MINUTES OF MEETINGS OF THE JOINT COORDINATING COMMITTEE FOR THE PROJECT ON PROMOTION OF MEDICAL EQUIPMENT MANAGEMENT SYSTEM

The Joint Coordinating Committee for the Project on Promotion of Medical Equipment Management System was held on 4 October 2007. The Committee discussed the main findings and recommendations of the Mid-term Evaluation, which was conducted by the Joint Evaluation Team organized by the Cambodian authorities concerned and Japan International Cooperation Agency (hereinafter referred to as JICA) from the end of July to the end of September 2007.

As a result of the discussion, the Committee endorsed the Joint Mid-term Evaluation Report attached hereto. It also reached an agreement that the actions recommended in the Report should be duly followed up by the Project Team, and that the Committee will meet to monitor the situation before the end of year 2007.

Phnom Penh, 4 Oct, 2007

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JICA Cambodia Office
Japan International Cooperation Agency
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Ministry of Health
Kingdom of Cambodia

Joint Evaluation Report

Mid-Term Evaluation for the Project on Promotion of Medical Equipment Management System

Japan International Cooperation Agency, Japan

AND

Ministry of Health, Kingdom of Cambodia

4 October, 2007

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CAHPTER 1: OVERVIEW OF THE MID-TERM EVALUATION

1. Background

One and half year passed since the Project on Promotion of Medical Equipment Management System (MEDEM Project) has started in January 2006. The Project is progressing with its activities, as described in the Project Design Matrix (PDM). Some activities have completed with a success and it seems that the Project Team will achieve the Outputs defined in the PDM by the end of the Project. However on the other hand, the Project Team has met some difficulties and issues. These issues might stand as constraints for achieving the project purpose if they don't take countermeasures now.

Even the Project could finish with a success, visions of how to promote medical equipment (ME) maintenance and management in this country is still unclear. The Cambodian Ministry of Health (MOH) requested JICA to provide continuous technical support on medical equipment management at referral hospital after the completion of the MEDEM Project in December 2008. In order to find the next step for MOH in this area, it is imperative to hold a discussion.

It is based on such background that authorities concerned are invited to conduct a mid-term evaluation on the Project. In light of the time constraints and the size of the Project, it is suggested to limit the scaled of evaluation to the minimum one, without dispatch of study team from Tokyo or procuring consulting agency. However, in order to ensure certain degree of neutrality and independence in the evaluation, we would like to invite JICA Cambodia Office to call a mid-term evaluation team to conduct such an evaluation.

2. Objective

The mid-term evaluation team conducted a joint evaluation with Cambodian party, and reach to consensus. Both parties agree the result of evaluation and recommendations along the objectives as indicated below;

(1) Recognize and confirm the progress and issues on the project activities by following project PDM. Fix possible countermeasures if any issues are found.
(2) Evaluate the Project by DAC five evaluation criteria
(3) Review and revise PDM if necessary
(4) Find out measures to promote and establish ME management system in Cambodia after completion of the current project.

The results of evaluation and recommendation were compiled in this Joint Evaluation Report and agreed between Cambodian and Japanese Side preferably at the Joint

Coordinating Committee.

3. Evaluation Team

Cambodian member

Prof. Eng Huot: as responsible authority

Dr. Chi Mean Hea: as coordinator, facilitator

Other member of Management Group of the MEDEM Project

Japanese Member attached to Cambodian Side

Mr. MATSUO Takeshi: coordinator, facilitator

Japanese Member

Mr. UKAI Hikoyuki: as team leader

Ms. TERAKADO Masayo: as chief evaluator

JICA HQ (experts and JICA staff): as assessment advisors

4. Role of the Authorities Concerned in the Evaluation

- JICA Cambodia office
  - ① Call an evaluation team which includes an analyst
  - ② Prepare of evaluation grid
  - ③ Conduct analysis
  - ④ Make recommendations

- JICA Japanese and national staff to the MEDEM Project undertake
  - ① Coordination
  - ② Data collection
  - ③ Translation

- MOH/HSD/HSB undertake
  - ① Review monitoring system
  - ② Data collection

- National Maternal and Child Health Centre (NMCHC)/NW undertake
  - ① Data collection

5. Method of Evaluation

The mid term evaluation team worked together with counterpart (MOH/HSD, NMCHC) and JICA project, by taking the following steps;

(1) Preparation of Evaluation Grid and Questionnaire

The team prepared evaluation grid and questionnaire. The grid was composed of the information such as item to be researched, measures of verification (necessary data and information), methods, information resources. Questionnaire were developed and used as part of information resources and were followed up through interviews with certain stakeholders.

(2) PCM Workshop

The Project Team organized PCM monitoring and reviewed workshop to find out the progress and challenges of the Project.

(3) Analysis of the collected information

The Evaluation Team analyzed the evaluation grid, questionnaire and result of workshop.

(4) Discussion between Cambodian and Japanese side

Both party discussed the result of the analysis and prepare minute (including PDM) based on a draft evaluation report, which were prepared by the Evaluation Team.

(5) Endorsement of the

Final agreement were made on the Joint Evaluation Report, together with a minute of discussion if necessary.

6. Proceedings and Schedule

M	D	JICA CAMBODIA Office	MEDEM Project Japanese and National staff	MOH/HSD/HSB	NMCHC/NW
July	-20	Making Evaluation Grid (J)			
	-				
Aug	-3		Data Collection	Data Collection	Data Collection
	-7	Making Questionnaire (E)		Review Monitoring System	
	-7	Mid Term Review WS (PCM)			
	-9		Minute of WS		
	-13	Finalizing the Evaluation Grid	Fill in Evaluation Grid	Answer Questionnaire	Answer Questionnaire
	15-17	Compiling/ Analyzing Data Complete Evaluation Grid Interview C/P (based on Questionnaire)			
	20-	Interview Japanese & National staff			
	-27	Draft join evaluation report			
	28	Report and discussion with JICA HQ (TV conference)			
Sep	-31	Making Recommendations			
	-3	Discussion with JICA HQ (TV conference)			
	-17	Drafting joint evaluation report based on comments from HQ			
	17	Share the first draft joint evaluation report			
Sep	19	1st discussion with the Management Group of the Project on the draft joint evaluation report			
		Discussion (if required)			
Oct	4	Joint Coordinating Committee (signing on the Joint Evaluation Report)			
End	Year	Follow-up Actions and monitoring			

CHAPTER 2: RESULTS OF EVALUATION/ ANALYSIS

1. Process of Project Implementation

1. Progress of Activities

The Project made a good progress according to the plan, despite the slight delay in activities for 2006, and there is no major delay in the implementation of activities at the moment. There is a good sense that the Project is moving forward to achieve the Project Purpose, especially with more than half of medical equipment (ME) related persons were trained, and with around 40% of the hospitals having introduced basic ME management activities after the Trainings. (see ANNEX1 for the progress of the Project Activities)

2. Administration of the Project

- The Management Group[1] for the administration of the Project is supportive of the Project implementation.
- There is a good understanding for the utility of monitoring system among the Management Group, and the revised monitoring system will be utilized for the Project management. *(→Recommendation 6.1.)*
- The Management Group gets involved in the Project through reporting from its staff and monitoring. However, opinions are divided on how much involvement in the actual implementation of the Project is required by the Management Group.

3. Staff Allocation

- Personnel changes were frequent (see ANNX 2, the chart on C/P allocation) on Cambodian side, mainly because of personal reasons as well as MOH's strategic consideration for human resource allocation. It is appreciated that the MOH has taken some measures to tackle this challenge.
- However, in general, challenges remain on how HSB can function effectively with current human resources, which seem not necessarily sufficient compared to their workload. This

[1] i.e. Project Director, Project Supervisor, Technical Advisor, Project Manager, as stipulated in the IV of the Record of Discussion for the MEDEM Project

concern is widely shared among the stakeholders[2] (see ANNEX 3, the latest job description of HSD/HSB and the staff allocation (to be revised soon)). Limited salary for public servants might also contribute to difficulties for them to fulfill their duties at MOH.

4. Function of the Cambodian team (the Project C/P)

- In spite of its efforts, the instruction system of the Cambodian team in general seems not to be clear enough, and this concern is partly shared among the Cambodian themselves. Especially, closer collaboration among the Management Group to ensure the instructions to be followed-up, should be ensured, as pointed out by several stakeholders through the Questionnaire and Interviews. *(→Recommendation 6.2.)*
- There is a general job description for HSD/HSB. Updating and clarifying the detailed tasks in terms of ME management promotion would be useful for more effective functioning of the Department/ Bureau, as pointed out by several stakeholders, and the MOH's current plan to do so is welcomed and should be encouraged. *(→Recommendation 1.3.)*
- There is a good understanding among the Project Team[3] about the role of MOH/HSB and that of NW/NMCHC (see ANNEX 3 for the current NW's Management Protocols, which includes TOR for individual staff (developed in 2002)) , (e.g. HSD should be responsible for policy and management, NW for technical issues). However, a discussion on the demarcation of the responsibilities in more detail and sharing the results widely might be useful in order to strengthen the functions and motivation of the two bodies. *(→Recommendation 1.3.)*
- Instruction systems for HSB and NW are separate and parallel, as they belong to different authorities (HSB→ MOH / NW→NMCHC). Most of the communication between the two is done by ad-hoc basis (not through an established system) and is functioning well, thanks to the good understanding of the persons involved. However, this instruction system might be usefully formalized, based on the clarified demarcation mentioned in the above, for the sake of stability in the future.
- As an effort to encourage more information sharing among the team, MOH's will to increase the number of meeting or other occasions to ensure information sharing is welcomed.

5. Function of the Japanese team

- Generally, clear job description and information sharing mechanism are in place. There was no particular opinion to point out problems concerning the function of the Japanese team in the Questionnaire and Interviews.
- However, it would be useful to have more frank discussions and strengthen cooperation

[2] Cambodian C/Ps (including the Management Group) and the Japanese Team (Long-term expert and short-term experts), who responded to the Questionnaire and Interview of this Mid-term Review

[3] Cambodian C/Ps (including the Management Group) and the Japanese Team

among the team in the process of carrying out the tasks which are overseen by different experts, in order to maximize the impacts on the activities. One example would be to more actively ensure the coherence and make a good linkage between the several training materials (i.e. materials for ME technicians and for ME managers). *(→Recommendation 6.2.)*

- It may be also important for the experts to have more intensive discussions to reach a certain degree of consensus on the vision on how to move forward with the Project in detail.

6. Relationship among the Project team (Cambodian and Japanese teams)

- There exists good trust among the Project Team (i.e. the Cambodian and Japanese team) in general, as supported by the responses to the Questionnaire. A number of the stakeholders make a lot of efforts to enforce the relationship among the Team.
- However, it was pointed out by several stakeholders that closer communication and more frank discussions especially between the two sides should be encouraged on certain topics (e.g. on the future vision of ME management in Cambodia, and how to assign the responsibilities to different organizations). *(→Recommendation 6.2.)*
- Most of the stakeholders observe that information sharing among the Project Team is going well. There is also a positive remark that both sides make efforts to listen to others' opinions, which should be highly appreciated. In order to maximize these efforts, strengthening communication skills between the two sides (e.g. language skills which always requires interpretation in the course of Project implementation) and information sharing (e.g. most of the actions are initiated by the Japanese side according to the observation) would contribute to deepen the relationship further.

