 3. 12	(10 名)
	4) 長期調査員	58. 5. 29～ 6. 13	(1 名)
	5) 実施協議	58. 6. 5～ 6. 13	(9 名)
	6) 計画打合	59. 5. 16～ 5. 23	(8 名)
	7) 巡回指導	60. 3. 4～ 3. 11	(4 名)
	"	60. 4. 2～ 4. 9	(8 名)
	"	61. 1. 12～ 1. 16	(3 名)
	"	61. 4. 2～ 4. 9	(8 名)
	"	62. 3. 9～ 3. 17	(11 名)
	"	62. 10. 1～10. 9	(3 名)
	8) 評価調査	63. 2. 1～ 2. 10	(10 名)

無償資金協力との関係

本プロジェクトは、ASEAN人造りプロジェクトの一環で、40億円を目処に技術協力(15億円)、無償資金協力(25億円)を併せて実施。無償資金協力では、NPBビルの基本設計、訓練機材及び教材の供与を行った。

(第一回 E / N [8.1 億] 58 年 12 月署名)

(第二回 E/N [4.0 億] 59年 6月署名)

(第三回 E/N [13.5 億] 61年 10月署名)

国内支援

国内支援委員会を設置し、プロジェクトの支援を行った。

2-3 プロジェクトの経緯

ソ側の当初の要請は、全労働者(約110万人)を対象とした知識と技術に関する生涯教育を実施するための「日ソ生涯能力開発センター」の設置であったが、ソ側と協議する過程において、主として管理者・監督者の訓練を行う「生産性向上プロジェクト」に変更された。

本プロジェクトの構想はNPBの拡充強化計画そのものでありNPBの組織としての弱さ、人材の不足を補完する援助が急務であり、人材の養成及び実施されている訓練コースの量的拡大を行っていくとともに生産性運動の展開を図るものである。R/Dどおり最初の3年間は準備、基礎確立の第一フェース、61年度からは発展期の第二フェースと位置付け協力を行う。

第二フェース計画では協力分野をこれまでの6分野から実務的区分の11分野とし、カウンターパートの教育にはOJTを導入し、より実践的な指導を行い着実な成果を上げるに至った。

昭和61年8月1日、NPBは労働省から商工省へ移管されたが、OSH部門は労働省所管のままとなった。プロジェクトとしては従来通り一本で扱うこととし、OSHに関する諸手続きはすべて他の協力分野同様NPBを経由して実施することとなった。

3. プロジェクト評価の方法

3-1 経緯

本プロジェクトは1988年6月に5ヶ年に亘る協力が終了することになり、それに先立ちこれまでの協力の実績と成果をレビューし、協力の効果を把握する必要が生じた。

昭和62年3月派遣の巡回指導調査団により、評価に関する日本側の基本的考え方を説明し、シ側も異存ない旨申越したため評価案の全体構成、評価方法、評価基準等についてほぼ日本側の案のとおり合意するところとなった。

昭和62年10月評価に係わる詳細事項に関する最終調整を行い、準備作業の進捗を図ることを目的に巡回指導調査団を派遣した。本調査団により定性的評価を行うための三段階評価方式に関する事、評価の対象とするフェーズ、現R/D期限以降はこれまでの協力で移転が完了できなかった部門についてのみフォローアップ協力を行うこと、そのための期間は最長2年間とする、プロジェクトのスケールは現行の約1/2程度とすること、評価調査団派遣までのスケジュール等についてNPBと取決めを行った。

昭和63年2月評価のためのエバリュエーション調査団を派遣。本プロジェクトに係る合同評価を行うと共に、フォローアップ協力に関する概略を取決めた。

3-2 評価の手法

3-2-1 定量的評価

これまでのプロジェクト協力による投入実績をもとに、専門家派遣数、研修員受入れ数、セミナー・シンポジウム、報告書、勧告書の数等々定量的成果を整理、評価する。

3-2-2 定性的評価

定性面の評価にあたっては、Second Phase PlanのMatrix of Assisting Method & Fieldを応用して、各協力分野毎（協力形態毎）に評価し、致達段階を把握する。

3-3 定性的評価の方式

定性的評価を行うにあたっては、「ソフト技術の移転」を評価するという困難な側面はあるが、本プロジェクトを評価する目的に合致するよう考え出された「三段階評価法」により行う。Second Phase PlanのMatrix of Assisting Method & Fieldを応用し、Evaluation Sheetにより各分野毎に段階づけを行う。

3-3-1 三段階評価基準

第一段階（学習、習得の段階） 長期、短期専門家または研修講師等にはほぼ全面的に依存

First Stage	して技術の習得を行う段階。
第二段階（適用，適応の段階） Second Phase	必要の際は専門家，講師等のアドバイスを受けながら習得した技術の実際面への適用ならびに現地事情にあわせた適応を計る段階。
第三段階（応用の段階） Third Phase	専門家，講師等に頼らず自主的に技術の運営ができたその応用発展まで可能な段階。

なお，本評価基準については62年3月派遣の調査団によりNPB側と一応の合意をしたが，英文表現については派遣長期専門家からの指摘等も考慮し，最終的には以下の表現を採用することとしNPBと合意した。

a) Stage I : Learning stage

This is the initial learning stage at which the knowledge and technology acquired by the counterparts is wholly dependent upon Japanese long/short term experts and training in Japan.

b) Stage II : Adaptation and application Stage

This is the progressive stage at which the knowledge and technology acquired by the counterparts can be adapted to local conditions and put into practical application with the guidance and assistance of Japanese experts and lecturers whenever they or their counterparts consider it to be necessary.

c) Stage III : Development and improvement stage

This is the final stage at which the knowledge and technology acquired by the counterparts can be further developed and improved by the counterparts themselves without the assistance of Japanese experts and training in Japan.

3-3-2 評価の対象フェーズ

評価の主たる対象は，発展期の PHASE II (Development Stage) に力点を置き，準備段階の PHASE I (Preparation and Basic Establishment Stage) は PHASE II との関連により適宜これに戻り，総合的に評価する。

3-3-3 Evaluation Sheet の Format 及び記載方法について

定性的評価の順序は，①Method 毎の内容の記述 - ②Method 毎の三段階評価 - ③総合所見 - ④Field の総合三段階評価付け付けとする。

Format については，日本側より提案したものを使用する。

4. 評価の結果

4-1 全体評価

シンガポール生産性向上プロジェクトは、日本の生産性向上諸技術の移転を効果的におこなう為の重要な手段となった。また、シンガポール側が日本の生産性向上諸技術を理解、習得、経験し、その適応を可能とするため重要な役割を果たした。

カウンターパートは各専門家について生産性関連の研究を行い知識を習得した。1983年プロジェクトが開始されて以来、NPBは専門家の協力により訓練コースを増加させた。特に、QCC、労使関係、生産性推進プログラム、生産管理、IE、監督者訓練等のコースは国レベルおよび企業レベルの生産性運動の推進のために開発された。

PDPのもとにトレーナーの日本での研修を行い、日本の生産性運動に関する理解を深めた。また、日本での研修を終えた後シンガポールで生産性関連のコースを実施するのに必要な技術を身につけた。

長期、短期専門家の助力によりNPBは企業に必要な特別のプログラムを実施するための十分な専門知識を習得した。これらのプログラムは主にIE、生産管理、QCC、労使関係等の分野に関するものである。これらのコースは講演、ワークショップ、講義等のかたちで実施された。

労働安全衛生の分野では、地下鉄建設、プレス機械及び関連機械、石油化学安全、産業衛生、造船安全、ゼロ災害運動等の分野における助力により活動が展開した。

リソースセンターで制作された番組は、NPB内外での研修に用いられ、生産性情報の伝達や企業内におけるコミュニケーションの増加、生産性諸施策の導入等に役立つところとなった。

特記すべきは、日本における第四次および第五次研修に先立ち、日本における研修の基礎的事項に関する研修（コアコース）をシンガポール（NPB）で行うようになった事である。第一次より第三次研修まではコアコースも日本で実施された。シンガポールで行ったコアコースの講師は帰国研修員を中心にPDPの専門家の助力も得て行なわれた。

要約すれば、SECOND PHASE PLANに記載されている11分野における技術移転は成功であったと結論することができる。しかしながら、シンガポールにおける生産性運動の高揚を維持し、より持続的な効果を上げるためには、ひきつづきフォローアップ協力が必要である。

4-2 定量的評価

4-2-1 建物および設備

シンガポール側はS\$55.5百万を投じBt Merah Centralに22階建のNPB新庁舎を建設した。日本側よりは無償資金協力により新ビルの基本設計をおこなった。またリソースセンター用機材、労働安全衛生展示用及び実験機材、教室、セミナールーム、オーディトリウム

等の試験設備を供与した。これらの機材は効率的に使用され、プロジェクトの円滑な実施を加速することとなった。

4-2-2 N P B の職員数及び組織

プロジェクトの開始当初 N P B の職員数は Chairman 以下 211 名であったが、1988 年 1 月の時点では、その数が 300 名を数えるに至った。この間の N P B の増員の為の努力は評価できる (N P B の組織図は Joint Evaluation Report Annex A 参照)。また N P B の組織として P D P Division ができ Director が任命されていること、その元に P D P 実施課 (P D P Implementation Section) が設立されスタッフが配置されたことにより、プロジェクトの実施、日シ双方の意思疎通がより円滑になったことは高く評価できる。

4-2-3 プロジェクトの管理運営

過去 N P B は効果的人事管理、労働態度、労使関係の改善等を中心に活動してきたが、新たな活動目的として、生産性向上への総合的取組みと雇用後の再訓練に関することをとり入れたことにより、政策的事項に関して商工省との調整活動や実施面で商工省の各機関との連携が必要とされるに至った。労働安全衛生部門を除く N P B の全部門は昭和 61 年 8 月 1 日付けで商工省の所管となり、労働安全衛生部門は労働省所管のままとなった。この移管による N P B の P D P 実施機関としての役割には何等影響はなかった。

「日本的経営の輸出」を含めた生産性技術の移転ということは、日シ双方にとっては新しい分野であり、プロジェクト開始当初はその目的の理解のしかたに食違いがあったが、日シ双方の相互理解と緊密な意思疎通の努力により速やかに解決された。

N P B の依頼により特にチーフアドバイザーが役員会 (Board Meeting) と幹部会 (Top Management Meeting) に出席することとなった。これにより双方の情報交換が良好になり、プロジェクトの円滑な実施につながった。

N P B がいかに本プロジェクトを重要視しているかは、N P B のなかに P D P Implementation Section を設立したことに表される。このセクションの P D P の実施への貢献は多大なものがあり、高く評価できる。

N P B は、P D P 実施のための JICA の真摯な取組みとプロジェクトマネジメントの確保に関する努力を評価している。

4-2-4 供与機材

技術協力のもとに以下の機材を供与した。

- | | | |
|-----------------------|-------|----------|
| 1) Station Wagons (2) | ..... | 昭和 58 年度 |
| 2) Word Processor | ..... | “ |

- 3) Copy Machine 昭和 59 年度
- 4) Personal Computer (10) (昭和 63 年 3 月予定)
- 5) VTR Camera, Table Top Player/Recorder)
 Portable Recorder/Player (昭和 63 年 5 月予定)

4-2-5 派遣専門家及び活動

協力期間中149名におよぶ専門家を派遣した。内訳は短期専門家126名、長期専門家23名である。評価時点での派遣長期専門家数はプロジェクトリーダー以下13名である。プロジェクト開始当初、専門家の業務について日シ間で認識の違いがあったが、双方の努力により解決された。また「人作り」を行い成果をあげるには時間が必要であり、双方が着実な忍耐強い努力を重ねてゆかなくてはならないこと、同時に生産性の向上の為の諸活動はシ側の当面の要求を満たすものでなくてはならないことが、認識されるに至り Second Phase Planが調印され、第二フェーズではより柔軟な対応をすることとなった。

シンガポール側は、PDP専門家の指導と努力に対し感謝の意を表している。プロジェクト開始以来の派遣専門家のリストは、Joint Evaluation Report Annex B 参照。

4-2-6 日本におけるカウンターパート研修

プロジェクト開始以来152名におよぶ研修員を受入れた。PDPにおける研修の主な目的は生産性に関するトレーナー、コンサルタント、プロモーターを生産性運動推進者として訓練とその能力開発をすることである。この研修により、研修員は日本における生産性向上活動展開の諸分野を体験することができた。研修を通じて得た知識や技術は、出版物やトレーニングの場において広められている。“An eyewitness account of Japanese Productivity” “What else can we learn from the Japanese?”と題する出版物が出されたり帰国研修員によるパブリックセミナーが開催され、研修の成果が広められた。特に、昭和61年度マネジメントコンサルタンシー研修に参加した研修員は、帰国後NPBのマネジメントガイダンスプログラムに組込まれている種々の中小企業の指導を行い、さらにNPBで開設した同内容の研修コース「The Management Consultancy Course」を担当した。

また個々のニーズに合せた研修員受け入れが行われ、それぞれの知識技術の習得に効果があった。分野としては、労働安全衛生、リソースセンター、その他生産性測定、図書館自動化等であった。PDPにおける研修員の受け入れにより、NPBスタッフは生産性推進者としての能力を付けることができ、NPBはJICAが多数の研修員を受入れたことを高く評価している。年度毎の研修員受け入れ数、分野期間等のリストはJoint Evaluation Report Annex C 参照。

4-2-7 プロジェクト実施経費

日本側は本プロジェクト実施のため、総額15億円を越える技術協力を行った。またNPBは5,550万Sドル(約55億円)を投じBukit Merah Centralに22階建ての新NPBビルを建設した。

4-2-8 教材

無償資金協力により供与した教材(労使関係/管理監督者訓練関連34コース, 労働安全衛生11コース)の他, 派遣専門家によりセミナー, 講義, ワークショップ等用に多くの教材が作成され, カウンターパートの指導等に活用された。

4-2-9 報告書及び勧告書

派遣長期専門家及び短期専門家により多数の報告書及び勧告書が提出され, プロジェクトの活動に活用された。これらは非常に貴重なものであり, NPBの生産性向上促進活動の指針となった。提出された報告書勧告書の数は, 短期専門家によるもの94通, 長期専門家によるもの143通, 計237通にのぼる。(但し昭和63年1月末現在) Joint Evaluation Report Annex E参照。