7. Awareness and Ownership for Addressing Problems in ME Management

- There is strong awareness on challenges and importance for enforcing ME management among the Project Team. On the other hand, it is observed that understanding on their concrete solutions, especially the long-term and comprehensive measures seems to be lacking, and should be widely shared in the Project team.
- As for the ownership toward the Project activities, a number of Cambodian stakeholders assert to take initiatives in some activities, and there are a number of activities which they can implement without the help from Japanese team by now (e.g. logistics for workshops organization), all of which can be considered as good achievements of the Project. There were also a number of positive remarks toward the attitude of Japanese team, to respect and encourage the ownership of Cambodian side. Such efforts by the both sides are welcomed and should be even more strengthened.
- When it comes to ownership toward ME management promotion in this country in more specific terms, there remains a question for which organizations should take which

responsibilities and actually implement measures for the issue. A general idea that MOH should take some measures is in the mind of the stakeholders, and it is plausible that a number of respondents to the Questionnaire assert they make efforts to solve ME issues even outside of the Project activities. However, it is observed that there is a need to clarify the question in detail and share the consensus among the stakeholders.

- Calls from Cambodian side for JICA to continue its support in this area without clear idea about division of labor with MOH are frequently heard. Question on the real ownership/ commitment to actually take actions for ME management should be clarified in this regard, although there is a steady increase in ownership of the C/P toward the Project Activities, according to observations by the Japanese Team. *(→Recommendation 6.4.)*

8. Incentive System

- A large number of Cambodian stakeholders find themselves motivated for the Project activities. It is especially observed that, through the workshop implementation (e.g. acting as lecturer), some C/P seems to be highly motivated.
- There was an argument by Cambodian side that the Project should provide incentives/ salary supplements. As a series of discussions in the Project Team as well as with the JICA Cambodia Office, there is an understanding about basic principle for JICA project implementation and there is no complaints openly expressed. However, there is an opinion that JICA[4] should at least consider the reality of the low salary at MOH. Also, there is still a strong sense among some Cambodian C/Ps that per-diem provided by the Project is not enough. (There is, however, an opinion that it is appropriate since there is not a big gap with the amounts that MOH can pay after the Project withdraws.)

2. Evaluation Based on the DAC 5 Evaluation Criteria

1. Relevance

- In general, relevance of the Project is found to be relatively high. This is because the Project supports the Cambodian policy, Health Sector Strategic Plan 2003-2007, which commits to "strengthen the management of coverage of support services such as laboratory, blood safety, referral, pharmaceuticals, equipment and other medical supplies and management of facilities and transport", as a component of "health service delivery" which is one of the 6 priority areas of the Plan.
- With regards to the relevance to the Japanese ODA policy, the Project is in the line of the

[4] JICA HQ and JICA Cambodia Office, if not specified.

general direction, considering the possibilities that, in the long run, the Project serves to improve the health services, which is included in the priority areas of Japan's Assistance Policy for Cambodia. However, it should be remembered that the contribution of the Project to the Plan's specific strategy to support the socially vulnerable people through providing supports in Basic Human Needs (BHN) (e.g. health and education) remains limited, since the Project's direct purpose is to improve ME management in hospitals and there are a number of other measures to be taken so that improved ME management will result in increasing the health services, especially to the socially disadvantaged people.

- The Project is relevant in terms of the needs of hospitals in general, although their perception on the necessity or importance of ME management remains quite general.
- The selection of Project scope can be recognized as appropriate. There are enough justifications for not including user training, infrastructure development, and development or facilitation of spare-parts procurement.

2. Effectiveness

- At this moment, there is a sign that the Project is moving forward steadily to achieve the Project Purpose, especially the introduction of the basic maintenance and management activities, in light of the current progress for Output 2, with around 40% of the hospitals having introduced such activities after the Training by the Project, and the good prospects for implementing the Activities to support the achievement of the Purpose. While this good anticipation can be attributed to several positive factors such as strong supports from the Cambodian side, and efforts by the Japanese side to work together with the Cambodian team and to encourage their ownership, it might be necessary to share common and clearer understanding among the stakeholders and JICA on concrete level of attainment for the Project Purpose, especially on the level of its sustainability, so that the Project can identify priority activities in the latter half of the Project for more effective achievement of the Project Purpose *(→Recommendation 3.)*.
- The Outputs are relevant and important factors to achieve the Project Purpose.
- As for the Pre-conditions/ Important Assumptions, there are several reports that the qualification of the ME technicians at hospitals are not adequate. A number of the stakeholders recognize it as one of the impeding factors for attaining the Outputs. Several measures for clarifying and ensuring good qualification for the ME technicians started to be taken cared of in the framework of the Project activities as well as by MOH's own efforts. *(→Recommendation 3.2.)*
- With regard to the prospects for C/P to continue working for the Project, one of the important assumptions of the Project, frequent personnel changes, could be a bottleneck.

3. Efficiency

(1) Achievement of the Outputs

- A number of Cambodian stakeholders are positive about the prospect for achieving the Outputs. However, firstly, there is a need to share common understanding on concrete level of attainment for each Output among the stakeholders and with JICA *(→Recommendation 2.)*. Secondly, there are some factors which make it difficult for the Project to be positive about this prospect, at least at this moment, as follows.
- Activities are relevant for achieving the Outputs in general. However, there is a room for the Project to consider introducing new activities to achieve the Outputs more effectively, based on discussion on the points below.

Output 1

- According to the observation by the Japanese experts, there is a good sign that HSD's understanding on the importance of ME management, and capacity for certain tasks, such as preparations for Trainings and coordination with hospitals are increasing.
- However, prospects for achieving indicators 2, 3, 4 are not necessarily high, for the moment, considering the fact that the activities for those indicators are not implemented partly or completely (e.g. no quarterly report). While this challenge is being tackled with by MOH, through staff change and clearer assignment of the responsibilities, there are concerns over limitation in human resources and administrative capacity in HSD.
- In addition to this, as for indicator 3 and 4, the AOP system at MOH itself has been just introduced and is not at full function yet, and this is also a bottleneck for the Project to rigorously engage in activities to strengthen the HSB's capacity to draft AOP. However, the Project should be encouraged to implement such activities, so that HSB can get prepared when the AOP system in MOH will function, and can actually draft an evidence-based AOP with good coordination with NW (e.g. based on the information from hospitals as well as the past activities through reports of the previous years). *(→Recommendation 3.1.)*
- Attainment level for these Outputs should be re-examined and understood by all stakeholders, especially concerning their "administrative capacity" as well as HSD and NW's capacity to implement activities related to Output 2 and 3 (no indication in the PDM).

Output 2

- There is a sound progress in the Training and follow-up activities. As is pointed out above, there is a good prospect for achieving this Output, considering the fact that 40% of the visited hospitals after the Training by the Project have introduced necessary activities.
- While capacity of the C/P as lecturer for training is increasing, according to observations by the Japanese Team, compilation of the information on hospitals has not been started yet, and is expected to be followed-up immediately. There is also a need to clarify and widely share attainment level for this Output, especially concerning degree of the sustainability for Indicator

5, among stakeholders and with JICA.

Output 3

- The introduction of new concept on "ME management" (not "repairing") was appreciated by several stakeholders. Awareness toward ME management and management is raising as well.
- While there is a good sign for implementing necessary activities for the Output, there seem to be a couple of challenges for achieving this. First, like other Outputs, it is necessary to clarify and widely share the attainment level in detail. Second, activities to increase capacity of the Cambodia side to conduct necessary activities should be rigorously pursued, since most of the related activities is new to the C/Ps and has just started (as planed), and there are also some observations that C/P's capacity and time to be devoted to the activities might not be sufficient for the moment.
- However, at the same time, there is also a good encouragement that the C/Ps and Japanese experts are working actively based on a good relationship and trust.

(2) Inputs/ Outputs compared to Inputs

- Volume and quality of the Inputs from Japanese side are perceived to be optimum in general. Especially on the expenses, there are several efforts to minimize them (e.g. by utilizing the existing equipments and recruiting Japanese National Staff in more cost-effective way), while still keeping the good prospect for bearing similar level of Outputs as other technical cooperation projects.
- As for the timing of the Inputs, namely the one for experts, it might have been more effective to dispatch them separately (although with a short period of overlaps to make sure coherence among their activities), so that the Cambodian side could devote sufficient time and resources to exploit their supports.
- The Inputs by the Cambodian side seem to be sufficient, and in some case, more than expected (e.g. offer of accommodation by NMCH for training participants). There is also a prospect for increasing the resource allocation from the HSSP, if negotiation succeeds, as well as MOH on small expenses. However issues on the frequent change of C/P need to be solved, as mentioned before.

4. Impact

- It is difficult to conclude that the Overall Goal will be achieved or not at this moment. However, in light of the absence of discussions and agreements on how to sustain the Project achievements, clearer understandings and more actions to ensure the achievements may be required.
- There are some good impacts, which were not foreseen at the time of the Project

commencement, on activities by other JICA Projects, by other Donors, or by MOH itself. Especially, significance of the impact on the activities by HSSP, namely the Project's technical contributions to HSSP's hospital renovation and ME procurement plan, should be more recognized and highlighted by wider audience.

5. Sustainability

- While there is a good prospect that the Policy will remain favorable about ME management promotion, there are a large number of issues to be solved to "actually" ensure the sustainability of the Project achievements at the grass-root level, as follows. It should not be overlooked at the same time, that concerns over the sustainability seem to be shared among stakeholders to some extent, as demonstrated in their responses to the Questionnaire.
- Firstly, awareness and ownership for tackling ME management issues in the key Cambodian stakeholders should be further strengthened. Although individual staff do have own idea about what should be done in general, concrete measures and responsibilities for the implementation are not clarified and widely shared in an official way. While a number of stakeholders assert to make efforts in initiating some activities even outside of the Project scope, it is observed that ownership to actively take actions seems to be rather weak (e.g. not perceived as MOH/ HSD/ NW's task).
- Secondly, institutional capacity of MOH (e.g. administrative capacity, human resources) needs to be further improved. There are also some structural complexities to effectively carry out necessary tasks by different bodies (e.g. more collaboration and clearer division of responsibilities are required between NW and HSD, whose instruction systems and AOP are separate.).
- Thirdly, from financial perspectives, more efforts to enforce the prospects for increasing MOH budget allocation to necessary activities should be encouraged. First; it is very positive that there are some efforts for cost-sharing in the Project activities such as provision of the accommodation by MOH for the Training. There is also an expectation to gain HSSP budget for training and MOH for follow-up visits at hospitals thanks to the efforts at the Project. More measures for these efforts to bear fruits should be encouraged. Second; it is suggested to enforce some activities to ensure more allocation of the budget, by, for example, supporting AOP development, and lobbying to MOH management officials. *(→Recommendation 6.5.)*
- Fourthly, there are no clear incentives for the beneficiaries (i.e. target hospitals) to actually implement the related activities and invest resources to do so, although this situation could be improved to some extent by implementing new activities in the Project or by MOH. *(→Recommendation 3.2.)*

CHAPTER 3: CONCLUSION AND RECOMMENDATIONS

1. Conclusion of the Mid-term Evaluation

1. It is possible to conclude that the MEDEM Project is making a good progress against its plan and toward the achievement of the Project Purpose, especially with around 40% of the hospitals having introduced basic ME management activities after the Trainings by the Project. There are also good signs that the capacity of Project C/P is improving, for example, with more ability to act as lecturers at the Trainings, and with more capacity to implement a number of activities without a help from Japanese team, such as logistics for workshops organization. However, more efforts are required for activities related to Output 1, and prioritization of the activities should be made. It is also important that the Project and JICA shares clear idea about the attainment level of the Project Purpose and Outputs of the Project.