4-2-10 プロジェクト運営会議

プロジェクトの円滑な実施のために, シ側と定期的に会議を開催した。主な会議は次の通り。

Joint Committee	年1回程度
Monthly PDP Meeting	(1983年12月より月1回を原則に開催)
Technical Cooperation Sub-Committee	(1985年6月より開催)

この他, 長期専門家チーム内の意思疎通を計るため, 毎月曜日専門家チーム週例会議を開催した。またこの会議における重要事項等, 必要に応じNPB側へ通知した。各会議の開催頻度, TORはJoint Evaluation Report Annex F参照。

4-2-11 域内研修

アセアン人造りプロジェクトの趣旨に鑑み, 本プロジェクトの成果を広くアセアン各国へ広めるため, Regional Training ProgrammeがNPBによって開催された。昭和63年1月20日日本プログラム実施のためのR/Dが署名され, アセアン各国より参加者を募り, 同3月27日より4月6日まで開催されることとなった。本プログラムは“Introductory Seminar on the Productivity Development Project in Singapore”と題され, 参加各国の生産性向上に関与する者を対象に開催される。

4-2-12 数量的成果

「ソフト技術の移転」を目的とした本プロジェクトは、その移転成果を数量的に把握することは非常に難しい。しかしながら、この点に関してシ側との再三の議論の結果、プロジェクト活動の進展を把握するには、とりあえず何等かの数的把握をしておいた方が良いとの判断から、昭和60年度より月次報告書により以下のような数的把握を行ってきた。

(1985年4月～1987年12月末)

	FY85	FY86	FY87	Total
NPB職員訓練数	1,096	812	2,024	3,932
新コース開設数	10	9	9	28
特定プロジェクト実施企業数	107	37	22	166
モデル企業設立数	7	0	0	7
報告書勧告書数	141	173	101	415
セミナーワークショップ参加者数	5,325	7,157	2,589	15,071

* FY87は昭和62年12月末日まで

4-3 定性的評価

前述の手法により評価した結果、管理監督者訓練(MSD)、労使関係(LMR)、小集団活動(QCC)、生産性測定(PM)の分野は、いずれも技術移転における最終段階であるStage 3に達した。これはカウンターパートが、習得した技術知識を専門家の援助も日本における研修訓練も必要とせず、自力で発展させていくことができるようになったことを意味している。各分野の評価の詳細についてはJoint Evaluation Report Annex D参照。

4-3-1 管理監督者訓練(MSD)

日本の経営管理の特質については、ほぼ理解され、この分野の技術移転は完了となる。NPBはマネジメントシミュレーションに関して協力を希望してきたが、まったく新たな内容であり評価の対象にはならず、フォローアップ協力には加えられないとして了承を得た。実務指導、プロジェクトにおける教材開発、モデルカンパニーの指導、セミナー/ワークショップでの指導についてはすべて完了となる。

4-3-2 労使関係(LMR)

日本の労使関係に関する知識技術の移転は完了となる。ただしシンガポール国内において賃金問題についての関心が高まりつつあるが、独自のLMRシステム確立のための努力が期待される。

4-3-3 小集団活動(QCC)

QCサークル活動分野は生産性分野の中でも最も技術移転が進行した分野であり、公式登録サークル数は、1982年の44から1988年1月現在5,760に増加した。サークル活動の内容も年々充実されており現地化が成功裡に進行中である。企業から国家レベルへとQCC活動が充実拡大され、シンガポール独自の工夫展開をみせている。今後TQCの導入により、一層の発展が期待される。

4-3-4 生産性測定(PM)

企業および産業レベルの付加価値生産性測定方式については、移転が完了された。それ以外の生産性測定方式に関してNPBは移転未完了としていたが、現R/D期間内に派遣される短期専門家による指導援助により技術移転が完了されるとして双方了解した。また本分野もコンサルティング分野と密接な関連をもっていることも十分理解された。

またIE, QCおよびTQC, リソースセンターおよびAV技術, 労働安全衛生, 中小企業およびコンサルタンシーの分野においては、Stage 2「適応と応用の段階」と評価された。これはカウンターパートが習得した技術知識が、専門家の援助と指導に支えられながらシンガポールの現状に適した形につくりかえられ、現実に応用される段階になったことを意味する。これらの分野ではその基礎となる知識は着実に移転されつつある。

4-3-5 IOE, QC及びTQC

5S, JIT, TPM等IOE諸技法およびTQCの基本概念, 知識については技術移転は完了するが、これまで移転された諸技法を、総合的に運用し実践場面で活用するレベルに達するには、さらに協力が必要との評価である。

4-3-6 リソースセンター及びAV技術

基本的AV制作業務については概ね技術移転が完了した。日常業務運営, 番組制作活動を自主的に展開できる状況になった。NPBの教育訓練, 普及促進活動を支える為のロールプレイ, ドラマさらにバラエティーを含む番組制作には、より高い企画能力が要求され、継続的に番組の企画・制作のOJTを行う必要がある。制作技術については、基本的な技術運用業務は十分に確立している。高度な寸劇やドラマ等を含む番組制作については、それに伴う進んだ技術の習得・蓄積が必要とされる。また施設の運用には設備管理, 整備保守, 故障発見・修理には対象機器の動作原理や回路構成など, 専門的知識が必要とされ、このために設備管理, 主要機器の整備保守を中心とした対応が必要である。

4-3-7 労働安全衛生（OSH）

労働安全衛生部門における技術移転は概ね成功裡に完了した。しかしながら、Safety Management, Foremen and New Worker Training, OSH Exhibition, Industrial Hygiene Laboratory, Zero Accident Movement, Press and Construction Machineryの分野においては、これまで移転した技術の定着とカウンターパートの能力向上のための協力が必要である。

4-3-8 中小企業指導及びコンサルタンシー（Management Consultancy & SMEs）

製造業部門における中小企業に対するマネジメントガイダンスの基本的事項については、相当の成果をみた。しかしこの部門の総合的コンサルティングスキルのレベルアップ、及びサービス業部門における経営指導については、現在の協力期間内には技術移転が完了し得ないとの評価である。

5. フォローアップ計画

5ヶ年におよぶシンガポール生産性向上プロジェクトの協力を通じて、極めて具体的な成果が得られている。シンガポールの生産性運動の高揚を維持し、より持続的な効果を上げる為に、以下の分野において引き続き協力することが必要である。

5-1 フォローアップの分野

5-1-1 IOE, QC, TQC

NPBはBASICS, IE, ジャスト インタイム システム, TQC, Total Productive Maintenance等のタスクフォースを設置し、効果的な技術移転を推進してきた。これは総合的生産性向上をはかるための第一歩となった。より総合的見地から企業の生産性向上を推進してゆくためには、カウンターパートの知識や専門的能力を総合的に向上させることが必要である。シンガポール産業における「総合的生産性向上」(Integrated Productivity Improvement)をすすめるため、概念化をはかり実施してゆく為の援助が必要である。

5-1-2 Management Consultancy & Small and Medium Enterprises

この分野における技術移転は主として製造業部門にかぎられてきた。NPBはサービス業の生産性向上、及び大企業に対する生産性関連分野での指導にも力をいれることが求められている。これまでに移転されたマネジメントガイダンスについてのレベルアップと総合的運用について、特にOJTを通じた人材育成、管理会計の視点からの経営改善、経営的視点からの生産管理を中心とした指導が必要である。

5-1-3 リソースセンター

ロールプレイ、ドラマ、バラエティーのようなより高い企画能力が要求されるような番組制作、および機材の保守の為に、継続的な番組企画制作のオンザジョブトレーニング及び設備管理、主要機器の整備保守を中心とした指導と訓練が必要である。

5-1-4 労働安全衛生

安全管理、フォアマン・新規採用者訓練、OSH展示室、産業衛生ラボ、ゼロ災害運動、プレス・建設用機械検査等の分野ではカウンターパートの能力向上の為にさらに援助が必要である。

5-2 長期専門家派遣計画

フォローアップ協力実施の為、計8名の長期専門家をフォローアップ期間中派遣する。

1) チーフアドバイザー	.....	1名
2) コーディネーター	.....	1名
3) IOE	.....	1名
4) マネジメントコンサルタンシー	.....	3名
(中小企業, サービス業経営指導, 訓練開発)		
5) リソースセンター	.....	1名
6) 日本語指導	.....	1名
		8名

5-3 短期専門家派遣計画

	63年度	64年度
<u>生産性関連</u>	8	8
1) Just-In-Time System	2	1
2) TOC (Including Quality Chart)	2	1
3) Total Productive Maintenance	1	1
4) Productivity Management Consultancy	2	1
5) Quality Management	1	1
6) Service Sector Consultancy	-	3
<u>リソースセンター</u>	3	3
7) VTR/Editor	1	-
8) Camerawork/EFP/ENG	1	-
9) Programme Docu-Drama	1	-
10) Audio Recording/Processing	-	1
11) Camera/Video Monitors Maintenance	-	1
12) Switchers & Special Effects	-	1
<u>労働安全衛生</u>	2	3
13) Upgrading of OSH Exhibition Centre and Safety Week	1	-
14) Voluntary Machinery Inspection(Press Machine)	1	-
15) Foremen and New Workers Training	-	1
16) Relocation of Industrial Hygiene Laboratory	-	1
17) ZAM (ゼロ災害運動)	-	1
	計	14
	13	14

5-4 研修員受入れ計画

	63年度	64年度
<u>生産性関連</u>	12	6
マネジメントコンサルタンシー	10~12	6
総合的生産性向上	2~0	-
<u>リソースセンター</u>	3	2
プロデューサー	1	-
技術者(エンジニア, テクニシャン)	2	-
テクニシャン	-	2
<u>労働安全衛生</u>	3	2
O S H展示室/安全週間	1	-
自主検査(プレス, 建設機械)	2	-
フォアマン/新人訓練	-	1
ゼロ災害運動	-	1
<u>その他</u>	2	-
計	20	10

6. 添 附 資 料

- 6-1 Summary of Discussion Between NPB and The JICA Guidance Mission
- 6-2 Minutes of Meeting Between The Japanese Evaluation Team and The Authorities Concerned of The Republic of Singapore
- 6-3 Joint Evaluation Report
- 6-4 NPB Alpha News, Strait Times, 新加坡新聞 記事

SUMMARY OF DISCUSSION BETWEEN NPB AND THE JICA GUIDANCE MISSION
(1-9 Oct 87)

(I) EVALUATION

Arising from the meetings held with the mission from 3 to 7 Oct 87, the following understanding were reached by both parties:

1. The evaluation on PDP would be conducted in both the qualitative and quantitative form. The 3-stage approach in evaluation would be adopted to assess the results of the PDP in the qualitative manner. The 3 stages are as follows:

- a) Stage I : Learning stage

This is the initial learning stage at which the knowledge and technology acquired by the counterparts is wholly dependent upon Japanese long/short term experts and training in Japan.

- b) Stage II : Adaptation and application stage

This is the progressive stage at which the knowledge and technology acquired by the counterparts can be adapted to local conditions and put into practical application with the guidance and assistance of Japanese experts and lecturers whenever they or their counterparts consider it to be necessary

- c) Stage III: Development and improvement stage

This is the final stage at which the knowledge and technology acquired by the counterparts can be further developed and improved by the counterparts themselves without the assistance of Japanese experts and training in Japan

The third stage is to be recognised as the stage in which no further technical co-operation is necessary as the transfer of expertise had been considered to be complete as defined under the framework of the PDP.

2. Scope of Evaluation

Under the R/D, the duration of the Technical Cooperation for the PDP is divided into 2 phases: Phase I (Preparation

stage) and Phase II(Development stage).It was agreed that Phase I would be excluded from the objectives of evaluation being only the preparatory stage. The evaluation would focus on the achievements in the 2nd Phase.

3. As stated in the R/D, the cooperation period for the project is 5 years in the with the provision for extension for a further 2 years. For uncompleted areas, the Japanese side would take follow-up action to transfer the necessary expertise to ensure the successful completion of the uncompleted areas. The follow-up action would be guided by the following three basic principles:
 - I) the assistance would be in the form of LTEs, STEs and fellowship awards;
 - II)all areas under the follow-up action must be completed under the extended phase;
 - III)the present system of counterpart attachment to expert under the PDP must be maintained.
4. According to the mission, the scale of the follow up action had not been finalised , however they informed that the scale would be less than half of the present activities. NPB had put forth a strong request for the Japan side to consider an appropriate scale necessary to complete the full transfer of expertise rather than a restricted scale which might still leave some areas uncompleted even with the extension. The mission agreed to report Singapore's sincere request to the authorities in Japan for consideration.
6. Both parties agreed that the evaluation team to be despatched to Singapore should be sometime late Jan and early Feb 88.
7. Until the despatch of the evaluation team, both parties agreed that the work schedule should be as follows:

Date	Details
-----	-----
End Oct 87	Completion of the first draft of the joint evaluation report
End Oct 87	Submission of the joint evaluation report to JICA, H.Q.
Nov 87	Ministerial meetings in Japan coordinated by JICA, H.Q. for the evaluation of PDP

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and meetings with PDP Supporting committees in Japan

End Nov 87 Finalisation of the report

End Jan 88/
early Feb 88 Despatch of evaluation team to NPB

7. The workplan for the period Apr 88-Jun 88 would be finalised during the visit by the final evaluation team visit in Feb 88.
8. The format of the evaluation sheet agreed previously during the discussions in Japan in Jul 87 had been adopted by NPB for qualitative evaluation.
9. Singapore side had reported much progress in the preparation of the evaluation report. An example of the evaluation done in the area of QCC was shown to the mission and as attached at Annex A.
10. The draft evaluation report prepared by NPB would be recognised as the draft of of evaluation. The LTEs would then review the draft and make the necessary comments and recommendations before submitting the draft back to NPB. NPB would then consider the comments/ recommendations by the LTEs and make adjustments where NPB deems fit. The draft would then be forwarded to the Japan side who would review and assess the draft submitted.
11. It was understood that the evaluation was to evaluate the progress of the technical cooperation of the PDP and not evaluate the individual efforts of STEs and LTEs.
12. Singapore had submitted a request for extension for PDP through the diplomatic channel. Singapore 's requests was for extension of a period of 5 years. It was clarified with the mission that the period of extension of 2 years as stipulated by the Japanese is acceptable to Singapore side.

II) PROVISION OF EQUIPMENT UNDER THE EXTENDED PHASE OF PDP

13. During the meetings held in JICA H.Q. in Jul 87, NPB had submitted the list of equipment necessary to supplement the equipment provided to NPB under the PDP. The equipment were basically equipment for the Resource Centre and the Computer Centre. The amount of the equipment requested cost S\$2,435,000.

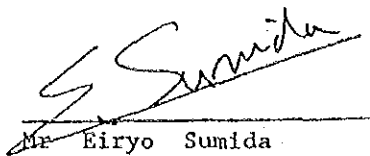
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14. The mission informed that Japan could not accede to the request bearing in mind that all other ASEAN HRD projects did not have grant aid. However, to ensure success of the PDP, Japan side would supply the necessary equipment under the available budget of the PDP. The mission assured that this matter would be brought up to the concerned Japanese governmental officers for action.
15. The list of equipment requested by NPB was as per Annex B.

(III) REGIONAL TRAINING PROGRAMME (RTP)

16. The mission explained to NPB that there are essentially 2 types of Third Country Training Programme. The first type take the form of Technical Cooperation among Developing countries (TCDC) and the second type take the form of Regional Training Programme (RTP). The RTP is organised under the budget of PDP whereas TCDC is not.
17. Within the context of R/D and PDP, the mission proposed that NPB consider RTP as a means to share achievements of PDP with the other ASEAN countries. The other AHRD projects have or are in the process of organising RTP within the FY 87.
18. Some suggestion and the guideline for the conduct of RTP given by the mission is as per Annex C.
19. With regard to RTP, NPB stated that:
 - a) it would consider the 2 options of either conducting the introductory seminar on PDP alone or to conduct the introductory seminar on PDP together with some other courses/seminars;
 - b) it would consider seriously to have the RTP implemented within FY 87;
 - c) it would work out the draft plan on the conduct of RTP and submit to Japan side by Oct/Nov 87.



Mr Eiryo Sumida
Leader, JICA Guidance Mission
Implementation (1-9 Oct 87)



Mr Winston Teow
Director, PDP
Division

8 October 1987

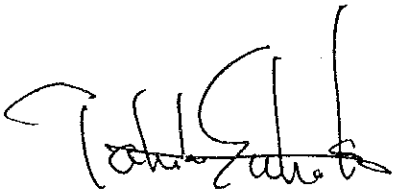
MINUTES OF MEETING
BETWEEN THE JAPANESE EVALUATION TEAM
AND THE AUTHORITIES CONCERNED
OF THE GOVERNMENT OF THE REPUBLIC OF SINGAPORE
ON THE JAPANESE TECHNICAL COOPERATION
ON THE PRODUCTIVITY DEVELOPMENT PROJECT
IN THE REPUBLIC OF SINGAPORE

The Japanese Evaluation Team organised by the Japan International Cooperation Agency visited the Republic of Singapore from February 1, 1988 to February 10, 1988 for a series of discussions with the authorities concerned of the Government of the Republic of Singapore in respect of the evaluation on the technical cooperation programme concerning the Productivity Development Project in the Republic of Singapore.

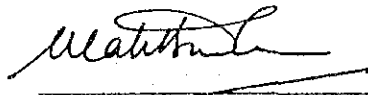
As a result of the joint evaluation work and discussions, the Japanese Evaluation Team and the authorities concerned of the Government of the Republic of Singapore came to the conclusion referred to in the Summary of Discussions (Annex 1) based upon the Joint Evaluation Report (Annex 2).

Both parties agreed to recommend to their respective governments the matters referred to in the document.

Singapore : February 9, 1988



TAKEHO SAKATA
Leader
Japanese Evaluation Team
Japan International Cooperation
Agency



MAH BOW TAN
Chairman
National Productivity
Board

SUMMARY OF DISCUSSIONS
BETWEEN THE JAPANESE EVALUATION TEAM
AND THE AUTHORITIES CONCERNED
OF THE GOVERNMENT OF THE REPUBLIC OF SINGAPORE

I) BACKGROUND

1. During the five-year period of the Technical Cooperation of the Productivity Development Project (PDP) beginning from 11 June 1983, the Japanese Government provided technical cooperation in the form of experts attachment and fellowship programmes. The main objective of the PDP is to facilitate the transfer of Japanese productivity technology to Singapore and to develop, expand and strengthen NPB's capabilities in spearheading the Singapore Productivity Movement.

The Evaluation Team despatched by the Government of Japan from 1 Feb to 10 Feb 88 was to conduct a joint evaluation with the authorities concerned of the Government of the Republic of Singapore on the past performance and achievements of PDP and to assess the need for follow-up cooperation.

Evaluation was carried out for the following assisting fields :

- i) Management and Supervisory Development (MSD)
- ii) Labour Management Relations (LMR)
- iii) QCC
- iv) Industrial Engineering, Quality Control and Total Quality Control
- v) Resource Centre & AV Technology
- vi) Productivity Measurement
- vii) Occupational Safety & Health (OSH)
- viii) Management Consultancy & Small and Medium Enterprises

II) CONCLUSION OF THE EVALUATION

Overall Performance

Generally, the PDP was evaluated as very successful in achieving its objectives. It has served as an important channel for the effective transfer of Japanese Productivity Technology and has played an important role in enabling Singaporeans to understand, learn, experience and adapt the "Productivity Technology" from Japan.

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M. S. S. S.

Significant results have been achieved in the training of trainers and upgrading of NPB staff's capabilities which are the two main pillars of PDP activities.

Assisting Fields Evaluated at Stage 3

The technology transfer in the fields of MSD, LMR, QCC, and Productivity Measurement has been successfully completed.

Under the experts attachment programme, NPB counterparts learnt and absorbed Japanese productivity technologies in these fields through practical guidance, assistance in development of training materials, model company projects, seminars and workshops conducted by the Japanese experts. This has helped to build up the expertise of NPB personnel. The knowledge gained were in turn disseminated to the Singapore workforce through NPB's training programme, workshops, seminars and talks. These have resulted in the increased awareness and acceptance of productivity concepts which are essential to the success of the Productivity Movement.

These areas are evaluated as having achieved the final stage (stage 3) of technology transfer at which the knowledge and technology acquired by the counterparts can be further developed by the counterparts themselves without the assistance of Japanese experts and training in Japan.

Assisting Fields Evaluated at Stage 2

The areas of Industrial Engineering, Quality Control and TQC, Management Consultancy and Small & Medium Enterprises, Resource Centre & AV Technology, and Occupational Safety and Health have been evaluated as having achieved the stage of adaptation and application (Stage 2). This is the progressive stage at which the knowledge and technology acquired by the counterparts can be adapted to local conditions and put to practical application with the guidance and assistance of Japanese experts and lecturers whenever they or their counterparts consider it to be necessary. The basic foundation/knowledge in these areas has been successfully transferred in these areas.

A considerable quantity of materials have been developed in the area of IOE and TQC. Several companies have also been assisted through direct assistance involving both NPB counterparts and PDP experts.

NPB has also made marked progress in the area of management guidance extended to small and medium enterprises. NPB staff has directly benefitted from the fellowship programme in management consultancy and training of NPB consultants by the PDP experts through management guidance projects.



The technology transfer in the area of Resource Centre has made progress particularly in production technology and basic programme production, and training on 1st Phase Equipment as well as basic operational training on 3rd Phase Equipment had been completed.

The area of occupational safety and health had also been adequately developed with assistance received through the PDP.

In summary it is concluded that the transfer of technology in all assisting fields as identified in the 2nd Phase Plan has been successful. These results are only possible with the concerted efforts of both Japan and Singapore. NPB and MOL (S) appreciates the commitments and efforts put in by the agencies involved on the Japan side. Details of the evaluation in each field are contained in Annex D of the Joint Evaluation Report.

III) FOLLOW-UP ACTION

Although very concrete results have been achieved through the PDP in the last 5 years, the Evaluation Team and the National Productivity Board recognised that follow-up cooperation is necessary in some areas in order to keep up the momentum and to achieve a more lasting effect on the Productivity Movement. It is recognised that human resource development is a time-consuming process and it requires persevering efforts by both the Japan and Singapore side to achieve results.

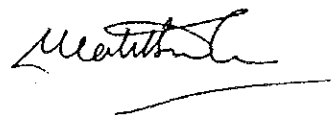
The areas identified for necessary follow-up cooperation are :

Industrial Engineering, Quality Control and Total Quality Control

NPB has set up working task forces in Basics and IE, Just-In-Time System, TQC and Total Productive Maintenance to enhance the process of technology transfer. This served as a first step towards Integrated Productivity Improvement. Knowledge and expertise of counterparts need to be further upgraded in order to assist companies in an integrated approach. Further assistance would be required to conceptualise and implement Integrated Productivity Improvement in Singapore industries.

Management Consultancy and Small & Medium Enterprises

In the past, the technology transfer has concentrated mainly on the manufacturing sector. NPB's current need is to gear up and expand its services to the service sector to help them in their productivity improvement. NPB also planned to extend its services to help bigger companies which require assistance in productivity-related areas.



Resource Centre

Further expertise and training is needed in the production of stand-alone interactive videos, drama and variety type programs as well as maintenance of the 3rd Phase Equipment.

Occupational Safety and Health

Further assistance would be required in Safety Management, Foremen and New Worker Training, OSH Exhibition, Industrial Hygiene Laboratory, ZAM, Press and Construction Machinery Inspection.

IV) MAJOR POINTS OF DISCUSSION FOR FOLLOW-UP COOPERATION

Period of Follow-up Cooperation

The period of follow-up cooperation will be 2 years from Jun 88. Thereafter several weeks will be required to undertake the administrative aspects of concluding the project.

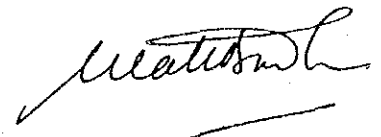
Counterpart Attachment

The Japan side requested that counterparts attachment should be maintained and further stepped up in the extended phase in order to realise a complete and successful follow-up cooperation of the PDP. Conscious effort for the absorption of technology transfer should be adopted so that counterparts will be able to work independently without the assistance of PDP experts at the end of follow-up cooperation.

NPB and MOL (S) confirmed that every effort will be made to achieve maximum benefits from the follow-up cooperation. Conscious efforts will be made to improve counterparts' capabilities.

Responsibilities of Both Government

The extended phase will be implemented in accordance with the responsibilities as spelt out in the Record of Discussions between the Japanese Implementation Survey Team and the authorities concerned of the Government of the Republic of Singapore on the Japanese Technical Cooperation for the Productivity Development Project signed on 11 Jun 83.



V WORKPLAN FROM APR 1 TO JUN 10, 1988

The workplan from Apr 1 to Jun 10, 1988 is as follows :

Long Term Experts

Items	Month	APR	MAY	JUN 88
	(1) Chief Advisor			
(2) PDP Coordinator				
(3) Labour Mangement Relations/ Flexible Wage System				
(4) IE, QC, Production Management & SME				
(5) Management Consultancy				
(6) Resource Centre				
(7) In-Company Productivity Schemes				
(8) Japanese Language				
(9) Occupational Safety and Health				

VI TENTATIVE SCHEDULE FOR IMPLEMENTATION OF THE FOLLOW-UP COOPERATION

TABLE 1 : LONG TERM EXPERTS

ITEM	FISCAL YEAR	
	FY88/89	FY89/90
1) Chief Advisor	1	1
2) PDP Coordinator	1	1
3) IOE (Integrated Productivity Improvement)	1	1
4) Management Consultancy	3	3
. Consultancy in Productivity Management for SMEs		
. Consultancy in Service Sector		
. Training Development		
5) Resource Centre	1	1
6) Japanese Language	1	1
Total	8	8

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TABLE 2 : SHORT TERM EXPERTS

ITEM	FISCAL YEAR	
	FY88/89	FY89/90
<u>INDUSTRIAL ENGINEERING, QUALITY CONTROL AND TOTAL QUALITY CONTROL</u>		
1) Just-In-Time System	2	1
2) TQC (Including Quality Chart)	2	1
3) Total Productive Maintenance	1	1
<u>MANAGEMENT CONSULTANCY AND SMES</u>		
4) Productivity Management Consultancy	2	1
5) Quality Management	1	1
6) Service Sector Consultancy	-	3
<u>RESOURCE CENTRE</u>		
7) VTR/Editor	1	-
8) Camerawork/EFP/ENG	1	-
9) Programme Docu-Drama	1	-
10) Audio Recording/Processing	-	1
11) Camera/Video Monitors Maintenance	-	1
12) Switchers & Special Effects	-	1
<u>OCCUPATIONAL SAFETY & HEALTH</u>		
13) Upgrading of OSH Exhibition Centre and Safety Week	1	-
14) Voluntary Machinery Inspection (Press Machine)	1	-
15) Foremen and New Workers Training	-	1
16) Relocation of Industrial Hygiene Laboratory	-	1
17) ZAM	-	1
TOTAL	13	14

TABLE 3 : FELLOWSHIP

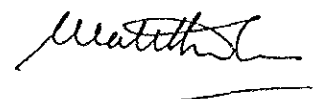
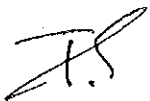
ITEM	FISCAL YEAR	
	FY88/89	FY89/90
<u>PRODUCTIVITY GROUP</u>		
1) Management Consultancy (Manufacturing/Service Sector)	10 (or 12)	6
2) Individual Attachment in Integrated Productivity Improvement	2 (or 0)	-
<u>RESOURCE CENTRE</u>		
3) Producer	1	-
4) Technical (Technician, Engineer)	2	-
5) Technicians	-	2
<u>OCCUPATIONAL SAFETY AND HEALTH</u>		
6) OSH Exhibition Centre & Safety Week	1	-
7) Voluntary Machinery Inspection (Press Machine, Construction Machine)	2	-
8) Foremen & New Workers Training	-	1
9) Zero Accident Movement	-	1
<u>OTHERS</u>		
10) Overall Technical Cooperation	2	-
Total	20	10

Details of implementation on experts attachment and fellowship will be worked out at the Annual Workplan discussions.