2. The process of the Project implementation is under favorable conditions especially in a sense that there is a strong trust inside the Project Team, and good environment to promote the ownership of the Cambodian side for the Project. However, more efforts would be required to facilitate the process even further by, for example, having more frequent and frank discussions among Cambodian side, Japanese side and the Project Team as a whole.

3. Against the DAC 5 criteria, it is possible to conclude with a positive sense, especially with "effectiveness" and "impact". On the other hand, as for "sustainability", although with a good prospect for the favorable policy conditions, there are a large number of issues to be solved to actually ensure this, and the activities to ensure this point should be started during the Project term.

2. Recommendations to be considered by the Project Team

[Summary of Recommendations]

Recommendation 1.

Clarify and share the vision of ME management in this country and roles of the organizations, mainly by holding more discussions among the Project Team, and by clarifying and agreeing the roles, responsibilities and relationship of HSD/HSB and NW. (by the end of December)

Recommendation 2.

Clarify and share the attainment levels of the MEDEM Project Purpose and Outputs. (by the end of December)

Recommendation 3.

Prioritize the Project Activities and introduce additional Activities (by the end of December)

Recommendation 4.

Revise the PDM and PO (by the end of December)

Recommendation 5.

Consider additional inputs based on the follow up result of the Evaluation

Recommendation 6.

Efforts to facilitate the process of the Project implementation in areas such as : follow up the PCM Workshop, ensure closer communication and more frank discussions among the Project Team, raise awareness and ownership of the Project C/P, MOH demonstrate clear commitment for more budget to ME.

Recommendation 1.

Clarify and share the vision of ME management in this country and roles of the organizations.

1. **First and foremost, it is indispensable that MOH clarifies (1) the vision of ME management for the coming 5-10 years in this country, (2) which organization should take responsibilities for which tasks in detail, and share the Project Team and JICA, and (3) widely share these points as an official decision.**

2. While MOH's prompt decision as a whole on these issues is strongly recommended, the Project Team is invited to support this process at the same time, as this would also facilitate achieving the outputs of the Project itself. With regard to (1) (vision of ME management), for example, **the Project Team, especially the Management Group, with the help of the Japanese Team and JICA Cambodia Office, should hold more regular meetings to discuss this issue.** It might be useful to use a concept paper as attached to this document, as a basis of the discussion so that we can have such discussion with more comprehensive and long-term view (ANNEX-(R)1). It is recommended that a future action plan be made and shared between the Project Team and JICA

Cambodia office by the end of year 2007.

3. As for (2), **it is suggested at least to clarify and agree with the roles, responsibilities and relationship of the HSD/HSB and NW in facilitating ME management in this country as well as in implementing the MEDEM Project by the end of December 2007**, based on the careful consideration on capacity of each body. The Evaluation Team would like to suggest that the Project Team utilize a table in ANNEX-(R)2 with some concrete suggestions as a basis for such discussions. It might be better if the job description of HSD/HSB being revised by MOH reflects this discussion. Also, JICA Cambodia Office is encouraged to collaborate with MOH and other donors involved in the current function analysis and reforms of MOH on this issues.

Recommendation 2.
Clarify and share the attainment levels of the MEDEM Project Purpose and Outputs

As pointed out repeatedly in the Evaluation Results, **clarifying and sharing the attainment levels of the Project Purpose and each Output is important**, in order to have clear understandings on the goals and concentrate resources on priority activities. ANNEX-(R) 3 is a list of points to be clarified and some suggestions for such levels by the Evaluation Team. It is recommended that the Project Team discuss and decide on such levels **before the end of December** for formal endorsement. If current Indicators in PDM is not sufficient, it is also recommended to add more to reflect these attainment levels.

Recommendation 3.
Prioritize the Project Activities and introduce additional Activities

1. Considering the limited time and resources available for the Project, **it is recommended that the Project prioritize some of its Activities, in order to maximize the impact of the Project activities.** The following is the suggestion from the Evaluation Team and it is recommended that the Project Team agrees on their priorities and submit this to JICA Cambodia Office by the end of December.
1) Among the Outputs, 2 and 3 should be achieved with higher priority, considering its direct impact to the Project Purpose, and considering the limited resources available for MOH.
2) However, Output 1 is also important, especially when we consider the sustainability of the Project. It is recommended that the Project especially shift more resources and energies to HSB's capacity development in drafting AOP (related to Indicator 3). Drafting an evidence-based AOP and ensuring coherence between the AOP of HSB and one of NW would be essential and improving capacity of HSB to do so should be the center of the activities. It is also important to

implement more activities to enforce HSB's capacity, together with the support from NW, to conduct monitoring trip in a sustainable manner and give "supportive supervisions" to hospitals (Indicator 2). In this regard, efforts to enlarge the capacity of NW might be also important.

2. At the same time, in order to accelerate the achievement of the Outputs, **it is recommended to introduce some new Activities** to the Project as follows. The Project is suggested to consider this point and decision could be also made before the end of December so that it can be included in the new PO (to be discussed below).;

1) For Output 1, activities to define and ensure allocation of appropriate ME technicians and managers at target hospitals (part of which is now the Important Assumption of the Project), in order to maximize the impact of the Trainings as well as related activities at the hospitals.

2) For Output 3, activities to encourage target hospitals more to engage in ME management, in order to increase their incentives and capacity to do so. Ideas include, for instance, highlighting successful hospitals by giving awards or by utilizing media. Compiling and sharing successful experiences, and visible and tangible results such as reduction of ME management and repair fee in hospitals would be also helpful. At the same time, the Project Team could consider a creation of a system where successful hospitals can get more budgets for ME management from MOH with a help of other donors. The JICA Cambodia Office could facilitate this action.

Recommendation 4.
Revise the PDM and PO

1. Upon agreement on the above-mentioned issues, **it will be necessary to revise the PDM to reflect the changes mentioned-above,** as suggested in ANNEX-(R) 4.

2. At the same time, **the following revisions are also suggested so that the PDM is in line with the realities which were identified through the Project Activities so far, and can show the Project more accurately**;

1) Delete "PHD" from the Project Purpose and Output 3. This is because the Project Team identified that the PHD's role and instruction system with target hospitals for ME management is ambiguous for the moment (e.g. Coverage of PHD's responsibilities over hospitals has changed 2 times already after the Project started.).

2) Insert an indicator for the Output 1 to measure the capacity of HSD and NW to conduct the Trainings.

3) Revise one of the "Objectively Verifiable Indicators" under the Project Purpose to read "Medical equipment management procedure are....", in order to avoid duplication with other Indicators.

3. The Project could also usefully amend the PO to reflect the revision here.

4. The revised PDM and PO should be agreed **officially upon the agreement by the Project Team and JICA by the end of December.**

Recommendation 5.
Consider additional inputs

Both Cambodian side and JICA Cambodia Office could usefully consider increasing inputs such as more budget allocation and experts dispatch to the Project, necessary for the newly introduced or intensified Activities in mentioned above, if condition allows. More concrete arrangements from Japanese sides could be considered upon the revision of PDM and PO, as well as action taken by MOH or the Project team to follow up the major recommendations of this Mid-term Evaluation.

Recommendation 6.
Efforts to facilitate the process of the Project implementation

There are some recommendations for actions in order to facilitate the process of the Project implementation as follows. Some of the recommendations are important for achieving the Project Purpose as well as ensuring the sustainability of the Project;

1. It is encouraged that **the Project team will fully utilize the new Monitoring Chart. Also it is important that the Project team follow up the measures to solve the issues identified based on the Chart at the PCM Workshop** (ANNEX-(R) 5)**, and that the Management group closely monitor the progress.**

2. **Ensuring closer communication and more frank discussions is indispensable** (1) among Japanese experts especially on the vision on how to move forward with the Project in detail, and on the tasks which are overseen by different experts, and, (2) among the Cambodian Team, especially the Management group, to ensure the instructions to be clear and followed-up, and (3) between the Cambodian and Japanese sides, especially on certain topics such as the future vision of ME management in Cambodia, and how to assign the responsibilities to different organizations. The Evaluation Team strongly recommends the Project Team to promptly have discussion on how to establish mechanisms to ensure good communication. How to follow up the results of the Mid-term Evaluation could be one of the first topics for discussion under the newly established mechanisms.

3. **MOH should consider how to fill the gap between the workload and capacity of HSB, and**

delegate some responsibilities and tasks to other bodies. Based on the clarified job description of HSB and NW, the Management group of the Project with a help of the Japanese Team should consider whether the capacity of HSB (e.g. number of staff, and human resources capacity) is sufficient vis-à-vis its workload, and should take actions promptly. Actions may include delegating more works to other divisions or NW. Closer collaboration between the 2 organizations is also on call. The Evaluation Team strongly recommends MOH to delegate especially technical responsibilities and tasks to NW, strengthen instruction system and collaboration with HSB, and increase their capacity by allocating more budgets (as already suggested in ANNEX- (R) 2). More detailed discussion might be required and should be followed up by the Project Team and JICA Cambodia Office.

4. **MOH should take more actions, with a support from Japanese side, to raise awareness and ownership of the Project C/P for addressing the issue in ME management and the MEDEM Project.** Having clarified the vision of ME management in this country and responsible bodies with respective tasks identified in detail, it is recommended that MOH hold discussions among its staff to raise awareness and ownership of the Project C/P and other MOH staff toward such visions, that they are the one who should mainly take responsibilities for the ME management issues in this country, by utilizing the framework of the strengthened communication mechanisms as above. More encouragement from the Management Group to hard-working staff on the issues should be given, and their success should be widely shared with other staff. The Japanese Team should help with this process. MOH supports in this direction are much appreciated.

5. **MOH should demonstrate its clear commitment to allocate necessary budget to ME management or its promotion** before the Project termination, in order to ensure the sustainability of the Project achievements. Especially budget for providing continuous "supportive supervision" to hospitals (e.g. monitoring trip and brush-up training) by HSB and NW would be indispensable. **At the same time, the Project Team, with a help of JICA Cambodia Office, could usefully deepen the discussions with MOH or other donors such as HSSP in this direction.**

2. Recommendation to be considered by the MOH in long-term

As recommendations to MOH on long-term basis, the following actions are suggested.

Recommendation for future 1.

Establish a long-term strategy for ME management

MOH could usefully establish a long-term strategy for ME management in this country. This should

include wider scope of action taken by MOH than the MEDEM Project does. Especially, based on experiences with similar JICA project in different countries, how to establish a system to ensure appropriate and efficient procurement of ME spare-parts, as well as mechanism to allocate necessary budget in time, are keys for success. Also, promoting ME management and management issues "in the framework of hospital management", including financial management, and capacity development of the hospital in this comprehensive hospital management, are important. Encouraging and regulating private actors such as ME company and maintenance consulting company is also an important issue to be considered.

***Recommendation for future* 2.**
Strengthen the function of AOP

AOP is still a new process to the government of Cambodia. Ensuring proper functioning of AOP- which is to say, evidence-based drafting, proper budgeting and disbursement based on AOP and its monitoring, is indispensable not only for ME management issues but also for MOH's whole activities. More efforts by MOH, together with other Ministries and with help of development partners will be required in this area.