JOINT EVALUATION
OF THE
TECHNICAL COOPERATION ON THE
PRODUCTIVITY DEVELOPMENT PROJECT

FEBRUARY 1988

S I N G A P O R E



The following is a joint evaluation of technical cooperation on the Productivity Development Project by the Evaluation Team of the Japan International Cooperation Agency (JICA) and the National Productivity Board (NPB).

Date : 9 February 1988

Place : N P B

1 ATTENDANCE :

JAPANESE PANEL

EVALUATION TEAM

- | | | |
|----|-----------------------|---|
| 1) | Mr Takeho SAKATA | Special Assistant to the Director of the Department, Mining & Industrial Development Cooperation Department, Japan International Cooperation Agency |
| 2) | Mr Yuji TOKUMASU | Deputy Director, Economic Cooperation Division, Economic Cooperation Bureau, Ministry of International Trade and Industry |
| 3) | Mr Tsuneaki TANIGUCHI | Deputy Director, Overseas Technical Cooperation Department, Japan Productivity Centre |
| 4) | Mr Akira KAWASAKI | Manager, Overseas Technical Cooperation Department, Japan Productivity Centre |
| 5) | Mr Koji KANO | Chief, Technical Assessment Officers, Department of Industrial Safety & Health, Ministry of Labour |
| 6) | Mr Issei OKAMURA | Deputy Director, Health Control Department, Japan Industrial Safety & Health Association |

- 7) Mr Satoru ITOH Special Advisor for International Cooperation, International Cooperation Division, Communications Policy Bureau, Ministry of Posts & Telecommunications
- 8) Mr Toyoo TANAKA Senior Research Engineer, Science & Technical Research Laboratories, Japan Broadcasting Corporation (NHK)
- 9) Mr Hiroyuki ARAI Staff, Third Training Division, Training Affairs Department, Japan International Cooperation Agency
- 10) Mr Haruo WADA Staff, Technical Cooperation Division, Mining & Industrial Development Cooperation Department, Japan International Cooperation Agency

EMBASSY OF JAPAN

- 11) Mr Kenichi SADO First Secretary, Embassy of Japan

JAPAN INTERNATIONAL COOPERATION AGENCY (SINGAPORE) OFFICE

- 12) Mr Mitsuo ISHIZAKI Resident Representative of Japan International Cooperation Agency Singapore Office

CHIEF ADVISOR

- 13) Mr Yasushi FUKUDA Chief Advisor, Productivity Development Project

SINGAPOREAN PANEL

- 1) Mr Koh Juan Kiat Executive Director, National Productivity Board
- 2) Mr Winston Teow Director, Productivity Development Project Division, National Productivity Board
- 3) Mr Jimmy Low Director, Training Centre, National Productivity Board
- 4) Mr Chew Whye Director, Management Guidance Centre, National Productivity Board
- 5) Mr Freddy Soon Director, Promotion Centre, National Productivity Board
- 6) Mr Choy Chan Pong Director, OSH Training & Promotion Department, Ministry of Labour
- 7) Mr Danny Lam Deputy Director (Programmes) Training Centre, National Productivity Board
- 8) Mr Michael Lowe Deputy Director, Training Development Centre, National Productivity Board
- 9) Mr David Wee Ag Director, Resource Centre, National Productivity Board
- 10) Mr Woon Kin Chung Ag Director, Research & Development Centre, National Productivity Board

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- MATRIX OF ASSISTING METHOD & FIELD
- SUMMARY OF EVALUATION
- MANAGEMENT SUPERVISORY DEVELOPMENT
- LABOUR MANAGEMENT RELATIONS
- QCC
- INDUSTRIAL ENGINEERING, QUALITY CONTROL & TOTAL
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- RESOURCE CENTRE & AV TECHNOLOGY
- PRODUCTIVITY MEASUREMENT
- OCCUPATIONAL SAFETY & HEALTH
- MANAGEMENT CONSULTANCY & SMES

Annex E - REPORTS BY PDP SHORT-TERM EXPERTS
- REPORTS BY PDP LONG-TERM EXPERTS
- PDP PAPERS BY LONG-TERM EXPERTS
- MEETINGS ON PDP

1. BACKGROUND OF PROJECT

Under the Asean Human Resource Development Project, the Japanese Government had pledged US\$100 million for the establishment of human resource development projects in the five ASEAN countries. Singapore was to receive US\$20 million. The fund was utilised by Singapore to implement the Productivity Development Project (PDP).

The PDP was officially launched with the signing of the Record of Discussions by the representative of both Governments on 11 Jun 1983.

The former Prime Minister Mr Zenko Suzuki first proposed the idea of an ASEAN human resources development program in a speech he delivered in Bangkok during his January 1981 official tour of ASEAN nations. The programme was aimed at education and training of human resources needed for development of ASEAN countries.

On 31 March and 1 April 1981, the first preliminary meeting of ASEAN Human Resource Development attended by the respective countries was held in Tokyo. A resolution was taken to take necessary actions to materialise the project.

The Government of Singapore then proposed to establish an Institute for Continuing Occupational Development (ICOD) with the expertise and assistance of the Japanese Government to reach out to all levels of the society.

The project was further discussed and considered by both parties and it was subsequently modified to the Productivity Development Project (PDP).

The Productivity Development Project was proposed to develop the role of the National Productivity Board (NPB) to spearhead the productivity movement in Singapore. NPB had been given the mission to foster a highly productive workforce where every worker would want to achieve higher productivity. The Japanese experience had shown that training of managers and supervisors should take priority as they were the catalysts to motivate their peers and workers to be productive. Singapore wanted to achieve productivity improvement through the tested strategy by the Japanese.

The second preliminary meeting of ASEAN was held in Jakarta, on 6 and 7 October 1981 upon which the outline of the each ASEAN Human Resources Project was confirmed. Each project was then entrusted to individual country for bilateral negotiation with Japan.

Following this, a preliminary survey team was despatched by JICA on 21 November to 2 December 1982 to survey and work out the following ;

- (i) Basic framework for the cooperation plan (Technical Cooperation and Grant Aid)
- (ii) Implementation schedule
- (iii) Action Plan for both parties

In February and May 1983, both sides met to make concrete and detailed arrangements for the implementation. Based on the discussions of these 2 survey teams, JICA then despatched an implementation survey team to Singapore from 5 to 13 June 1983.

The basic framework of the technical cooperation plan for PDP was formalised through the signing of the Record of Discussion (R/D) and Tentative Implementation Plan (TIP) on 11 June 1983. This marked the official commencement of the PDP.

2. OBJECTIVE OF PDP

The National Productivity Board (NPB) is appointed the implementing agency of PDP in Singapore. Its role is to foster a highly productive workforce where every worker will want to achieve higher productivity. The main objective of PDP is therefore to develop, expand and strengthen NPB's capabilities in spearheading the Productivity Movement, and thus to contribute to productivity improvement in Singapore and to strengthen its international competitiveness which realises the highly industrialised society and promotes the economic welfare of the nationals of Singapore.

3. SCOPE OF ASSISTANCE

Under the PDP Technical Cooperation, the Japanese Government will provide :

- a) experts, both long-term and short-term, to help NPB develop new programmes and improve existing programmes;
- b) fellowship training for NPB staff in Japan;

The above assistance will be provided in six elements of NPB's work :

- a) Management and supervisory training;
- b) Training in labour-management relations and small group activities;
- c) Planning and research;
- d) Promotion of productivity;
- e) Occupational safety and health; and
- f) Development of Resource Centre for the productivity and dissemination of printed and audio visual materials for promotion of training purposes.

4. TERM OF JAPANESE TECHNICAL COOPERATION

The duration of the Technical Cooperation for the Project will be five (5) years. If necessary, it would be extended for a further 2 years.

The cooperation period is divided into the following 2 phases :

(1) 1st Phase (Preparation Period : 3 years)

The major objective of the Technical Cooperation in the 1st Phase is to design the basic plan for the promotion of the Productivity Movement and to train Singapore counterpart personnel who will be assigned as instructors of various training courses and other NPB staff connected with the implementation of the Project.

(2) 2nd Phase (Development Period : 2 years)

Various types of training will be conducted by Singapore instructors with technical advice and guidance from the Japanese experts.

5. SUMMARY OF MAJOR EVENTS FOR THE PDP

YEARS	EVENTS
1981 Jan	Prime Minister Zenko Suzuki of Japan during his visit to Asean countries committed Japan to a US\$100 million Asean Human Resources Development Project. The assistance sought by Singapore from the Japanese government under this project was aimed at improving productivity, primarily through better work attitudes and better labour-management relations.
1981 31 Mar - Apr	At the Preparatory Meeting on Asean Human Resources Development Project, Singapore proposed setting up an Institute for Continuing Occupation Development (ICOD).
1981 11 - 17 Aug	The Japanese Appraisal Team led by Mr S Higuchi, Deputy Director of Economic Cooperation Bureau, Ministry of Foreign Affairs visited Singapore and found the project "viable and feasible".
1981 6 - 7 Oct	The 2nd Asean-Japan Meeting on Human Resources Development, held in Jakarta, agreed that there would be equal allocation of aid for the 5 Asean projects.

YEARS	EVENTS
1982 1 - 5 Mar	A Singapore team led by Mr Lim Jit Poh, Executive Director, NPB, studied the availability of hardware, software and training facilities in Japan.
1982 Mar - Jun	Re-evaluation of ICOD based on findings of the above-mentioned study mission. The Japanese authorities were now of the view that ICOD was too "vague & ambitious" & were not prepared to finance it. The Ministry of Labour and NPB reviewed the Project and decided to propose to the Japanese authorities to focus the project on the Productivity Movement.
1982 15 - 18 Jun	A Singapore mission to Japan led by Mr Ng Kiat Chong presented to the Japanese authorities a new project proposal on productivity.
1982 21 Nov - 2 Dec	The Japanese Preliminary Survey Team headed by Mr S. Horiuchi, Director of the Second Technical Cooperation Division, Ministry of Foreign Affairs, visited Singapore to consult with Singapore authorities on the PDP project.
1983 28 Feb - 11 Mar	Japanese Survey Team on Technical Cooperation and Basic Design for PDP led by Mr S Inoue of Second Technical Cooperation Division, Cooperation, Ministry of Trade and Industry, visited Singapore to discuss content of Record of Discussion.
1983 2 - 12 Mar	PPD Basic Design Preliminary Survey Team led by Mr Mitsuaki Yamagata visited NPB to collect information for preparation of preliminary study for basic design of new building of NPB.
1983 29 May - 18 Jun	The 10-member Basic Design Study Team led by Mr H Suzuki, Director of Technical Cooperation Division, MITI visited NPB. The purpose of visit was to discuss and establish NPB's requirements on hardware and software.
1983 5 Jun - 13 Jun	The 8-member Implementation Survey Team led by Mr E Irei, MFA visited NPB to conduct basic design survey on PDP. This mission was despatched in response to request by NPB.

YEARS	EVENTS
1983 11 Jun	Signing of the Record of Discussions between the Japanese Implementation Survey Team and NPB on PDP.
1983 20 - 23 Oct	Arrival of 1st batch of Long Term Experts under the Technical Cooperation Programme. The Long Term Experts from Jpan were despatched to NPB to assist in planning the Productivity Movement and developing new training and promotional programmes and activities.
1983 8 Nov	Arrival of 1st batch of Short Term Expert(s) to NPB. The Short Term Experts would supplement the expertise of the Long Term Experts.
1984 Feb	First batch PDP fellows departed for training in Japan.
1984 18 - 22 May	Discussions were held between NPB and the JICA Mission led by Mr S Suzuki. The discussions aimed to finalise the Annual Workplan FY84/85.
1984 22 May	The Annual Work Plan for FY84/85 of the Technical Cooperation on the PDP was jointly signed by Leader of JICA and Executive Director of NPB.
1984 - 1985 10 Oct - 18 Jan	<p>The 2nd PDP Fellowship comprised of 1 month core course, and a 2 month Elective Programme was conducted. The Elective Programme was mainly train-the-trainer sessions based on course manuals developed by JPC under the Grant Aid component of PDP.</p> <p>In addition to classroom lessons, short plan visits were arranged so that fellows could observe actual operations of Japanese companies. A total of 35 personnel underwent the 2nd PDP Fellowship.</p>
1985 4 - 11 March	Visit by Japanese Pre-Technical Guidance Team, led by Mr N Amaki, Senior Assistant of Technical Cooperation, Ministry of Foreign Affairs.
1985 29 Mar	Arrival of Mr K Sakurai as the new Chief Advisor to Chairman, NPB.
1985 2 - 9 April	The 8-member Japanese Technical Guidance Team led by Mr T Kitamura visited NPB. The issues that were discussed included :

YEARS	EVENTS
	a) the despatch of experts b) the fellowship programme c) the signing ceremony
1985 8 April	The Annual Work Plan for FY85/86 of the Technical Cooperation on the PDP was jointly signed by Mr T Kitamura, Leader of Japanese Technical Guidance Team, JICA and Mr Ng Kiat Chong, Executive Director of NPB.
1985 8 April	First PDP Joint Committee Meeting was held. The functions of the Joint Committee would be as spelt out in the Record of Discussion signed on 11 Jun 83.
1985 8 Sept - 20 Dec	The 3rd batch of fellowship trainers were dispatched to Japan. The basic structure of past fellowship programme was retained for the 3rd fellowship namely the 1 month core programme followed by 2 months of Elective Programme. However, in addition to short plan visit, there was also an extended period of attachment to Japanese companies for On-The-Job Training to learn how to implement productivity programmes.
1986 12 - 16 Jan	Visit by Mr Oshima (Leader), Director of Technical Cooperation Division, MFA, Mr K Iimura and Mr K Oshiyama. Issue of extension of PDP was brought up.
1986 11 - 19 Mar	Visit by the 8-member Technical Guidance Team led by Mr Y Tanizaki, Deputy Director of the Technical Cooperation Division, MFA. The visit was to finalise and endorse the Annual Workplan FY86/87.
1986 7 Apr	2nd Joint Committee Meeting was chaired by Executive Director of NPB and co-chaired by PDP Chief Advisor.
1986 8 Apr	Formalisation of the Annual Workplan FY86/87 and 2nd Phase Plan. Mr Mh Bow Tan, Chairman, NPB was the signatory for the Singapore side and Mr Y Tanizaki was the signatory for the Japan side. The Annual Workplan provided for the despatch of 11 Long Term Experts, 24 Short Term Experts and 24 - 28 Fellowship awards for FY86/87.
1986 12 Jul	Arrival of Mr Y Fukuda as the new Chief Advisor to Chairman, NPB

YEARS	EVENTS
1986 13 Jul - 4 Aug	The Core Programme for the 4th PDP Fellowship was conducted in Singapore for the first time. The past 3 fellowships have helped to develop a cadre of productivity officers. The core programme was conducted locally by returned PDP Fellows and Japanese Long Term Experts.
1986 8 Aug - 8 Nov	<p>The 4th PDP fellowship (Elective Programme) was conducted in Japan. It was based on the Management Consultant Course developed under Phase 2 of the Grant Aid component of PDP. This was in line with the current emphasis on providing assistance to SMEs. In order to develop a pool of management consultants who could provide direct assistance to companies with specific consultancy needs, the NPB in collaboration with the Japan Productivity Centre had developed a course on Management Consultancy. The 16 participants of the 4th Fellowship would be the first group to be trained under this course. Prior to the despatch of PDP Fellows for the Management Consultant Course, one NPB staff was in Japan to jointly develop the manual for the Management Consultant Course.</p> <p>In addition to the above programmes, fellowship awards are also provided for training of technical personnel.</p>
1987 9 - 17 Mar	Visit by the 11-member Technical Guidance Team Team led by Mr K Sakurai. Purpose was to formulate and endorse the Annual Workplan FY87/88. The issue of extension of PDP was also discussed.
12 Mar 87	3rd Joint Committee Meeting was held.
1987 13 Mar	Signing of Annual Workplan FY87/88. Mr K Sakurai was the signatory for the Japanese side while Mr Mah Bow Tan was the signatory for the Singapore side.
1987 12 - 18 Jul	Mr Mah Bow Tan, Chairman, NPB, Mr Lam Chuan Leong, PS, MTI held discussion with MFA, MITI and MPT and attended Top Management Seminar held at Karuizawa, Japan.
1987 20 - 27 Jul	Mr Mah Bow Tan, Chairman, NPB held discussion with JICA (J), JPC & NHK in Japan. He was accompanied by Mr Winston Teow, Director of PDP Division and Ms Jennifer Teo, Officer of PDP Division.

YEARS	EVENTS
1987 10 Aug	5th batch PDP fellows left for training in Japan.
1987 2 - 9 Oct	JICA Pre-evaluation team headed by Mr Sumida, Special Assistant to Director of the Dept Mining & Industrial Development Cooperation Dept, JICA was in NPB to discuss evaluation format, for preparation of evaluation report on PDP.
1988 20 Jan	Signing Ceremony of Record of Discussions for ASEAN Regional Training Programme.
1988 1 - 10 Feb	<p>Visit of Final Evaluation Mission to NPB. The 10-member mission was led by Mr Takeho Sakata, Special Assistant to the Director of the Department, Mining & Industrial Development Cooperation Department, JICA</p> <p>The 2 main objectives of the visit are :</p> <ol style="list-style-type: none"> 1. Finalisation of results of PDP; and 2. Formulation of follow-up action plan (1988 - 1990) on PDP.
1988 9 Feb	Signing Ceremony for Evaluation and Follow-up Action Plan (1988 - 1990) for PDP.
1988 27 Mar - 6 Apr	Conduct of ASEAN Regional Training Programme. (Scheduled)

6. 2ND PHASE PLAN

The 2nd Phase Plan which focused on :

- (i) Training and development of trainers; and
- (ii) Upgrading of NPB staff,

was developed by Japanese representatives in August 1985 and received NPB's official agreement in April 1986 as a part of the Record of Discussions (R/D). The 2nd Phase Plan outlined steps to give practical and direct guidance to local businesses.

The 2nd phase plan was a concrete action plan based upon the first 3 years' experiences. Under the plan, the Japanese team had identified the two major pillars of PDP activities and a number of actual assisting methods and fields to provide assistance.

a) Pillars of PDP Activities

The training of trainers and upgrading of NPB's staff's capabilities were the pillars of PDP activities.

b) Assisting Methods & Fields

These pillars of PDP activities include the following concrete assisting methods and assisting fields which were closely interlinked :

Assisting Methods

i Practical Guidance

Conducting training on the PDP courses, which experts developed in Japan and some other courses developed by LTEs in Singapore, and providing advisory services for companies so that NPB staff involved could learn in the process of both training and advisory services.

ii Development of Training Materials

Development of training materials including cases and AV aids for the PDP courses. This also includes the development of materials for new courses which are not covered under PDP but required to fill the gap in NPB's total training.

iii Model Company Project & Pilot Company Project

The Model Company Project has been introduced to utilise the productivity development activity implemented by Model Companies to familiarise NPB staff with practical business scenes and pick up materials for cases in addition to the demonstration effort of introducing productivity improvement measures into these companies.

There are also immediate needs to promote productivity in SMEs. Therefore, the Pilot Company Project is set up to conduct diagnostic, advisory and training services for SMEs. Through those services, NPB staff will be able to practise various measures for productivity improvement, and to prepare case studies which will be useful for training.

iv Seminars/Workshops

Imparting knowledge and experience in various functional areas as speakers or panelists of NPB seminars/workshops.

v Preparation of Papers

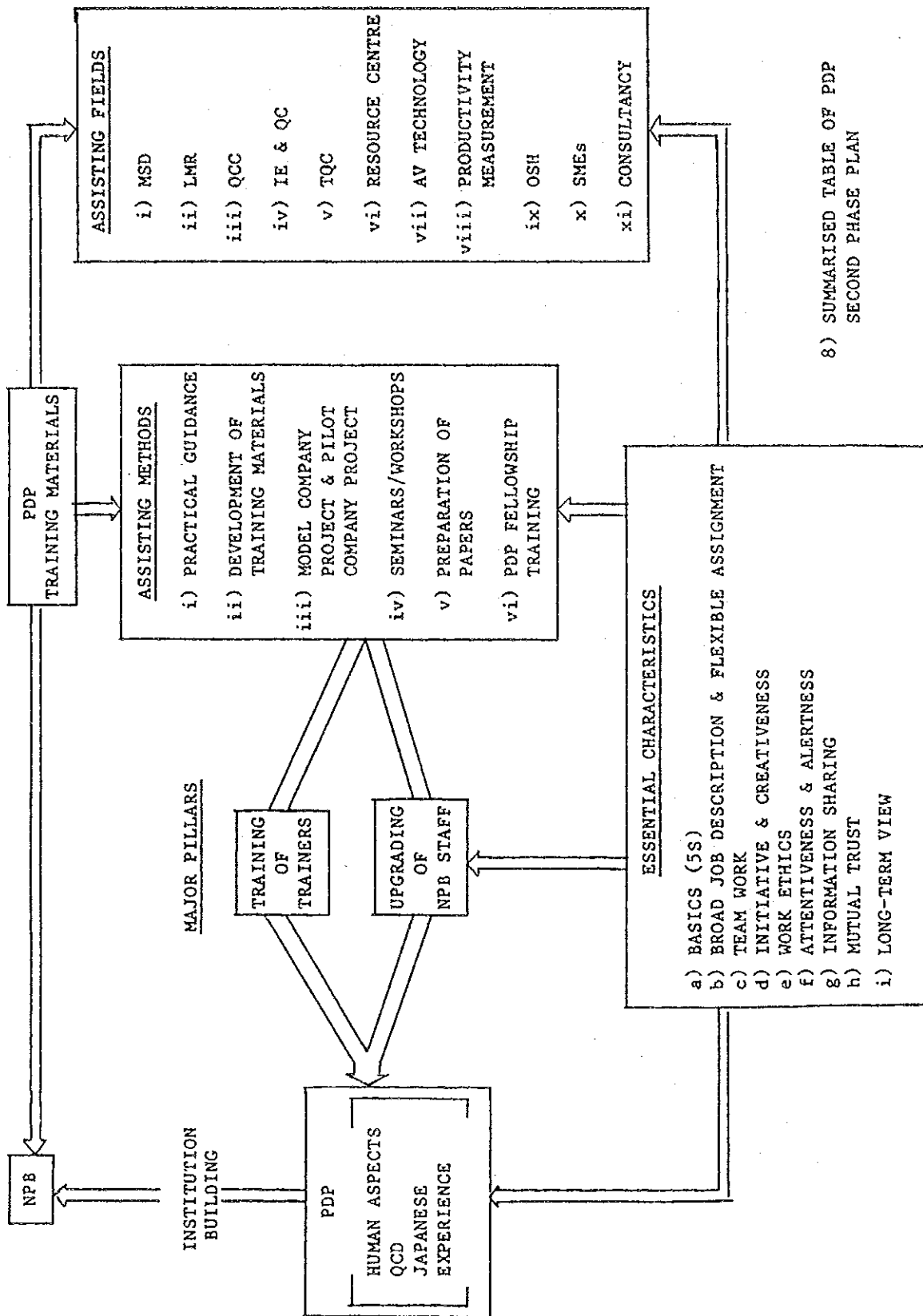
Papers will be prepared on Japanese experiences concerning important issues in the Productivity Movement.

vi PDP Fellowship Training

NPB staff was trained on the Japanese Productivity Movement in Japan and PDP courses under the fellowship programme. The practical experience through company attachment will be emphasised under the 2nd phase.

Assisting Fields

- i MSD
- ii LMR
- iii QCC
- iv IE & QC
- v TQC
- vi Resource Centre
- vii AV Technology for Training
- viii Productivity Measurement
- ix OSH
- x SMEs
- xi Consultancy



MATRIX OF ASSISTING METHOD & FIELD

FIELD METHOD	i MSD	ii LMR	iii QCC	iv IE & QC	v TQC	vi RC	vii AV TECHNOLOGY	viii PRODUCTIVITY MEASUREMENT	ix OSH	x SMEs (Nfmg)	xi CONSULTANCY
PRACTICAL GUIDANCE	Training (Top & Middle Mgt)	Training (Top & Middle Management) Adv. Service (SMEs)	Training Advisory Service (Top Management)	Training Advisory Service (QCD) (Top & Middle Mgt)	Training (Top & Middle Mgt)	Training Maintenance	Training	Training VA Physical	Zero Accident Research/ Survey Adv. Service (SMEs)	Training Advisory Service	Management Guidance Training
DEVELOPMENT OF TRAINING MATERIALS	Non-PDP Courses (SMEs)	Team Work Value-Added & Gain Sharing. LMR Concepts for Workers (SMEs)	Review & Improvement	Non-PDP Courses for QCD	Non-PDP Courses for TQC	Programme Production Technology	AV Teaching Materials		Zero Accident	Training Materials based upon Advisory Service & Case Study	Non-PDP Courses for Management Guidance
MODEL COMPANY & PILOT COMPANY PROJECTS	Training Oriented	WEC	Company Wide QCC	IE & QC	TQC			Productivity Analysis Training		Advisory Services	Management Guidance
SEMINARS/ WORKSHOPS	(Top & Middle Management)	(Top & Middle Management)			(Top Management)	Programme Production Course			(Top & Middle Management)	(Top Management)	
PREPARATION OF PAPERS											
PDP FELLOWSHIP TRAINING											

7. METHODOLOGY OF EVALUATION

To evaluate the past performance and achievement of the PDP, the following were used as references :

- (i) The Record of Discussion
- (ii) The official request made by the Government Singapore with respect to expert services, training of counterparts in Japan
- (iii) Minutes of meeting, Annual Workplan agreed in the course of implementation of the project
- (iv) Progress report and attachment report submitted by PDP experts

The evaluation will be conducted in 2 forms :

(i) Quantitative Evaluation

Numerical indices such as number of experts despatched, number of counterparts accepted for training in Japan would be reflected.

(ii) Qualitative

The degree of transfer of software technology although of great value is largely intangible. Hence, the following 3 descriptive stages would be used as evaluation criteria :

a) 1st Stage (Learning Stage)

This is the initial learning stage at which the knowledge and technology acquired by counterparts is wholly dependent upon Japanese long/short-term experts and training in Japan.

b) 2nd Stage (Adaptation and Application Stage)

This is the progressive stage at which the knowledge and technology acquired by the counterparts can be adapted to local conditions and put into practical application with the guidance and assistance of Japanese experts and lecturers whenever they or their counterparts consider it to be necessary.

c) 3rd Stage (Development and Improvement Stage)

This is the final stage at which the knowledge and technology acquired by the counterparts can be further developed and improved by the counterparts themselves without the assistance of Japanese experts and training in Japan.

The Phase I stage will be excluded from objectives of the evaluation since it is only a preparation stage and basic-establishment for substantial activities. The evaluation will be made on Phase II which is a stage of development.

RESULTS OF EVALUATION

Building and Facilities

- 1 Prior to signing of R/D, NPB secured land and budget for construction of new NPB building. The construction works were carried out according to the Proposed Construction Program for New NPB Building and completed on October, 1986, though initial schedule of completion was in 1985.

Comments

Activity	Programme Target		Actual Progress		Remarks
	Commence	End	Commence	End	
1 Complete basic design (done by the Japanese Survey Team)	Mar 83	Sep 83	Mar 83	Nov 83	
2 Detail design	Sep 83	Jan 84	Nov 83	Apr 84	Due to delay in completion of the basic design the schedule for detail design was pushed back
3 Tender	Jan 84	Mar 84	Apr 84	Jun 84	The schedule was not realistic as tender and piling cannot be carried out simultaneously
4 Piling	Jan 84	Mar 84	Jun 84	Nov 85	Two months allocated for piling was too short and unrealistic. No time was allocated for the calling of the piling contract
5 Main contract	Mar 84	Nov 85	Nov 84	Sep 86	The main contract took 22 - 23 months to complete instead of the scheduled 20 months

Comments

The equipment provided under the Phase III PDP was installed in the new building over the period Jul 86 - Jul 87. NPB as a organisation shifted into its new premises on 1 Nov 86. The official opening ceremony of the building was held on 3 Jul 87.

The new NPB building and equipment provided under PDP is being utilised effectively. With the completion of the new NPB building, smooth implementation of the Project had been accelerated. Although the building was completed in oct 86, efforts were made by both parties to adjust the implementation plan accordingly for smooth implementation of PDP.

Staffing

- 2 As of 1 Feb 88, number of NPB staff including Chairman, ED, DED, Directors, Section Heads and others totals to 300 persons. At the early stage of implementation of the project, the staff strength headed by Chairman stood at 211.