END

LIST OF ANNEXES

[ANNEX]

[ANNEX related to the Recommendations]

Progress of Activities (Part 1) As of 7th August 2007

	Subjects of Survey		Mean of Verification	Necessary information・Data (Questionnaire)	Source	Methods of collecting data	Survey Results
	Target	Indicator					
Overall Goal	Basic maintenance of ME is conducted at NHs and CPA3 RHs.	1. Operable rate of ME is improved for all ME at NHs and CPA3RHs.	To improve operable rate of ME in each hospital.	MEDEMIS Inventory	HSB	To see MEDEMIS Inventory	
		2. Estimated equipment life is fulfilled for all medical equipment at NH and CPA3 RHs.	The life span of ME become longer than expected its years (More than Japanese standard)	MEDEMIS Inventory Chart of life span of ME (Japanese standard)	HSB Project office	To compare MEDEMIS Inventory and chart of life span of ME	
		3. Number of preventive maintenance are increased while repair cost is decreased, during the estimated equipment life.	To increase the frequency of preventive maintenence. To compare of cost of repair (20?? ~ 20??)	Maintenance workshop, Report of hospitals	Target hospital HSD (HSB)	Analysis of hospital report (MoH) or hospital visit	
		4. Number of minor repair service by maintenance workshops at CPA3RH makes constant increase, while the one of NH decreases.	To decrease the number of out-reach service of NH To increase the in-house repairing service in each hospital	NH annual report Workshop, reports of hospital	NH Target hospital	Analysis of NH annual report Analysis of hospital report and hospital visits	
Project Purpose	Basic maintenance and management activities for ME are introduced at target HPs by following the instruction of MoH and PHDs, and by receiving technical guidance of NH.	1. Target NHs and CPA3 RHs submit annual activity report on medical equipment management to PHDs and HSD.	Target HPs submit report regarding ME maintenance management (such as existing annual report)	Annual report of target hospital	MoH (HSD)	The number of conformed report (the number of hospitals)	
		2. Based on the instruction manuals and checklist of medical equipment, periodical check and maintenance are conducted at target NHs and CPA3 RHs.	To see the condition of inspection and maintenance management on Job record or ME check list.	Maintenance workshop, Hospital reports	Target hospital, Monitoring record	Analysis of hospital report and hospital visit	12 hospitals were already instructed. 7 hospitals were visited and 5 hospitals were started activities Remaining hospitals : 10 hospital
		3. Maintenance and management plans are prepared and followed at target NH and CPA 3 RH.	To see ME maintenance and management plan (Number of hospitals)	ME maintenance management plan	Target hospital, Monitoring record	The number of collected ME maintenance and management plan of each hospitals, Analysis of workshop report	
Output	1. 1-Administrative instruction of HSD of MoH on ME management for target HPs is strengthened, with technical guidance of NH	1. Inventory is completed and regularly updated.	HSD implements MDEMIS. To see updating of data	Check PC	HSB	Collecting of update data	Database for target hospital was completed on September 2006 and introduced all target hospitals. 4 hospitals updated of inventory.
		2. Monitoring trip by HSD and maintenance service by NH are regularly conducted, and findings are fed back to their activity plans.	To create tools for monitoring. To summarize business trip report To discuss monitoring resulting	Business trip record Minutes of meeting	HSB	Analysis of business trip business Questionnaire	Monitoring trips were implemented, however no collection and analysis. Monitoring trips report is existed, but no evaluation and analysis.
		3. HSD prepares annual work plan by considering available human resources, financial resources, and materials.	Necessary activities is planed and examined by HSD	Annual operation plan (AOP) Minuets of meeting	HSB	Questionnaire, Analysis of AOP.	There is no AOP of HSB that based on careful consideration.
		4. HSD prepares quarterly report of their activities, and analyzes the progress.	HSB monthly reports are made regularly. To collect monthly reports in quarterly. To discuss quarterly reports in meeting To compare AOP and this report	Monthly reports Quarterly reports	Staff in charge of monitoring	Analysis of HSD activity reports. Questionnaire for monitors.	No reports (Only one monthly report (January 2007))

Progress of Activities (Part 2) Continued As of 7th August 2007

	Subject of Survey		Mean of verification	Necessary information - Data (Questionnaire)	Source	Methods of collecting data	Survey Results
	Target	Indicator					
Output	2. Technical skill of ME technicians in target NHs and CPA3 RHs is improved.	1. Number of trainees and instructors trained.	To increase of numbers of trainees	Training report TOT report (Report of Expert) Training in Japan	HSD Project office	Count of Training report. Analysis of report of short-term expert. Count of Training in Japan.	Number of trainee: Technical training (Theoretical Course) 38 people, (Practical Course) 13 people (1,2 Group)、Pre -technical training WS 39people Trainer: TOT/Lesson learn training 7people, Technical training (Theoretical and Practical Course) 10people
		2. Number and types of training courses.	To increase the frequency and types of training.	Training report TOT report (Report of Expert) Training in Japan	HSD Project office	Count of Training report. Analysis of report of short-term expert. Count of Training in Japan.	Technical training (Theoretical Course) 1 time (1 week)、Technical training (Practical Course) 2 time (4 weeks) ,Pre- technical training WS 1 time (1 day) TOT/Lesson learn training (1 day)
		3. Number and types of developed manuals, checklist, curriculum and training handouts.	Types of Training manuals, checklist, curriculum and handout, and total pages. Types of training curriculum and number (number of revising)	Training manuals, checklist, curriculum and handout	HSD Project office	Count and analysis of outcome	ME maintenance guidebook (Khmer (Edition 3) 333p, English (Edition 2) 349p) Detail: 19 subjects (Khmer 196p, English 158p), 37 ME manual (Khmer 100p, English 154p), 37 ME checklist (Khmer, English 37p) Training schedule: Technical training on ME maintenance Theoretical course: 1 type, Practical course: 2 types
		4. Difference in scores of pre-test and post-test conducted in the training course makes constant progress.	Score of test is improved after training. Rates of improvement increase	Training Report	HSD Project office	Count of test score in training report. Analysis of test score.	1st Group Average 34.3 points- 64.4 points 2nd Group Average 44.2 points- 66.5 points
		5. Project team's monitoring results for ex-participants make constant progress.	To see tools for monitoring to compare results. To summarize monitoring results To record monitoring results in monthly activities report.	Monitoring chart. HSB monthly reports.	HSD Project office	Analysis of monitoring chart (Checklist of monitoring trip and score chart)	Count of result of monitoring is not yet completed. (In PCM WS, 3 of 7 hospitals are already confirmed output of ME training. Due to unclear job description of ME technician, no achievement in some hospitals) F/U: 7 hospital (one time each)
	3. Management skill of ME manager in target NHs, CPA3 RHs, and PHDs is improved	1. Number of trainees and instructors trained.	To increase of numbers of trainees	Training report TOT report (Report of Expert)	HSD Project office	Count of Training report. Analysis of report of short-term expert.	ME management seminar: 86 people (PHD 31, OD 5, CPA3 41, NH 9) TOT/ ME management WS: 9 people, TOT/training in JAPAN, Administration of ME management: 2 people
		2. Number and types of training courses.	To increase the frequency and types of training.		HSD Project office	Count of Training report. Analysis of report of short-term expert.	ME manger Seminar: 1 time (2 days) TOT/ME management WS: 1 time (1 day). TOT/training in JAPAN, Administration of ME management: 1 time (20 days)
		3. Number and types of developed manuals, checklist, curriculum and training handouts.	Types of manuals (guideline), and total pages. Types of curriculum and number (number of revising)	Training manuals, curriculum and handout	HSD Project office	Count and analysis of outcome	
		4. Difference in scores of pre-test and post-test conducted in the training course makes constant progress.	Score of test is improved after training. Rates of improvement increase	Training Report	HSD Project office	Count of questionnaire score. Analysis of questionnaire score.	
		5. Project team's monitoring results for ex-participants make constant progress.	To see tools for monitoring to compare results. To summarize monitoring results To record monitoring results in monthly activities report.	Monitoring chart	HSD Project office	Count and analysis of monitoring chart	

Progress of Activities (Part 3) Input As of 7th August 2007

Progress of Input	1. Cambodian Side	1-1 Allocation of necessary C/P and other staff who are necessary 1-2 Facility, Building, Equipments 1-3 Local cost	Compare between plan and progress	Input of each years	C/P	List of C/P and other staffs Confirmation of local cost and others	1. Allocation of C/P Refer to allocation list 2. Project Office and facility Project Office NoH and NMCHC Cost of electricity and water 3. Local cost 2005 2006 Provide accommodation for ME training, approximately 2300US$ 2007 Provide accommodation for ME training, approximately 1300US$
	2. Japanese side	2-1 Dispatched expert (Long-term and short-term) 2-2 Training in Japan 2-3 Provision equipment	Compare between plan and progress	Input of each years	Long-term Expert	List of expert (dispatched) List of progress of training for C/P List of provision equipment	1. Expert 1-1 Long-term Expert (1 person) - Chief Advisor (18MM) 1-2 Short-term Expert (Total 3 person) - ME maintenance management (7.43MM) - Training Planning (5.10MM) - ME management system (2.50MM) 2. Provision equipment 2005 Copy Machine (6,120US$) 2006 Project car (53,000US$) ,Printer (2,190US$)、PC (830US$) 3. Training in Japan, Administration of ME management (2 people) (0.67MM) 4. Local cost 2005 12,585.46US$ 2006 39,582.29US$ 2007 12,808.66US$ 5. Carried equipment No

Counterpart Allocation

ANNEX 2

		2006												2007											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Prof.Eng Huot	Secretary of State for Health																								
Dr.Chi Mean Hea	DDG for Health																								
Dr.Sann Sary	Director of HSD																								
Dr. Kuy Sivotha	D.Direcotor of HSD																								
Dr.Sok Srun	D.Direcotor of HSD																								
Dr.Cheu Sivuthy	Chief of HSB																								
Dr.Phy Radian	Vice-Chief of HSB unit,HSD																								
Ph.Sok Chann	Vice-Chief of HSB unit,HSD																								
Dr.Chan Sohka	Staff of HSB unit,HSD																								
Mr.Long Borin	Staff of HSB unit,HSD																								
Ms.Chhay Sok Heng	Staff of HSB unit,HSD																								
Ph. Sam Sopheap	Staff of Labo unit,HSD																								
Ph.Uch Monipheap	Staff of Labo unit,HSD																								
Prof.Koum Kanal	Director of NMCHC																								
Mr.Huot Khom	Director of Administration																								
Mr.Hab Sok Samnang	Chief of Bio-Engineering unit																								
Mr.Chum Toma	Chief of Facility unit																								
Mr.Ngeth Titya	Staff of Bio-Engineering unit																								
Mr.Ban Sau Sophon	Staff of Facility unit																								

Management group Main C/P Sub C/P

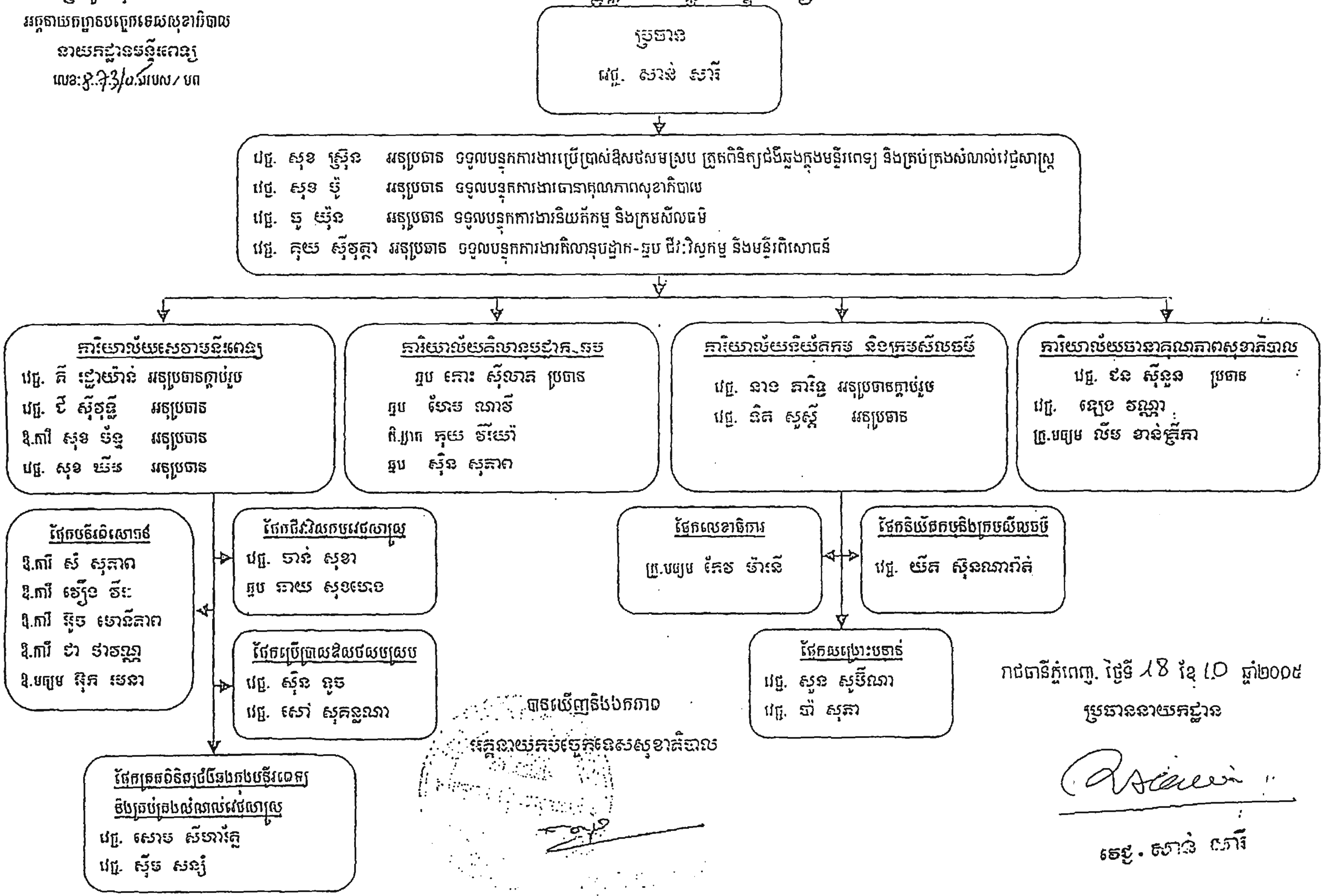
Organigram of HSD/MoH

Phnom Penh, October 18, 2005
Hospital Services Department
Director

Dr. Sann Sary

ក្រសួងសុខាភិបាល
អគ្គនាយកដ្ឋានបច្ចេកទេសសុខាភិបាល
នាយកដ្ឋានមន្ទីរពេទ្យ
លេខៈ ៩៣៣/០៥ នបស/បក

រចនាសម្ព័ន្ធនាយកដ្ឋានមន្ទីរពេទ្យ



បានឃើញនិងឯកភាព
អគ្គនាយកបច្ចេកទេសសុខាភិបាល

រាជធានីភ្នំពេញ ថ្ងៃទី ១៨ ខែ ១០ ឆ្នាំ២០០៥
ប្រធាននាយកដ្ឋាន

វេជ្ជ. សាន់ សារី

Kingdom of Cambodia
Nation Religion King

Ministry of Health
Directorate General for Health
Hospital Services Department
Hospital Services Bureau

Job Descriptions of HSD Staff

Dr. Phy Radian

- Take responsibility for management of activities of all units under the Hospital Services Bureau, especially for management –maintenance of medical equipments at national and provincial hospitals
  - Prepare and conduct meeting and workshop
  - Make annual action plan
  - Conduct supervision regarding management-maintenance of medical equipment
- Coordination and collaboration
  - With related agencies i.e. JICA, UNICEF, GTZ, HSSP, URC, ...
  - Making networking plan of central and provincial medical workshop
  - Implementing maintenance-repair at provinces
  - Monitoring and evaluating the Implementation Plan and Guideline of Medical Equipment Maintenance and Repair
  - With related departments and organizations
- Preparing and attending training courses, in collaboration with related organizations/agencies

Ms. Sok Chann

Take responsibility for management of activities of all units under the Hospital Services Bureau, especially for management –maintenance of medical equipments at national and provincial hospitals.

- Prepare and conduct meeting and workshop
- Make annual action plan
- Conduct supervision regarding management-maintenance of medical equipment

- Coordination and collaboration
  - With related agencies i.e. JICA, UNICEF, GTZ, HSSP, URC, ...
  - Making networking plan of central and provincial medical workshop
  - Implementing maintenance-repair at provinces
  - Monitoring and evaluating the Implementation Plan and Guideline of Medical Equipment Maintenance and Repair
  - With related departments and organizations
- Preparing and attending training courses, in collaboration with related organizations/agencies

Ms. Chhay Sok Heng

- Arrange documents and registration
- Prepare mission letters
- Record minutes of meeting
- Follow up all mission letters and other letters

Mr. Long Borin

- Manage and maintain all informatics' materials belonging to Hospital Services Bureau
- Assist the Vice-chiefs of Hospital Services Bureau and the Director of Hospital Services Department in making minutes of meeting and typing all related letters
- Arrange letter of mission to provinces regarding medical equipment management-maintenance supervision
- Arrange documents and registration
- Follow up all mission letters and other letters

Hospital Services Department

Position: Director/ Deputy Director of Hospital Services Department

TOR summary:

- Takes responsibility for every of clinical and nursing care in all constitutions at all level of public and private clinical and paraclinical services countrywide
- Take responsibility for medical regulation, ethic and bio-medical engineering.

TOR details:

- Develop policies and introduce regulation on management of services in order to upgrade quality of clinical/ paraclinical institutions
- Monitor and evaluate implementation of nursing/ clinical/ paraclinical institutions in both public and private sectors
- Routinely research and monitor on drugs, reagents and medical instruments consumption ratio at medical institutions countrywide
- Provide instruction on installation of hospital facilities and maintenance of them
- Provide instruction on daily registration of patient and hospital supplies
- Develop and introduce network system for nursing care
- Develop and introduce ethics
- Develop TOR details for each personnel of its respective department, bureau and unit
- Create criteria and procedures for selection of personnel for each position as well as personnel to attend local and overseas training

Qualification:

- A medical doctor who is skillful in hospital services and hospital management with at least 5 years experiences.

Bureau of Hospital Services and Bio-medical Engineering

Position: Chief of the Bureau

TOR summary:

- Take general responsibility for medical technique, appropriate drug consumption, laboratory (paraclinc) and private clinic
- Make plan of drug and medical materials consumption standards for health centers and hospitals in all provinces/ vile
- Manage clinic, maternity clinics, beauty centers, private poly-clinics properly according to medical technical standard
- Make plan and conduct monitoring/ evaluation of medical equipment maintenance activity

TOR details:

- Develop clinical guides for physicians or medical doctors
- Facilitate provincial hospitals, referral hospitals and private clinics regarding implementation of nosocomial infection, hospital hygiene, dianosis and treatment
- Research and check ratio of monthly and yearly consumption of drug
- Assist hospitals to have activities and evaluate activities of each hospital
- Conduct supervision to provincial/ vile referral hospitals regarding rational drug use
- Make annual budgetary plan for medical materials/equipment for hospitals, national programs and blood banks
- Make plan for medical materials/equipment distribution
- Conduct supervision to laboratories, hospitals, medical centers and medical institutes in the Kingdom of Cambodia
- Compile documentations, research and maintain document of all hospitals/clinics' services.

Qualification:

- A medical doctor who is skillful in clinical services with at least 35 years experience
- At least 12 months experienced in bio-medical engineering jobs.

Bureau of Nursing Care and Midwifery

Position: Chief of the Bureau

TOR summary:

- Take general responsibility for facilitating researches relating to nursing care and midwifery services
- Take responsibility for developing policies, guidelines relating to nursing care and midwifery
- Take responsibility for monitoring and evaluation of implementation of policies, guidelines for every level of nurses and midwives

TOR details:

- Develop policies, guidelines relating to nursing and midwifery care
- Take responsibility for making annual budgetary plan for the bureau
- Collaborate with HRD in developing nurse and midwife registration policy
- Make plan for developing terms of references of every level of nurse and midwife
- Develop principles of basic training and continuing training for nurse and midwife
- Develop structure and management of nursing services and national, provincial, district and commune level
- Facilitate researches relating to nursing care and midwifery; facilitate with provinces six monthly to evaluate activities that have been done and to make action plan for next year
- Monitor and evaluate implementation of policies and guidelines for every level of nurse and midwife.

Qualification:

- A person who has nurse/ midwife certificate and expertise in communication with at least 5 years experience.

Bureau of Medical Regulation and Ethics

Position: Chief of the Bureau

TOR summary:

- Develop regulations
- Develop and introduce ethics
- Take responsibility for issuing certificate of disability, providing medical check up and issuing medical check up certificate
- Take responsibility for general management

TOR details:

- Take responsibility for providing medical health check and issuing medical check up certificate
- Take responsibility for issuing certificate of disability
- Take responsibility for issuing certificate of disability category evaluation
- Take responsibility for issuing medical evaluation report
- Control opening – closing of private clinics
- Monitor and evaluate implementation of private clinics
- Organize emergency team when any national ceremony is celebrated
- Make plan and prepare drug for emergency team when any national ceremony is celebrated
- Register all incoming and outgoing letters, type all documents and letters of the Hospital Services Department
- Submit letters to the director of the department and related bureaus
- Negotiate and follow up outgoing and incoming letters with concerned people
- Manage all materials and real estates belonging to the department
- Collect presence and absence of personnel of the department

Qualification:

- A medical doctor who is skillful in medical regulation and ethics with at least 5 years experience.

Ministry of Health
National Maternal and Child Health Centre

Medical Engineering Unit

Management Protocols

Seminar on Medical Engineering Workshop
29th April 2002 - Kingdom of Cambodia
Supported by JICA

Ministry of Health, Kingdom of Cambodia
National Maternal and Child Health Centre

Management Protocols for Medical Engineering Unit

1. Name

The medical workshop facility taking care of medical equipment in the NMCHC is named as the "NMCHC Medical Engineering Unit" (hereafter ME Unit).

2. Location and Workshop Layout (See Annex-1 on page 5)

The ME Unit is located in buildings of the NMCHC, which all responsibilities are taken under delegation of the NMCHC Director.

3. Objectives

Keep all-medical equipment in working order, which are allocated in the NMCHC; this is called the "In-house Service". In addition to this, help for national hospitals and the other medical institutions in Phnom Penh City, if any, for provincial hospitals, as an "External Service" to keep their medical equipment in working order; this shall be carried out in cooperation with the Ministry of Health, Cambodia (MoH).

4. Scope of Work

The ME Unit shall cover the range of the following descriptions:

4.1 In-house Services

Annex-2 (on pages 6 and 7) shows the Maintenance Management Activities including routine maintenance and repair services required for in-house service.