Comments

NPB had made efforts to recruit the necessary staff for the smooth implementation of the PDP. Attempts of the NPB to increase number of Project personnel is highly appreciated by the Japan side. The organisation of NPB as at 1 Feb 88 is as in Annex A.

The PDP Implementation Section was also established in NPB to facilitate smoother communication for both parties to enable effective implementation of the Project.

Management & Administration

- 3 Since the inauguration, Productivity Development Project has been promoted under the cooperation of JICA, executing agency of technical cooperation by the Japanese Government, taking NPB as an executing agency which assumes responsibility for administrative and managerial matters of the Project.

On 1 Aug 86, all Departments of NPB except OSH Department were transferred under the jurisdiction of MTI due to some necessity arisen in Singapore side, and OSH Department was transferred from NPB to MOL.

Comments

In the past, NPB concentrated mainly on activities related to effective man-management, improvement of work attitudes and labour-management relations. This mission fitted in well with the concerns of the Ministry of Labour (MOL). However, with NPB's new task of overseeing

post-employment training and with the adoption of a total approach to productivity, NPB's activities will require closer policy coordination with the Ministry of Trade and Industry (MTI) and operational linkages with MTI's agencies.

NPB was therefore appropriately transferred from MOL to MTI. The transfer will give NPB a stronger orientation towards economic development and enable it to carry out its mission more effectively. The transfer had not in any way affected the PDP as the role of NPB as the implementing agency of the PDP remain unchanged.

Technical transfer of productivity technology including "Export of the Japanese style Management" were new areas for both JICA and NPB, therefore there was some confusion at the early stage of the Project caused by lack of common understanding of the Project purpose and achievements required; however, the confusion was quickly solved with efforts made by both parties through mutual understanding and close communication.

NPB's request for the Chief Advisor to be present during its Board meeting and Top management meeting contributed to the smooth communication information between both parties. This decision greatly helped smoother implementation of the Project. The importance of the PDP was recognised with the establishment of the PDP Implementation Section in NPB. Its establishment facilitated smoother communication between NPB and Japanese expert team. It had made considerable contribution to smooth promotion and effective, implementation of Productivity Development Project.

NPB wishes to record its appreciation to JICA for taking a serious view of the PDP and for taking the necessary steps to ensure a proper system of managing the project.

Equipment

- 4 Other than Grant Aid program, miscellaneous equipment brought by experts (expert's equipment) has been provided by JICA during a period between June 1983 and Jan 1987 as a part of technical cooperation plan. The equipment acquired by Japan side to facilitate implementation of PDP.

Comments

The list of some of the major equipment donated by JICA to assist the experts in carrying out their duties include :

- 1) Station Wagons (2) Provided in FY83
Fully utilised by the counterparts, short-term experts and the long-term expert team.

- 2) Word Processor Provided in FY83
(English & Japanese)
Effectively used for the long-term and the short-term experts' activities to assist and communicate with their counterparts.
- 3) Copy Machine Provided in FY84
Fully utilised for the PDP experts' activities to diversify the knowledge on the Productivity Technology.

NPB appreciates JICA's generosity in providing the necessary office equipment, books and vehicles to enable the experts to carry out their duties effectively.

JICA Experts

- 5 Starting from the first despatch of 3 long-term experts in October, JICA has achieved despatch of a total 149 experts till 10 June, 1988. These so-called technical experts are classified to the short-term experts who stay for less than one year and long-term experts for one year or longer. Achievement of the despatch counts 126 persons for the former and 23 persons for the latter. In addition to them, numbers of JICA teams despatched in connection with the Project including survey team and technical guidance teams reaches 11-detailed. Presently the team leader and 12 long-term experts are being despatched. For a while after commencement of the Project there was a basic difference between Japanese and Singaporean sides in recognition of roles of Japanese experts in the Project which necessitated coordination between them.

Comments

At the initial commencement of the Productivity Development Project, co-ordination was needed between Japanese experts and NPB on fundamental areas of the Project. These was solved through the joint efforts of both parties.

Under the PDP, the Japanese government's basic policy on technical cooperation project states that Japanese experts should not be placed in the position of directly offering their labour but should instead function as an advisory body.

This form of Technical Cooperation was in effect till Apr 1986. From the progress and experience of the 1st Phase of Project, both parties realised the need to proceed into the 2nd Phase with a more concrete action plan based upon the experiences of first 2 years.

The Japanese team also recognised that human resource development is a time consuming process and would require steady and persevering mutual efforts to achieve results; however, at the same time, productivity development activities should be closely linked to the immediate needs of the country.

To meet these 2 objectives ie. long-term human resource development through improvement of the human aspects of productivity and rather short-term productivity development of the Singaporean industries especially in the area of Quality, Cost and Delivery, the Japanese team considered that, notwithstanding the strict interpretation of the Master Plan, more flexible application of its expertise would be essential for the successful achievement in the 2nd Phase of the Technical Cooperation. The 2nd Phase Plan was thus formulated and signed by Mr Y Tanizaki (Leader, JICA team) and Mr Mah Bow Tan (Chairman, NPB) on 8 Apr 86.

Based on the 2nd Phase Plan, there was better coordination and cooperation of both parties towards achieving the objective of PDP. With the implementation of the 2nd Phase Plan for barely a year, both sides recognised that an extension of PDP would be required to reap fruits of the 2nd Phase Plan.

It must also be mentioned that the Singapore side is appreciative of the efforts and contributions made by the Japanese experts for the PDP. The list of experts despatched under PDP since 1983 is attached at Annex B.

Counterpart Training in Japan

6 Since the commencement of Productivity Development Project, 152 counterparts would have participated in the training in Japan. The numbers in each year are :

fiscal 1983	38 persons (Planned number 35),
84	33 persons (Planned number 35),
85	26 persons (Planned number 28)
86	27 persons (Planned number 28) and
87 *	28 persons (Planned number 28).

* As at 10 Feb 88, 22 fellows have been accepted, 6 to be accepted.

Comments

The aim of PDP fellowship programme is, in principle, the training and development of the facilitators of Productivity Movement through their role as trainers, consultants and promoters of productivity.

The training in Japan provided exposure to the participants to the development of the Japanese Productivity Movement, Japanese Management Practices and Labour-Management Relations. The knowledge and techniques gained by the returned fellows are widely disseminated through publications and training courses conducted by them. 2 such publications were "An eyewitness account of Japanese Productivity" and "What else can we learn from the Japanese ?" Public seminars were also conducted by returned fellows to achieve a multiple effect.

In line with the emphasis of the Singapore economy, 16 participants were sent to Japan for management consultancy training in FY86/87. Upon their completion of their training in Nov 86, these consultants have been assigned to assist various SMEs under NPB's Management Guidance programme. In addition, the returned fellows also conducted the Management Consultancy course launched by NPB in January 87.

Specialised individual training was also conducted for Singaporeans in the fields of Resource Centre, Productivity Measurement, Library Automation & Occupational Safety and Health. Trainees found the assistance in the form of individual training process to be effective in deepening their knowledge and experience in specific technical fields. The list of PDP trainees is attached at Annex C.

The fellowship training awards had contributed to development of NPB staff to carry out their duties as productivity facilitators effectively. NPB highly appreciates JICA's assistance in the allocation of the awards. As follow-up, fellowship training should be continued in the extended phase of cooperation.

7 Technology Transfer

Comments

Detailed Description on the Accomplishments of the 11 Fields stated in 2nd Phase Plan are summarised in the tables attached at Annex D.

8 Budget

Comments

Taking into account the severity of financial restrictions, the efforts of both NPB and JICA in preparing and implementing the budget may be highly evaluated.

JICA will have spent over 1.5 billion Japanese yen for technical cooperation since the commencement of the Project up to the end of March 1988.

These amount was carefully and prudently spent in accordance to the budget.

On NPB side, the amount of S\$55.5m was set aside for the construction of the NPB building for the effective transfer of productivity technology and to house the donated equipment.

9 Textbook

Comments

PDP Manuals donated under the Grand Aid programme were effectively utilized in PDP activities.

<u>PDP Manual Code</u>	<u>Title of Manual</u>	<u>Course Title</u>
L-10-2	QCC Facilitators Course III	Advanced QCC Facilitator
L-14-2	Trainers' Course for New Employees	Effective Instructors Course
L-14-2	Trainers' Course for New Employees	Diploma in Training & Organisation Development
L-14-2	Trainers' Course for New Employees	Performance Appraisal Course
L-14-2	Trainers' Course for New Employees	Certificate in Training Management
L-3-10	QCC Course for Top Management	QCC for Top Management
L-4-10	QCC Course for Leaders	QCC Leaders Course
L-5-10	QCC Course for Members	QCC Members Course
L-5-10	QCC Course for Members	QCC Members Course
L-6-2		Joint Consultation Basic Course
L-7-2	JC Advance Course	Joint Consultation Advanced Course
L-8-2	QCC Facilitators Course I	QCC Facilitator
L-9-2	QCC Facilitators Course II	QCC Facilitator
M-11-2	OJT Course	OJT Course
M-14-2	Training Development Course	Effective Instructors Course
M-14-2	Training Development Course	Performance Appraisal Course
M-14-2	Training Development Course	Diploma in Training & Organisation Development
M-14-2	Training Development Course	Certificate in Training Management
M-16-2	IE Course for Managers	Certificate in Industrial Engineering

<u>PDP</u> <u>Manual</u> <u>Code</u>	<u>Title of Manual</u>	<u>Course Title</u>
M-19-2	Personnel Appraisal Course	Effective Instructors Course
M-19-2	Personnel Appraisal Course	Performance Appraisal Course
M-19-2	Personnel Appraisal Course	Diploma in Training & Organisation Development
M-19-2	Personnel Appraisal Course	Certificate in Japanese Supervisory Practices
M-3-10	Supervisory Course	Certificate in Japanese Supervisory Practices
M-4-2	Management and Financial Analysis Course for Manager (MFG)	Financial Management and Analysis
M-5-2	Corporate Planning	Corporate Planning and Control
M-7-2	Corporate Strategy Course (MFG)	Corporate Strategy Course
M-8-2	Corporate Strategy Course (Service)	Corporate Strategy Course
M-9-10	Productivity Facilitator Course	Productivity Facilitator
M-1-10	Senior Management Course	Developing New Course 'Management Advanced Diploma'
M-1-10	Senior Management Course	Developing New Course 'Advance Management Course'
M-13-2	Management Problem Solving and Decision Making Course	Developing New Course 'Course for Diagnosticians'
M-15-2	Production Management Course	Developing New 'IE Workshops'
M-16-2	IE Course for Managers	Developing New 'IE Workshops'
M-17-2	Management Consultation Course	Developing New Course 'Course for Diagnosticians'
M-2-10	Management Development Course	Developing New Course 'Advance Management Course'
M-20-2	Management and Financial Analysis Course for Managers (Service)	Developing New Course 'Course for Diagnosticians'
M-4-2	Management and Financial Analysis Course for Manager (MFG)	Developing New Course 'Course for Diagnosticians'
M-6-2	Human Resource Management Course	Developing New Course 'Advanced Management Course'

Materials in the area of Occupational Safety & Health provided are effectively used as reference.

OSH Materials (Phase I)

(I) Reference Textbooks (6)

1. Safety Management Course
2. Safety Course on Press Machine & Related Machines
3. Petrochemical Safety Course Vol I)
Petrochemical Safety Course Vol II)
4. Industrial Hygiene Technical Course I)
Industrial Hygiene Technical Course II)
Industrial Hygiene Technical Course III)
Industrial Hygiene Technical Course IV))
5. Building Construction Safety Course
6. MRT Safety Course Vol I)
MRT Safety Course Vol II)

(II) Colour Slides (12)

1. The advice of "Pointing with the Finger and Calling" Practice
2. One Point Hazard Prediction Activity
3. How to Handle Heavy Items
4. Safety in Press Work
5. What caused the Accidents
6. The Compressed Air Shield Driving Method and Related Safety
7. Safety in Tunnel Construction
8. Excavation and Shoring
9. Form Shoring
10. Scaffolding
11. Safety in Piling Work
12. Safety in Operating Construction Machines

(III) Videos (8)

1. Improvement of operation method
2. Methods of Instruction
3. Potential hazards in a working process
4. Elimination of unsafe acts
5. Safety of new workers
6. Housekeeping of the workshop
7. Desire for safety
8. Invisible vapour

(IV) Booklets (16)

1. A compilation of promotional methods for training in prediction of potential hazards, with illustrated situation sheets, Part I
2. Ditto, Part II
3. TDB-KY Procedure and Model Sheet Education, Part I
4. Ditto, Part II
5. The Short Term KY Method and Model Sheets, Part I
6. Ditto, Part II
7. Work Instruction Training Procedures and Model Sheets, Part I
8. Ditto, Part II
9. New KYT Procedure and Model Sheets Edition, Part I
10. Ditto, Part II
11. A Guide for Formulating Plans for Zero Accidents
12. The Story of New KYT
13. Introduction to Zero Accident - New KYT Guide
14. New KYT = New Small Group Activities
15. The Zero Accident Campaign
16. Are You Practising Finger Pointing and Call ?

OSH Materials (Phase II)

(I) Booklets (15)

1. Industrial Accident Case Studies and its countermeasures (7 volumes)
2. Guide to Industrial Health Oct 1983 (3 volumes)
3. Safety Guidebook for National Safety Week Oct 84 (3 volumes)
4. How to map out Safety and Health Improvement Programme (Safety Control)
5. How to map out Safety and Health Improvement Programme (Health Control)

(II) Textbook (1)

1. Guide for Safety Health Control in the Shipbuilding Industry

(III) AV Aids (11)
(9 slides & 2 videos)

1. Safe operation and proper handling of a forklift
2. Prevention of Fires and Explosion
3. Safety in Painting Work
4. Personal Protective Equipment
5. Do not get caught between objects or by a machine
6. Duties of Supervisors in Safety and Health
7. Prevention of falling from height in the shipyard
8. Elimination of Electrical hazard
9. Gas chromatographic Analysis for Work-Environment Measurement
10. Operating Safety of Robots
11. The safe operation of a Grinder

NPB appreciates JICA's donation of these software to fulfill the objective of PDP.