4.2 External Services

4.2.1 Coverage Areas

National hospitals and the other national medical institutions located in Phnom Penh (see Annex-3 on page 8), if any, provincial, OD and referral hospitals located in provincial areas.

4.2.2 Coverage Groups of Equipment

From Equipment groups 2 to 5, if any, equipment groups 6 and 7 using normal tools and general test instruments in presence of Engineering Advisor (see Annex-4).

4.2.3 Service Scheme

+Besides carrying out maintenance and repairs for the above coverage areas and equipment groups, the ME Unit shall cover the following services:

1) Make plan for maintaining and repairing all medical equipment allocated in the above coverage areas;
2) Grasp the status of all medical equipment in coverage areas by means of Database (See Annex-5 on page 9);
3) Disseminate the concept of preventive maintenance and medical engineering;
4) Make: a) Equipment operation manuals in Khmer version;
   b) Technical standards and textbooks for use on the above purpose 3), and the training in collaboration with the Medical Engineering Sub-COCOM;
5) Conduct the training for technicians and operators, if requested from coverage hospitals;
6) Negotiate and exchange the technical information with equipment manufacturers and local suppliers;
7) Advice the specification of spare parts and problems of medical equipment in operation;
8) Monitor and evaluate the maintenance and repair aspects in coverage hospitals.

5. Management Structure – Relationship Between the ME Unit and the MoH

Annex-6 shows the Management Structure in the NMCHC in cooperation with MoH. The ME Unit mainly consists of three functions under delegation of the Administration Bureau and the Director, i.e., management, in-house and external services. The external service shall be carried out in cooperation with the MoH Biomedical Engineering Unit. The maintenance Manager shall coordinate it.

6. TOR for Individuals

6.1 Director of NMCHC

Take responsibilities to manage all things related with the ME Unit including staff management and utility management.

6.2 Director of Administration Bureau

1) Take responsibilities to manage all things related with the ME Unit including staff management and utility management, while the Director of the NMCHC is absent.
2) Take responsibilities to manage all properties such as maintenance materials, test instruments, spare parts and tools allocated in the ME Unit.
3) Take responsibilities to manage all things related with ME Unit in cooperation with the Maintenance Manager.
4) Take care of necessary budget for running the ME Unit including maintenance materials, test instruments and spare parts in cooperation with the Director of the Accounting Bureau.

6.3 Maintenance Manager

1) Cooperate with the Director of Administration Bureau on the technical managing matters.
2) Manage directly all properties allocated in the ME Unit, e.g., maintenance materials, test instruments, spare parts and tools.
3) Supervise NMCHC's technician at the site.
4) Cooperate with the Biomedical Engineering Unit in MoH for the external services.
5) Report and recommend all things related with maintenance management of medical equipment, which should be improved to the Biomedical Engineering Unit in MoH, if any, instruct the use of medical equipment at the site.

6.4 Technician for Medical Equipment

1) Carry out daily jobs, which is stipulated by the hospital authority.
2) Record all things, which have done, on the record form.
3) Report all things, which have done, to the Maintenance Manager.

6.5 Bio-medical Engineering Unit in MoH

1) Cooperate with the Maintenance Manager on external service matters including Paragraph *4.2.3.*
2) Take actions for all requests and recommendations from the ME Unit as much as possible.

7. Service Flow

7.1 In-house Services

Keep current flow for in-hose service system for the time being.

7.2 External Services

7.2.1 Service Category According to the Site

The service for maintenance and repair of medical equipment is classified into two categories, i.e., equipment maintained and repaired at the ME Unit' Workshop and equipment maintained and repaired at the site. MoH shall determine choosing the service category.

7.2.2 Service Flow Chart (see Annex-7 on page 11)

MoH shall receive complains from its responsible areas and shall request the services to ME Unit of NMCHC administration Bureau through issuing official letter. All these follow the procedures in accordance with MoH's Policy Documents.

7.2.3 Service Report, Gate Pass and Entry Pass (see Annex-8 on page 12)

The ME Unit shall issue a report on service details and submit it to the MoH and the owner of the equipment after the service completed. The Administration Bureau of the NMCHC shall control the Gate Pass and Entry Pass while equipment enters to out from the NMCH's Gate.

7.2.4 Job Description for Individuals

Based on *Annex-7*, responsible persons and organizations shall take actions in accordance with Annex-9 on pages 13 and 14.

7.2.5 Service Fee

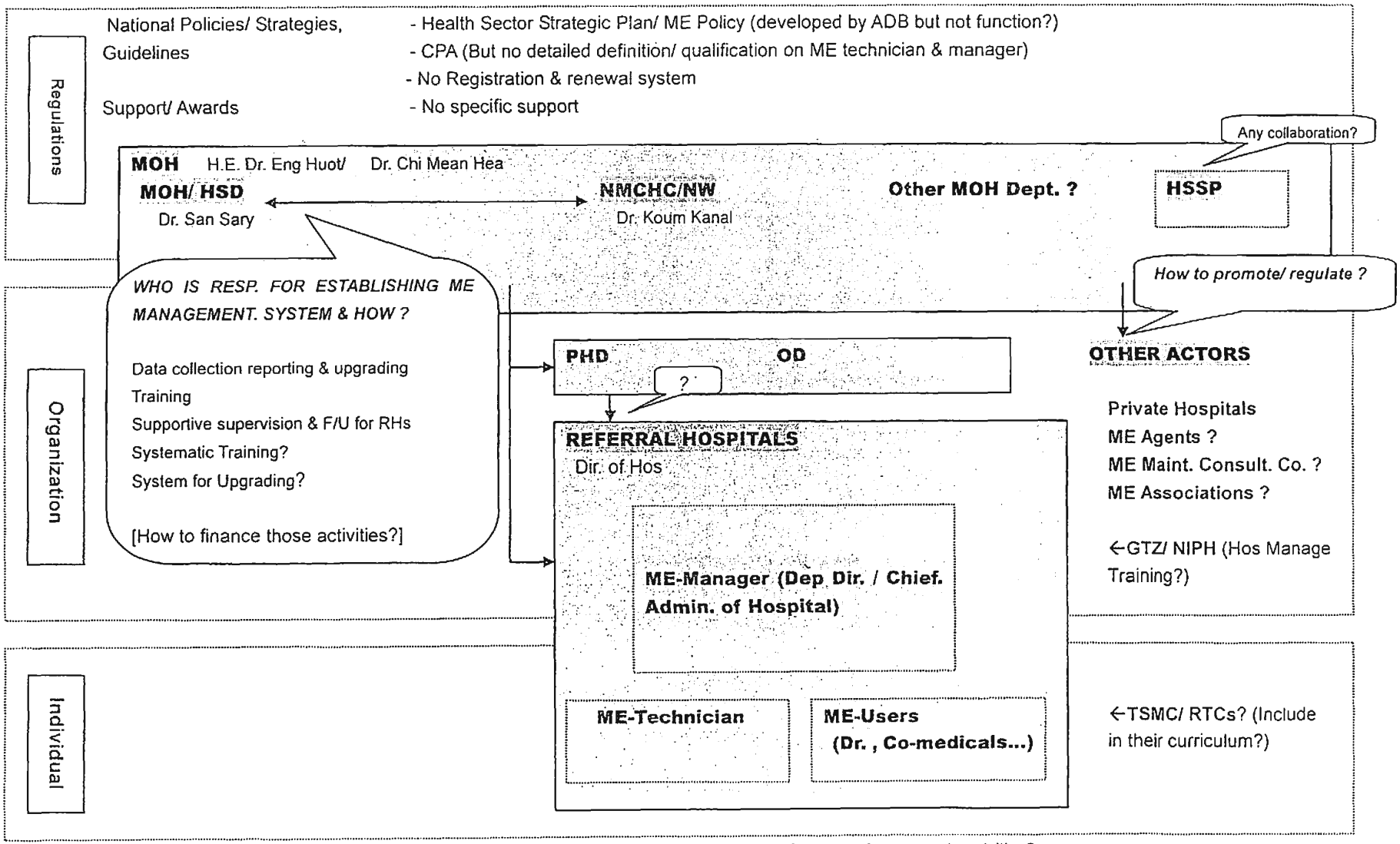
Technical services, which have been done, shall be charged as shown in Annex-10 (on pages 15 and 16). The service fee shall be kept as an income of the NMCHC, and it shall be used for procurement of maintenance materials/consumables and for other necessary expense required in operation of services.

8. Depreciation of Maintenance Facility

The ME Unit currently has various kinds of properties as a maintenance facility such as test instruments, tools, materials, office instruments and so on; the total cost is of approx. $35,000. Such properties would certainly loose their functions, and finally they need to be replacing by new one. In such a situation, concerning the depreciation of the facility is very essential to sustain activities of the ME Unit. To rectify this problem, budgetary and income for the maintenance facility should be concerned.

GENERAL SITUATION OF MEDICAL EQUIPMENT MANAGEMENT IN CAMBODIA: Issues and Vision

JICA Cambodia Office/ 19 Sep 2007



Points to be considered: How to promote the ME Management issue in general?/ Whose responsibilities?/ How to finance such activities?

ANNEX-(R)2

Draft Role/ Responsibilities by Organizations Concerned for ME Management and MEDEM Project (to be clarified and decided by MOH by the end of November)

	Role of each body for ME management issues in the Country in general	Role of each body for activities related to MEDEM Project
HSD/HSB, MOH	OVERALL ROLE 1. To assist MOH to develop policy and strategy on ME management. 2. To monitor and evaluate the implementation of 1. (planning, scheduling and assigning necessary activities by HSB. HSB also has to make sure getting reports from RHs. Actual implementation of monitoring by/ with help of NW. ROLES IN DETAIL 1. AOP/ Annual Activities Plan - Separate AOP by HSB and NW, but should be developed in closer consultation. 2. ME Training - Should be planned by HSB. They have to plan and assign who does what and when. 3. Assist Procurement of Spare parts by RHs HSB's responsibility. NW will help the process to identify spare parts to be procured based on the database and other info from RHs.	
NW/NMC HC	OVERALL Assist HSD/HSB in implementing ME policy and strategies from technical perspectives. ROLES IN DETAIL 1. Develop AOP on ....!? 2. Implementation (e.g. lectures) by NW. 3. Help HSD to plan procurement of spare party by giving technical advices.	

Note

- HSB and NW should act together to make sure ME management be implemented at RHs, although currently NMCHC does not have responsibility to supervise RHs. There was a strong message from the Secretary of the State that NMCHC/NW enlarges its capacity to engage more actively in ME management in this country.
- Overall responsibilities to supervise the 2 organization should be under the Secretary of State and Deputy DG of Health and Director of HSD.
- Communication between the two bodies should be...

ANNEX-(R) 3

Points to be Clarified and Suggestions
for More Concrete Attainment Level for the Project Purpose and Outputs
(To be developed by the end of December)

1. Project Purpose

"Introduction" means a situation where the target hospitals takes any actions to XXX (to be filled out by the Project team after discussions), but it is necessary that there is a good prospect that at least XX% of the hospitals will maintain such activities.

2. Output 1

HSD's capacity should be increased to the level where (1) they can collect necessary information for MEDEMIS, and update the date at least XX times a year (related to Indicator 1), (2) they can conduct and continue monitoring trip at least XX times a year, make monitoring report and other regular reports, and reflect the monitoring results into their activities plans such as annual work plan (Indicator 2 & 3), (3) they can prepare AOP considering available human resources, financial resources, and materials, and based on monitoring reports, hospital reports and inventory data, with better linkage with NW's AOP with good consultation with NW (Indicator 3), and (4) They can make quarterly reports of their activities, monitor and analyze the progress by having regular meetings, which will be utilized as a basis for drafting next annual work plan (Indicator 4).