10 Reports and Recommendations

Comments

Reports and recommendations were submitted by PDP experts to NPB to encourage NPB to develop new activities for the Project. Some of these reports were of high value and provided NPB with some guidelines in its productivity activities.

The list of reports submitted by PDP experts under the PDP are as attached at Annex E.

11 Joint Committee and Other Meeting

Comments

For smoother communication between both parties regular meetings were held. Such meetings include the Joint Committee which met yearly, Monthly PDP Meeting and the Technical Cooperation Sub-Committee Meetings. Frequency and the Terms of Reference (TOR) of these meetings are as spelt out in Annex F.

12 Technical Cooperation Among Developing Countries (TCDC)

Comments

- 1) It is hoped that for the duration of Japanese technical cooperation, the Productivity Development Project in Singapore; will strengthen and accelerate co-operation among the members of ASEAN through the diffusion of methods for the organization of productivity development activities.
- 2) As a requirement under the R/D for PDP, NPB had been advised by JICA through their Technical Guidance Team despatched from 2 - 9 Oct 87, to plan for the conduct of RTP beginning from FY87.

Within the context of Record of Discussions of PDP signed on 11 Jun 83, the team proposed that NPB considers Regional Training Programme (RTP) as a means to share achievements of PDP with other ASEAN countries.

After a series of discussions with the JICA (S) Office, the Record of Discussions for the conduct of ASEAN RTP was formalised on 20 Jan 88. The signatory for Singapore side was the Executive Director, NPB, Mr Koh Juan Kiat while the signatory for Japan side was Mr M Ishizaki, Resident Representative (S) for JICA Office.

The training course under the programme is entitled "Introductory seminar on the Productivity Development in Singapore".

The course, designed to provide an opportunity for persons in the ASEAN countries who are involved in productivity improvement to learn and benefit Singapore's experience in the implementation of the Productivity Development Project and to learn about the Productivity Movement in Singapore will be conducted from 27 Mar 88 - 6 Apr 88.

13 Summary of Tangible Results

Comments

The table shows the achievements of Japan side for the period FY85/86 - FY87/88.

Tangible Results

	FY85	FY86	As of 31 Dec 87	Total
No. of officers trained	1096	812	2024	3932
No. of new courses introduced	10	9	9	28
No. of companies implemented specific projects	107	37	22	166
No. of model companies established	7	0	0	7
Improvement to NPB as an organisation	141	173	101	415
No. of participants at seminars/workshops, etc.	5325	7157	2589	15071

14 CONCLUSION

1. Overall Performance

The Productivity Development Project has served as an important channel for the effective transfer of Japanese Productivity Technology and plays an important role in enabling Singaporeans to understand, learn, experience and adapt the "Productivity Technology" from the Japanese.

Under the experts attachment programme, NPB counterparts are attached to each expert to learn and assist in carrying out productivity-related studies. Since 1983, NPB had expanded its training activities with the assistance of the experts. Training courses in the areas of Quality Control Circles, Labour Management Relations, Productivity Facilitator Programme, Production Management, Industrial Engineering and Supervisory Practices were developed to facilitate the productivity movement at both the national and company level.

Under the Project, trainers were despatched to Japan to acquire a better understanding of the Japanese Productivity Movement and to equip themselves with the skills to conduct productivity-related courses at NPB after the fellowship in Japan. Five batches have so far been trained under the PDP. The latest batch was in fact trained in Production Management and Personnel Management. The returned fellows will assist in disseminating techniques learnt to the companies through the Board's training and advisory services.

With direct assistance from the Japanese Long-term experts and periodic assistance from the short-term experts from Japan, the Board has gained sufficient expertise currently to conduct specific programmes for the industries. These programmes were mainly in the areas of industrial engineering production management, quality control circles and labour management relations. These courses were in the form of talks, workshops and classroom training.

The area of occupational safety and health had also been adequately developed with assistance received in the areas of MRT Construction, Press Machine and related machine, Petrochemical safety, Industrial hygiene, Shipyard safety and Zero accident movement (ZAM).

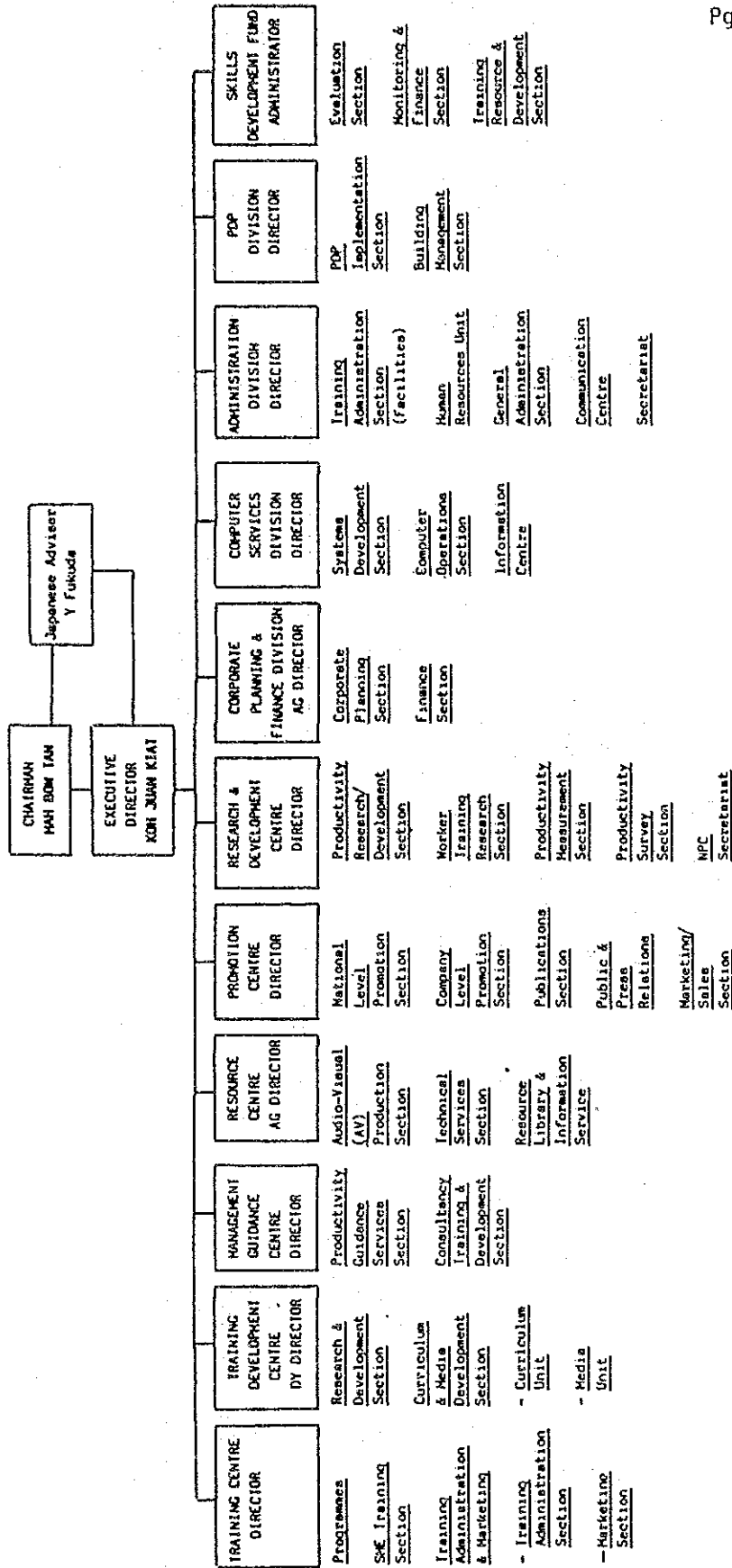
Programs produced by RC were used for training (used to support training activities in NPB and training activities of external organisations) and promotion (ie. programs were produced to disseminate productivity information, programs produced for companies were used to enhance corporate communication or to introduce productivity schemes eg. QCC).

Significant to note also was the fact that the 4th and 5th batch of PDP fellows attended the core training programme in Singapore. The first 3 batches of fellows had attended both the core training the elective courses in Japan. The instructors for the core training programme in Singapore were the PDP experts and the returned fellows. Through PDP, Singapore had acquired the necessary expertise to launch its QCC movement which constitute an integral part of the Productivity Movement.

In summary, it is concluded that the transfer of technology in the 11 fields as identified in the 2nd Phase had been successful. However some follow-up action is necessary to maintain the momentum and to achieve a more lasting effect on the Productivity Movement. In view of this, the Government of Japan has agreed to provide follow-up cooperation for 2 years from Jun 1988 to Jun 1990.

----- END -----

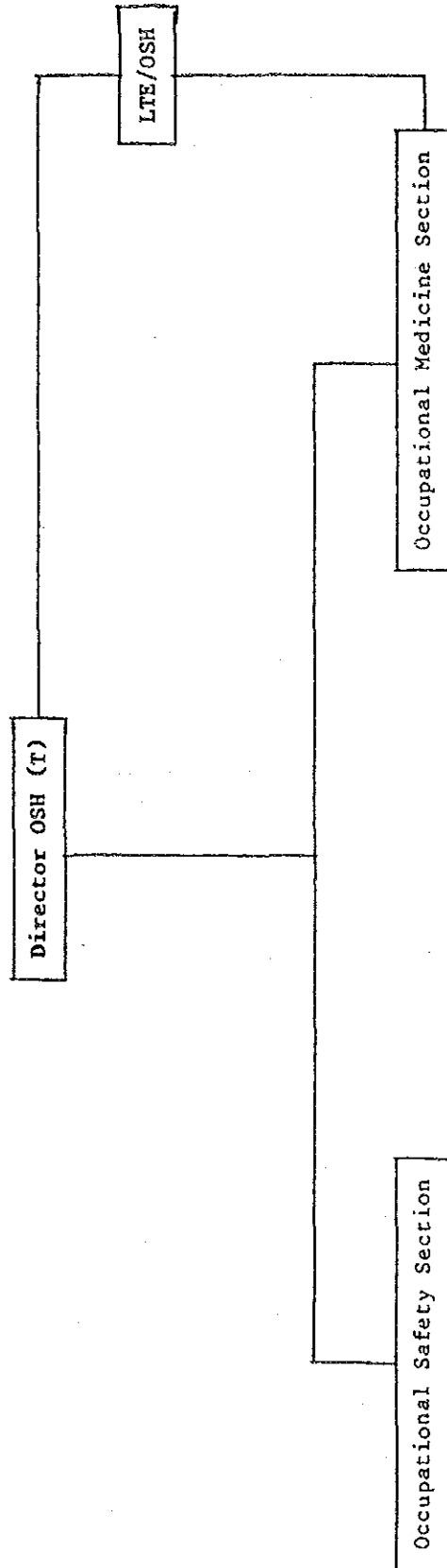
NPS ORGANISATION CHART AS AT JAN 88



MINISTRY OF LABOUR (S)

OS & H TRAINING AND PROMOTION DEPT

ORGANISATION CHART



SCHEDULE FOR THE DESPATCH OF PDP LONG TERM EXPERTS

		58	59	60	61	62	63
		'83	'84	'85	'86	'87	'88
		*					
Kazuo Ishihara,	Chief Advisor	10	10				
Haruo Wada,	Coordinator	10			10		
Masayashi Shimizu,	Planning & Research Development	11		11			
Taizo Omura,	Promotion	11		11			
Kazuchika Sato,	IMR (SGA)	10			10		
Hajime Inoue,	LMR	11		11			
Iwao Wada,	Management & Supervisory Development	11			11		
Koji Kano,	OSH		5		10		
Katsutoshi Kurauchi,	Resource Centre		6		6		
Hajime Suzuki,	IOE		10				6
Kiyohiko Sakurai,	Chief Advisor			3	7		
Toshihiko Kosaki,	Programme Production			8			6
Kozo Ochiai,	LMR				5		5
Koichi Urabe,	Resource Centre				5		5
Yasushi Fukuda,	Chief Advisor				7		7
Kunio Kushiro,	PDP Coordinator				8		6
Tsutomu Hikosaka,	IOE				8		6
Kazushige Aragaki,	PDP Coordinator				10		6
Hisashi Kamimura,	Management Consultancy				10		6
Yukimori Ouchi,	OSH				10		6
Kazuo Tsuchiya,	Management Consultancy				12		6
Kazuki Yamanaka,	Japanese Language					2	6
Atsuo Ishiwara,	In-Company Productivity					5	6

* figures indicate the period of attachment (month)

PDP SHORT TERM EXPERT (FY83/84)

1

STE No.	Name of Expert	Position	Activities	Period of Assignment	1983				1984				
					Dec	Jan	Feb	Mar	Apr				
1	Mr Toshio OGIYA	Sakura Electric Company	Productivity Improvement in Manufacturing Sector	8/12/83 - 25/12/83 (2 weeks)	8	25							
2	Mr Toshinori MIURA	NHK	Planning of Resource Centre	8/12/83 - 17/12/83 (1 weeks)	8	17							
3	Mr Masaaki MORITA	NHK International	- ditto -	- ditto -	8	17							
4	Prof Naomi HARUO	Chu University	Survey on Programme Implementation of LMR	9/12/83 - 24/12/83 (2 weeks)	9	24							
5	Mr Tomio JOICHI	Business Brain Company	Needs Survey on Managers' and Supervisors' Training	11/12/83 - 30/12/83 (3 weeks)	11	30							
6	Mr Osamu UMEDA	Management Consultant	Needs Survey on Small Group Activities	17/12/83 - 6/1/84 (3 weeks)	17	6							
7	Prof Kazukiyo KUROSAWA	Tokyo Institute of Technology	Productivity Statistics Measurement	25/12/83 - 8/1/84 (2 weeks)	25	8							
8	Mr Makio NAKAZAWA	Labour Welfare Agency	- ditto -	- ditto -	25	8							
9	Mr Shinsaku KOHEI	Public Opinion Survey Institute of NHK	Analysis Method of Survey Result and Survey Report	8/1/84 - 22/1/84 (2 weeks)	8	22							
10	Prof Kazuo KAWATAKE	Tokyo Women University	- ditto -	- ditto -	8	22							
11	Prof Yonosuke HAFUNE	Nihon University	Survey on Value Added Measurement at a Company Level	15/1/84 - 30/1/84 (2 weeks)	15	30							

Annex B
STE

PDP SHORT TERM EXPERT (FY83/84)

2

STE No.	Name of Expert	Position	Activities	Period of Assignment	1984				
					Dec	Jan	Feb	Mar	Apr
12	Mr Yasuo UEDA	Sanyo Electric Company	Survey on Small Group Activity and Its Consultation	15/1/84 - 22/1/84 (1 week)	15 ← → 22				
13	Mr Kiyoshi WAINAI	Eiko Accounting Office	Survey on Value Added Measurement and Disclosure of Accounting	22/1/84 - 7/2/84 (2 weeks)	22 ← → 7				
14	Mr Hasuo KUHE	JPC	Labour Economics and Related Statistics	12/2/84 - 25/2/84 (2 weeks)	12 ← → 25				
15	Mr Makio NAKAZAWA	Labour Welfare Agency	- ditto -	- ditto -	12 ← → 25				
16	Prof Yoshitaka FUJITA	Ajia University	Survey on Social Welfare and COHEC	19/2/84 - 6/3/84 (2 weeks)	19 ← → 6				
17	Prof Itsuro KIRINOKI	Chuo Gakuin University	- ditto -	- ditto -	19 ← → 6				
18	Mr Tomio JOICHI	Business Brain Company	Survey and Designing on In-Company Training Scheme	8/3/84 - 25/3/84 (3 weeks)	8 ← → 25				
19	Mr Osamu UEDA	Management Consultant	Survey on Productivity Improvement Factors in Manufacturing Sector	11/3/84 - 25/3/84 (2 weeks)	11 ← → 25				
20	Mr Junzo YAHADA	Matsushita Tele-Communication Co	Office Automation Training Programme	11/3/84 - 25/3/84 (2 weeks)	11 ← → 25				
21	Mr Yukio OTONARI	Management Consultant	- ditto -	- ditto -	11 ← → 25				
22	Dr Shinaaku KOHEI	NHK Public Opinion Survey Institute	Analysis of Survey Result and Survey Report	13/3/84 - 27/3/84 (2 weeks)	13 ← → 27				

PDP SHORT TERM EXPERT (FY83/84)

3

STE No.	Name of Expert	Position	Activities	Period of Assignment	1983				1984				
					Dec	Jan	Feb	Mar	Apr				
23	Prof Kazukiyo KUROSAWA	Tokyo Institute of Technology	Productivity Measurement at National Level and PDP Productivity Implementation Programme	15/3/84 - 2/4/84 (2 weeks)			15			18	2		
24	Mr Toshio ISHIKAWA	Vocational Training Research Centre	LMR Joint Consultation System	18/3/84 - 25/3/84 (1 week)						18	25		
25	Mr Yasuo FUJII	Ryukakusan Co	Productivity Improvement in High-Tech Industry	18/3/84 - 25/3/84 (1 week)						18	25		
26	Prof Hideo INOHARA	Jochi University	First Survey on Human Resources Development Programme	20/3/84 - 30/3/84 (2 weeks)						20		30	

PDP SHORT TERM EXPERT (FY84/85)

STE No.	Name of Expert	Position	Activities	Period of Assignment	1984												1985		
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
1	Mr Kiyoshi WAINAI	Eikoh (Accounting Company)	Productivity Measurement at Company Level	6/8/84 - 18/8/84 (2 weeks)					← 6 → 18										
2	Mr Shigeo SHIROTA	Accountant	- ditto -	7/2/85 - 24/2/85 (3 weeks)												← 7 → 24			
3	Mr Iwao TAKAHASHI	Hakuhodo Incorporated	Promotion and Information	2/6/84 - 29/6/84 (4 weeks)		← 2 → 24													
4	Mr Kei NAKANO	- ditto -	- ditto -	- ditto -		← 3 → 31													
5	Mr Yu HIRAKAWA	Hotel Odakyu	LMR at Hotel Level	23/6/84 - 30/6/84 (1 week)		← 3 → 30													
6	Mr Mikio AOKI	JPC	General Productivity Study (Foundation of Productivity Movement)	26/8/84 - 1/9/84 (1 week)					← 4 → 26										
7	Mr Toshio OGIYA	Planbase Engineering	General Productivity Study (Productivity Promotion at Enterprise Level)	20/7/84 - 30/8/84 (6 weeks)					← 20 → 30										
8	Mr Akinori KOHATSUBARA	Waseda University	- ditto -	1/8/84 - 30/8/84 (4 weeks)					← 1 → 30										
9	Mr Katsumi YOSHIMARA	Hiraba Chemicals Company	Top Seminar and In-House Training	20/9/84 - 30/9/84 (2 weeks)												← 20 → 30			

PDP SHORT TERM EXPERT (FY85/86)

1

STE No.	Name of Expert	Position	Activities	Period of Assignment	1985												1986		
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
1	Prof Ryokichi HIRONO	Seikei University	LMR White Paper	25/8/85 - 31/8/85 (1 week)						←→ 25 31									
2	Prof Yoshikazu TSUDA	Rikkyo University	Quality Control and QCC	28/7/85 - 4/8/85 (1 week)				←→ 28 3											
3	Mr Hajime TANABE	JISHA	Zero Accident Movement	11/1/86 - 25/1/86 (2 weeks)												←→ 24 25			
4	Mr Hiroyasu NAGASHIMA	Idemitsu Oil Company	Introduction of In-company Welfare System	28/7/85 - 12/8/85 (2 weeks)				←→ 28 12											
5	Ms Kiyoko MIYAWAKI	Seiyu Co	QCC Promotion and Participation of Female Workforce	27/8/85 - 4/9/85 (1 week)												←→ 27 4			
6	Mr Zenji SHIMADA	QCC Activation Research Institute	QCC Sustenance Activity	19/1/86 - 26/1/86 (1 week)														←→ 19 26	
7																			
8																			
9	Mr Ikuo NISHIKAWA	Eikoh Company (Accounting)	PDP Training Course	4/9/84 - 18/9/85 (2 weeks)														←→ 4 18	

PDP SHORT TERM EXPERT (FY85/86)

STE No.	Name of Expert	Position	Activities	Period of Assignment	1985												1986		
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
10	Prof Kunihiro SUETAKE	Kanagawa University	Promotion and Application of Audio Visual Technology	11/8/85 - 18/8/85 (1 week)					←→ 11 18										
11	Mr Kiyoshi WAINAI	Eikoh Company (Accounting)	Productivity Measurement at Company Level	4/8/85 - 17/8/85 (2 weeks)					←→ 4 6										
12	Mr Ryohai MAGOTA	Japan Wage Centre	Productivity Gainsharing	31/8/85 - 12/9/85 (2 weeks)					←→ 31 12										
13	Mr Yasunaga TAKEMURA	Consultant	QCC Promotion Programme at Firm Level	18/11/85-30/11/85 (2 weeks)									←→ 19 20						
14	Mr Shigeru NAKAMURA	Hitachi Company	Promotion and Application of Audio Visual Technology	29/11/85-28/1/86 (8 weeks)									←→ 29 20						
15																			
16	Mr Naoki TESHIMA	Hitachi Company	Value Engineering	2/11/85 - 17/11/85 (2 weeks)									←→ 2 17						
17	Mr Masahiro KOMORI	Komori Safety Device Instrument Co Ltd	Safety and Health for Metal Working Industry	13/12/85-12/3/86 (12 weeks)											←→ 15 12				
18																			

PDP SHORT TERM EXPERT (FY86/87)

STE No.	Name of Expert	Position	Activities	Period of Assignment	1986												1987							
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar								
10	Mr Junichi YAMACUCHI	Consulting Engineer	Productive Maintenance (Electronics)	23/8/86 - 13/9/86 (3 weeks)						23	23													
11	Mr Hiroshi IWAYAMA	Central Japan Industries Association	Just-In-Time System	24/11/86 - 13/12/86 (3 weeks)										24	24									
12	Mr Masao KUMABARA	Cosmo International Company	Chemical Industry	30/5/86 - 29/8/86 (12 weeks)							30													
13	Mr Akihiko TAKIZAWA	JISHA	Industrial Hygiene	27/1/87 - 20/4/87 (12 weeks)																				27
14	Mr Kenji NAKATA	Consulting Engineer	Productive Maintenance (Machinery)	3/1/87 - 24/1/87 (3 weeks)																				24
15	Mr Kazuo ONOZAWA	NHK	Lighting	5/2/87 - 18/3/87 (6 weeks)																				5
16	Mr Seiji UTSUMI	Okinawa International Centre	AV Technology	27/7/86 - 3/8/87 (1 week)																				3
17	Mr Masaki SATOH	NHK	Video Production	5/2/87 - 18/3/87 (6 weeks)																				5
18	Mr Hiromitsu TANAKA	Eutec Corporation Japan	Training Trainers for Export Marketing Course	18/9/86 - 18/10/86 (4 weeks)																			18	18

PDP SHORT TERM EXPERT (FY86/87)

STE No.	Name of Expert	Position	Activities	Period of Assignment	1986												1987									
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar										
19	Mr Tadaharu OBA	Yamatake Honeywell Company	Productivity Congress	10/11/86-15/11/86 (1 week)																						
20	Mr Kouichi KAMISAWA	Yamatake Honeywell Company	Productivity Congress	10/11/86-15/11/86 (1 week)																						
21	Mr Toru SASE	Japan Management Service Inc.	Management Guidance in SMEs	10/11/86-30/11/86 (3 weeks)																						
22	Mr Acauo TSUJI	NHK	Training Video Packages for Resource Centre	24/12/86-28/1/87 (6 weeks)																						
23	Mr Kouke TSUKADA	NHK	Graphics for Transparency Slide & Video Production	20/2/87 - 27/3/87 (6 weeks)																						
24	Prof Masayoshi AKAHORI	University of Air	AV Technology	16/3/87 - 15/5/87 (8 weeks)																						

PDP SHORT TERM EXPERT (FY87/88)

1

STE No.	Name of Expert	Position	Activities	Period of Assignment	1987												1988			
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr			
1	Asst Prof Hiromasa SUZUKI	Waseda University	Flexible Wage Systems	22/7/87 - 4/9/87 (6 weeks)				← 21 →	← 4 →											
2	- ditto -	- ditto -	- ditto -	28/3/88 - 11/4/88 (2 weeks)														← 28 →	11	
3	Mr Teutomo KURUYA	Management Consultant	Consultancy in Service Sector	1/4/88 - 1/5/88 (4 weeks)																
4	Prof Ryohei MAGOTA	Waseda University	Gainsharing	10/7/87 - 10/9/87 (9 weeks)				← 10 →	← 14 →											
5	- ditto -	- ditto -	- ditto -	15/3/88 - 28/3/88 (2 weeks)														← 26 →		
6	Mr Tadaharu OBA	Yamatake Honeywell Company	Business Efficiency Through Better IMR	10/8/87 - 18/8/87 (1 week)									← 10 18 →							
7	Mr Yoshito MAGATA	Prima Meat Company	Worker Education & Training (Manufacturing)	22/6/87 - 31/7/87 (6 weeks)				← 22 →	← 31 →											
8	Mr Shigeo SUZUKI	JPC	Worker Education & Training (Service)	22/6/87 - 31/7/87 (6 weeks)				← 22 →	← 31 →											
9	Mr Tsutomu FURUYA	Management Consultant	Implementation of OJT	20/6/87 - 21/8/87 (9 weeks)														← 21 →		

PDP SHORT TERM EXPERT (FY87/88)

STE No.	Name of Expert	Position	Activities	Period of Assignment	1987												1988				
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar					
10	Mr Noriharu KANERO	Takasago Kanko Co Ltd	QCC for Service Industry	1/12/87 - 9/12/87 (1 week)														← → 9 9			
11	Mr Kazuhika SATO	JICA	Monitoring (Management Support & Self-Evaluation) and Suggestion Scheme in QCC Structure	29/5/87 - 5/7/87 (5 weeks)		← → 29 7															
12	Mr Yoshiharu MATSUDA	NHK	Advanced Training in Studio Production of Training Videos	15/11/87 - 14/1/88 (8 weeks)														← → 15 14			
13	Mr Isao MAITOH	NHK	Lighting	- ditto -														← → 15 14			
14	Mr Toshiyuki SAKAMOTO	NHK	Use of Special Effects in Video Programme Production	22/9/87 - 21/11/87 (9 weeks)														← → 15 21			
15	Mr Kenji NAKATA	Consulting Engineer	Productive Maintenance (Machinery)	3/8/87 - 29/8/87 (4 weeks)														← → 5 19			
16	Mr Hiroshi IWAYAMA	Central Japan Industries Association	Just-In-Time System	24/5/87 - 7/6/87 (2 weeks)		← → 24 7															
17	- ditto -	- ditto -	- ditto -	6/12/87 - 27/12/87 (3 weeks)														← → 6 27			

PDP SHORT TERM EXPERT (FY87/88)

STE No.	Name of Expert	Position	Activities	Period of Assignment	1987												1988		
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
18	Mr Masaka ITOH	Management Consultant	TQC in Service Sector	6/7/87 - 29/7/87 (3 weeks)				←→ 6 29											
19	- ditto -	- ditto -	- ditto -	23/11/87 - 13/12/87 (3 weeks)										←→ 25 13					
20	Mr Hiromitsu TANAKA	Eures Corporation	Export Marketing	9/9/87 - 17/10/87 (6 weeks)					←→ 9 17										
21	Mr Joji ARAI	JPC	Information Gathering and Dissemination	12/7/87 - 19/7/87 (1 week)				←→ 12 19											
22	Mr Tsutomu FURUYA		Company Productivity Data Analysis	18/2/88 - 31/3/88 (6 weeks)														←→ 18 31	
23	Mr Makoto SATO	Mitsubishi Heavy Industries Ltd	Shipyard Safety	7/8/87 - 1/10/87 (8 weeks)					←→ 7 1										
24	Mr Nobuo ITOH	Takenaka Komuren Co Ltd	Building Construction Safety	22/1/88 - 17/3/88 (8 weeks)														←→ 22 17	
25	Mr Kozo KAWAGATA	JISHA	Zero Accident	10/1/88 - 23/1/88 (2 weeks)														←→ 10 23	
26	Mr Makoto HASEGAWA	U.S. Marine Base in Japan	- ditto -	- ditto -														←→ 19 25	