3. Output 2

The ME technicians in XX% of the target NHs and CPA3 RHs should be able to sustain the A level of ME management activities as instructed in the MEDEM Training for ME technicians (the detailed item of such activities will be provided).

4. Output 3

The ME managers in XX% of the target NHs and CPA3 RHs should be able to sustain the A level of ME management activities which will be identified and instructed in the MEDEM Training for ME managers (for the detailed item of such activities will be provided) .

Suggestions for the Revision of Project Design Matrix (PDM)

ANNEX(R)4

Title: Promotion of Medical Equipment Management System

Duration: January, 2006-December, 2008

Target Area: Whole Cambodia

Version: PDM3 (October 4, 2007)

Target Group: Medical equipment managers and technicians at target NHs and CPA3 RHs
Indirect Beneficiary: Patients of NHs and CPA3 RHs
Super Goal: Basic maintenance of medical equipment is conducted at all RHs

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Important Assumption
[Overall Goal] Basic maintenance of medical equipment is conducted at NHs and CPA3 RHs.	* Operable rate of medical equipment is improved for all medical equipment at NHs and CPA3RHs. * Estimated equipment life is fulfilled for all medical equipment at NH and CPA3 RHs. * Number of preventive maintenance are increased while repair cost is decreased, during the estimated equipment life. * Number of minor repair service by maintenance workshops at CPA3RH makes constant increase, while the one of NW decreases.	* Annual activity report of NHs and CPA3RHs * Inventory data at HSD * Accounting book of NH and CPA3RHs * Annual activity report of PHDs, HSD and NW	* Medical equipment maintenance managers and technicians are assigned at OD, CPA1 and CPA2 RHs, and Project activities are extended to them.
[Project Purpose] Basic maintenance and management activities for medical equipment are introduced at target NHs and CPA3 RHs, by following the instruction of MOH and by receiving technical guidance of NW.	* Target NHs and CPA3 RHs submit annual activity report on medical equipment management to MOH through PHD. * Based on the instruction manuals and checklist of medical equipment, periodical check and maintenance are conducted at target NHs and CPA3 RHs. * Medical equipment management procedure are prepared and followed at target NH and CPA 3 RH.	* Maintenance activity plan of NHs, CPA 3 RHs. * Reports from NHs, CPA 3 RHs.	* Refresher training is provided to ex-participants * Training is provided to managers of PHDs. * Medical personnel at NHs and CPA3 RHs improve the knowledge on medical equipment usage.

【Outputs】 1. Administrative instruction of HSD of MoH on medical equipment management for target NHs and CPA3 RHs is strengthened, with technical guidance of NW . 2. Technical skill of medical equipment technicians in target NHs and CPA3 RHs is improved. 3. Management skill of medical equipment managers in target NHs, CPA3 RHs is improved.	For Output 1 1. Inventory is completed and regularly updated. 2. Monitoring trip by HSD and maintenance service by NW are regularly conducted, and findings are fed back to their activity plans. 3. HSD prepares annual work plan by considering available human resources, financial resources, and materials. 4. HSB of HSD prepares quarterly report of their activities, and analyzes the progress. 5. HSD and NW are able to conduct training for medical equipment manager and technician. For Output 2 and 3 1. Number of trainees and instructors trained. 2. Number and types of training courses. 3. Number and types of developed manuals, checklist, curriculum and training handouts. 4. Difference in scores of pre-test and post-test conducted in the training course makes constant progress. 5. Project team's monitoring results for ex-participants make constant progress.	* Project report of HSD and NW * Inventory data * Annual report of HSD and NW * Training report (i.e., test results, supervision results, and questionnaire survey results)	
【Activity】 1-1. Design and introduce the medical equipment inventory. 1-2. Enhance knowledge of HSD staff on medical equipment management administration. 1-3. Verify and give advices on existing policy guidelines (i.e. policy document, implementation plan & guideline, and basic maintenance) on medical equipment management, based on the experience from project activities, as needs arise. 1-4. Provide on-site guidance to medical equipment managers and technicians at target NHs and CPA3 RHs. 1-5. Conduct regular monitoring and evaluation on all above activities. 1-6. Give advice to MOH and donors for appropriate supply of new medical equipment to hospitals.		【Input】 Japanese Side <Personnel> Long-term experts Short-term experts <Equipment and Materials> Basic maintenance tool	**Cambodian Side** <Personnel> 1. Counterpart members (HSD and NW) 2. NH and CPA 3 RH <Equipment and Materials> 1. Training facilities (at NMCHC)	* Majority of trained medical equipment maintenance managers and technicians continue working for the position. * Main counterpart members remain working for the Project

2-1. Develop the medical equipment maintenance manuals and checklist to target NHs and CPA3 RHs (i.e. medical equipment inventory, activity record, inspection standard, and reporting). 2-2. Conduct needs assessment on medical equipment technicians at target NHs and CPA3 RHs. 2-3. Provide technical training of trainers (TOT) for NW staff. 2-4. Develop training curriculum (i.e. preventive maintenance, maintenance planning, inventory management, minor repair, and reporting) for medical equipment technicians of target NHs and CPA3 RHs. 2-5. Prepare training handout for medical equipment technicians of target NHs and CPA3 RHs. 2-6. Provide the technical training for medical equipment technicians at HSD, target NHs and CPA3 RHs. 2-7. Evaluate the above (2-6.) technical training. 2-8. Conduct follow-up supervision for the ex-trainees at their workplace. 2-9. Hold blush-up meetings with medical equipment technicians of target NHs and CPA3 RHs at NW to promote usage of maintenance manuals and checklist. 3-1. Provide TOT for HSD staff for medical equipment management training program. 3-2. Develop the medical equipment management manual to target NHs and CPA3 RHs (i.e. inventory management, management of technicians, maintenance planning, and reporting protocol). 3-3. Conduct training needs assessment of medical equipment managers at target NHs and CPA 3 RHs. 3-4. Develop training curriculum for medical equipment managers of target NHs and CPA 3 RHs. 3-5. Provide training for medical equipment managers of target NHs and CPA 3 RHs. 3-6. Evaluate the above (3-5.) training. 3-7. Provide follow-up supervision for the ex-trainees at their workplace. 3-8. Hold blush-up meetings with medical equipment managers and directors of target NHs, and CPA3 RHs at HSD to promote usage of management manual.	Necessary equipment for Project Office <Training in Japan>	2. Project offices (both at MOH and NMCHC) <Budget> Local cost for government staff including salary and facilities. Water, electricity and gas supply for project offices.	**【Pre-Condition】** * Appropriate medical equipment managers and technicians are assigned at target NH and CPA 3 RH

Abbreviation: National workshop: NW; Hospital service department: HSD; Hospital service bureau: HSB; Provincial Health Department: PHD; Referral Hospital: RH; Training of Trainers: TOT; Ministry of Health: MOH; Operational District: OD; Complementary Package of Activities: CPA

Result of Monitoring System

ANNEX-(R)5

Narrative Summary	Indicator	Achievement	Constraint	Solution	Responsible Person
Output I: 1- Administrative instruction of HSD of MoH on ME management for target HPs is strengthened, with technical guidance of NM	1. Inventory is completed and regularly updated	- ME data already collected - ME database system was introduced	- The definition of update was not clear - RHs didn't submit ME report to HSD yet	- HSB staffs must make report for data collection - RHs should fill ME Condition Sheet and then send to HSB of HSD every 6 month - HSB should collect ME data from RHs two times per year - SHB staffs will inform to target hospitals to update ME inventory 2 times per year - HSD has to push Target Hospitals to make report regarding ME and send it to HSB regularly	HSB/NM staff (prepare) HSB staff (update) JM staff
	2. Monitoring trip by HSD and maintenance service by NM are regularly conducted, and findings feed back to their activities plan	- HSB has conducted monitoring about ME to RH	- HSB didn't make quarterly report about monitoring activity yet - Some hospitals the power condition was not good - ME Maintenance was done while having the request from RH - Sometime HSB staff didn't attend in monitoring trip	- Should provide feedback to their activities in monthly report and then present it in HSB/D regular meeting - Should make clear report flow and its content (person in charge) - HSD and NM should give advise to the hospital - Conduct meeting documentation every 4 months - Should conduct post-monitoring MS	HSB staff NM staff (Dr. Cheu Sivuthy is a collator)
	3. HSD prepares annual work plan by considering available human resources, financial resources, and materials.	- HSB prepared AOP	- Number of HSB staffs is not enough. HSB requested 2 staffs but Personnel Department provided only one staff - HSB didn't change the structure yet	- Dr. Cheu Sivuthy will be in-charge of making AOP - Need to revise HSB organization chart	HSD staff (Dr. Cheu Sivuthy)
	4. HSB of HSD prepares quarterly report of their activities, and analyzes the progress	- Only monthly report of January 2007 was completed - HSB prepared quarterly report but they didn't send to Project Manager yet (Q1 and Q2)	- Responsible person doesn't have a conscience to make report	- Change of chief of bureau - By August Dr. Cheu Sivuthy will deliver a copy of 1st & 2nd quarterly report of 2007 to JICA MEDEM Project, from 3rd quarter of 2007 the process of quarterly report is as follows: ** Unit (make monthly record) → HSB (chief of HSB collect monthly report and compile quarterly report) → HSD Director → DG → DDG → JICA MEDEM (a copy)	HSD staff (Dr. Cheu Sivuthy)
Output II: 2. Technical skill of ME technicians in target NHs and CPA3 RHs is improved	1. Number of trainees and instructor trained	- 13 trainees trained - 7 trainers implemented (TOT)	- Difficult to select trainees for next training course (3rd and 4th groups)	- MoH instruct hospital director to assign appropriate ME technician (1st priority) - Select 2nd Trainee (2nd priority) - Accept contracting staff (3rd priority	HSD staff
	2. Number and types of training courses	- Hold Technical Training on ME Maintenance (theoretical course) 1 times, 38 participants attended - Hold Technical Training on ME Maintenance 2 times - Hold Pre-training MS: 38 participants attended - TOT/ lesson plan training 1 time	- Basic qualification of trainees are different	- It will not be affected to the existing training. Select next training for 3rd and 4th group more carefully.	NM staff ST-Expert
	3. Number and type of developed manuals, checklist, curriculum and training handout	- 2 training curriculums developed and implemented - ME maintenance checklist developed for 37 types of medical equipment - ME maintenance guidebook developed			NM staff ST-Expert
	4. Difference in scores of pre-test and post-test conducted in the training course makes constant progress	- Score of pre-post test of 1st group: Average 34.3-64.4 - Score of pre-post test of 2nd group: Average 44.2-66.5 - All post test the score was improved	- Test result is not satisfied - Time schedule and Trainer are limited - Trainees aren't not motivated to attend the training course	- Contents of session will be upgrade more by each trainer - We should manage existing human resource. - Selection of next trainee will be more carefully.	NM staff ST-Expert
	5. Project team's monitoring results for ex-participants make constant progress	- Followed up ex- trainees conducted to 7 hospitals. The result was that only 3 hospitals have been improved such as workshop condition improved and MEDEMIS updated	- RH director doesn't have concept about ME maintenance - Some ex-trainee activities were stuck due to unclear assignment - 4 hospitals haven't been improved after the training	- Need strong instruction from HSD - Hold blush-up meeting on September and continue to follow up remaining ex-trainees	NM staff ST-Expert
Output III: 3. Management skill of ME managers in target NHs, CPA3 RHs and PHDs is improved.	1. Number of trainees and instructor trained	- ME manager seminar (April 25-26): 86 persons	- Human resource (# of C/P) is not enough	HSD requests MOH to allocate additional personnel at HSB.	HSB staff ST-Expert JM staff
	2. Number and types of training courses	- ME Management Seminar held on April (Assessment) - Develop Seminar Report (Assessment)	- HSB staffs have many works. So they didn't have enough time to prepare reports	HSD requests MOH to allocate additional personnel at HSB.	HSB staff ST-Expert
	3. Numbers and types of developed manuals, checklist, curriculum and training handout	- Draft of procedure of ME Management System is developed - Draft of ME Management instructions developed	- MOH is required ME management system for hospital Service Bureau (HSB)	- ME management manual and form will be set up for referral hospital including role of working group in the hospital. - ME management manual and form will be made and set up at HSB	HSB staff ST-Expert
	4. Difference in scores of pre-post test conducted in the training course makes constant progress	- ME Manager Seminar will be held on August			HSB staff ST-Expert
	5. Project team's monitoring results for ex-participants make constant progress	- To be conducted in this August	HSB staffs have many works, so they didn't have enough time to go around all of hospitals.	- MOH will monitor activities at hospital as much as possible, and find collaboration with some NGO or donor that are supporting hospital management.	HSB staff ST-Expert

COUNTER REPORT
FOR
JOINT EVALUATION REPORT
MID-TERM EVALUATION FOR THE PROJECT ON PROMOTION OF MEDICAL EQUIPMENT MANAGEMENT SYSTEM

WRITTEN BY CAMBODIAN AND JAPANESE PROJECT STAFF
OF
PROMOTION OF MEDICAL EQUIPMENT MANAGEMENT SYSTEM

28 DECEMBER 2007

Preface

This report is made by both Cambodia and Japanese counterpart of the project on Promotion of Medical Equipment Management System in response to the Joint Evaluation Report "Mid-Term Evaluation for the Project on Promotion of Medical Equipment Management System" that was issued on 4 October 2007.

The contents of this report answer the inquiry and recommendation shown in the Joint Evaluation report, and in addition, we added necessary and useful information for JICA. This means the first objective is to deliver the message and result of discussion among us, and another very important value on this report is to remind and orient us the way where we have to step onto.

The current Project on Promotion of Medical Equipment Management System will complete at the end of December 2008. Despite the Joint Evaluation Report shown some remained issues, we would like to note that many of remarkable achievements have already appeared by the Project activities such as an improvement of technical skill on medical equipment technician. And unique function on this Project is to diffuse learning how to manage the medical equipment using various approaches. The Project is executing not only providing training for medical equipment manager and technician focusing human resource development, but also the matters concerning medical equipment in the direction of cross section, for example assistance for HSSP, hospital grant aid, participation to MPA taskforce, etc.,

We were aware for long time that medical equipment management and maintenance was essential activities at public hospitals and central revel, and now we have recognized how to solve this issue and realize necessary action by the process of the Project implementation. Also the process of mid term review, Joint evaluation and making this report will be absolutely good opportunities for further consideration.

We hope this report might be useful for both Japanese and Cambodian side.

28 December 2007

MATSUO Takeshi
Chief Advisor
MEDEM Project

Prof. Eng Huot
(MEDEM Project director)
Secretary of State for Health
Ministry of Health
Kingdom of Cambodia

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1 Overall review

1.1 Background

The term of the Project on Promotion of Medical Equipment Management System (hereinafter called the Project) is just for three years. In the middle of the term, September 2007, both Cambodian counterpart and JICA Cambodia assembled joint evaluation team and proceeded mid-term evaluation involving following objectives;

(1) Recognize and confirm the progress and issues on the Project activities by following Project PDM. Fix possible countermeasures if any issues are found.

(2) Evaluate the Project by DAC five evaluation criteria

(3) Review and revise PDM if necessary

(4) Find out measures to promote and establish ME management system in Cambodia after completion of the current Project

There was one more additional objective, is as preliminary study on the new request by the Cambodian government for further improvement of ME management at referral hospital beyond the Project. Because current Project may disseminate a primitive ME management method and ME maintenance skill to 18 CPA3 referral hospitals and 4 of national hospitals (hereinafter called Target hospitals), thus it is needed to continue support, instruction, and implementation for fixing basic ME management at target hospitals for at least 3 to 5 years. JICA HQ and JICA Cambodia office have carefully examined the request. However it was found that some of the conditions, information and vision were not fully disclosed yet. Therefore the joint evaluation report was expected to covers not only evaluation of the current Project but also to collect necessary information for further consideration on the new project.

The mid-term evaluation has worked out. The evaluation report was shown and agreed between Cambodian and Japanese side in the joint coordination committee meeting held on 4 October 2007.

1.2 Review of the recommendations

The Joint Evaluation Report consists of 3 chapters as follows:

- Chapter 1: Overview of the mid-term evaluation
- Chapter 2: Result of Evaluation analysis
- Chapter 3: Conclusion and recommendations

This counter report is described mainly following the recommendations demonstrated by joint evaluation team. Hereinafter shows summary of the recommendations.

(1) Recommendation 1:

Clarify and share the vision of ME management in this country and roles of the organizations mainly by holding more discussions among the Project team and by clarifying and agreeing on the roles, responsibilities and relationship of Hospital Service Department (HSD)/Hospital Service Bureau (HSB) and National Workshop (NW) of National Maternal and Child Health Center (NMCHC).

(2) Recommendation 2:

Clarify and share the attainment levels of the Project Purpose and Outputs.

(3) Recommendation 3:

Prioritize the Project Activities and introduce additional Activities.

(4) Recommendation 4:

Revise the PDM and PO.

(5) Recommendation 5:

Consider additional input based on the follow up result of the Evaluation

(6) Recommendation 6:

Efforts to facilitate the process of the Project implementation in areas such as: follow up the PCM workshop, ensure closer communication and more frank discussions among the Project team, raise awareness and ownership of the Project C/P, MOH demonstrate clear commitment for more budget to ME management.

We have already identified, some of the issues that are included in the recommendation, for example a state (position and condition) of NW and relationship between NW and HSD was not quite clear since the Project started. And the vision of ME management for the coming 5-10 years in this country has also not been drawn clearly. HSD had policy document for ME management but the Project design doesn't always follows the policy. (See Chapter 7: Other Information). However there were some reasons that we couldn't solve issues before starting the Project with actual implementations because we, in fact had not enough experience of proceeding ME management and maintenance by ourselves. Now, standing at the middle point of the Project term, with much experience, we learned what is the suitable ME management system in this country. In this counter report, we tried to demonstrate especially above recommendations 1, 2, 3 and 4 to make them clear as much as possible. And the described contents are well considered by key members of the Project at several times of the meeting, discussion and workshop.

2 Attainment level of the MEDEM Project purpose and output

2.1 Project purpose

To make easy understandable we draw the table below to assess the attainment level of the Project purpose. The result is expected to be achieved by July 2008.

Component	Attain. Level	Judgment	Indicator of PDM
Output 1	- Making regular quarterly report by HSB	Completed	-Inventory is completed and regularly updated. -Monitoring trip by HSD and maintenance service by NW are regularly conducted, and findings are fed back to their activity plans. -HSD prepares annual work plan by considering available human resources, financial resources, and materials. -HSB of HSD prepares quarterly report of their activities, and analyzes the progress. -HSD and NW are able to conduct training for medical equipment manager and technician.
	- Making appropriate AOP 2009	Completed	
Output 2	Score of evaluation on ME maintenance activities in 22 hospitals	80% target hospitals get 70 point	-Number of trainees and instructors trained. -Number and types of training courses. -Number and types of developed manuals, checklist, curriculum and training handouts. -Difference in scores of pre-test and post-test conducted in the training course makes constant progress. -Project team's monitoring results for ex-participants make constant progress.
Output 3	Score of evaluation on ME management activities in 22 hospitals	all target hospitals get 70 point	-Number of trainees and instructors trained. -Number and types of training courses. -Number and types of developed manuals, checklist, curriculum and training handouts. -Difference in scores of pre-test and post-test conducted in the training course makes constant progress. -Project team's monitoring results for ex-participants make constant progress.
Project purpose	Basic ME maintenance and management activities at 22 hospitals	Satisfied all above score	-Target NHs and CPA3 RHs submit annual activity report on medical equipment management to MOH through PHD. -Based on the instruction manuals and checklist of medical equipment, periodical check and maintenance are conducted at target NHs and CPA3 RHs. -Medical equipment management procedure are prepared and followed at target NH and CPA 3 RH.

It could be said that if the above outputs 1, 2 & 3 could be reached to their attainment level with efforts and support of the HSD and NW. Thus, it could be said that the Project purpose is achieved.

2.2 Output 1

It is difficult to define attainment level of the output 1, neither in number nor in percentage. In stead, we would like to set the level as follows:

- It is 100% sure that HSD can collect necessary information for MEDEMIS and update the data 2 times a year.
- By the end of the Project, monitoring trip will be conducted to every of target hospital for two times at least. In addition to this, ME management report forms of all target hospitals will be submitted to HSD two times at least; first time is early January 2008 and second time is early July 2008. There is possibility that some of them will submit third time at the late of December 2008.
- Regarding AOP for 2009, it is 100% sure that HSB can make better AOP.
- HSB could prepare its quarterly report regularly.

2.3 Output 2

We would like to set the attainment level that ME technicians in 80% of the target hospitals will get 70 points of their activities defined in the Score Criterion of the Follow up and Monitoring for Ex-trainee (Refer to Annex-1). The Project staffs discussed and reached the consensus on this at the meeting with the following reasons:

- By this December 2007, ME technicians in 18 (80%) of the target hospitals are already trained. And, we schedule to training the remaining 4 ME technician by this coming February of 2008. In addition, the Project has plan to conduct follow up and monitoring trip to the ex-trainees regularly;
- According to the result of the follow up and monitoring to 12 ex-trainees, most of them already get over 70 pints (Refer to Annex-2);
- The Score Criterion of the Follow up and Monitoring for Ex-trainee consists of 7 components. However, only one of the components <I- Planned Preventive Maintenance> is the technical activities, which are difficult to get score. Other 6 components are just basic or minimum actions, which should be achieved by the technicians at least.

2.4 Output 3

The Project developed ME management report forms and introduced to all of 22 target hospitals twice through ME Management Training Seminar held on August and November 2007. The forms include Annual Action Plan, Semiannual Report etc. (Refer to Annex-3:).

As for the level of this Output 3, ME managers in **22 (100%)** of the target hospitals will get **70 points** of the ME management activities defined in the **ME Management Follow up Check Sheet** (Refer to Annex-4). The Project staffs decided with the following reasons:

- MoH has taken multi-medias to encourage all target hospitals to submit ME management report forms
- Checkpoints and criteria are general/overall issues. And submission of the report forms, which is easy for them to get the first highest (40) points.
- The second highest (30) point is from Form 3-2. This form is mainly done by ME technicians (Refer to Annex-5)

3 Vision of ME management in this country

3.1 **Restructure and job description of each organization** (Hospital Service Bureau (HSB) of Hospital Service Department (HSD) and Engineering Section of the National Maternal and Child Health Center

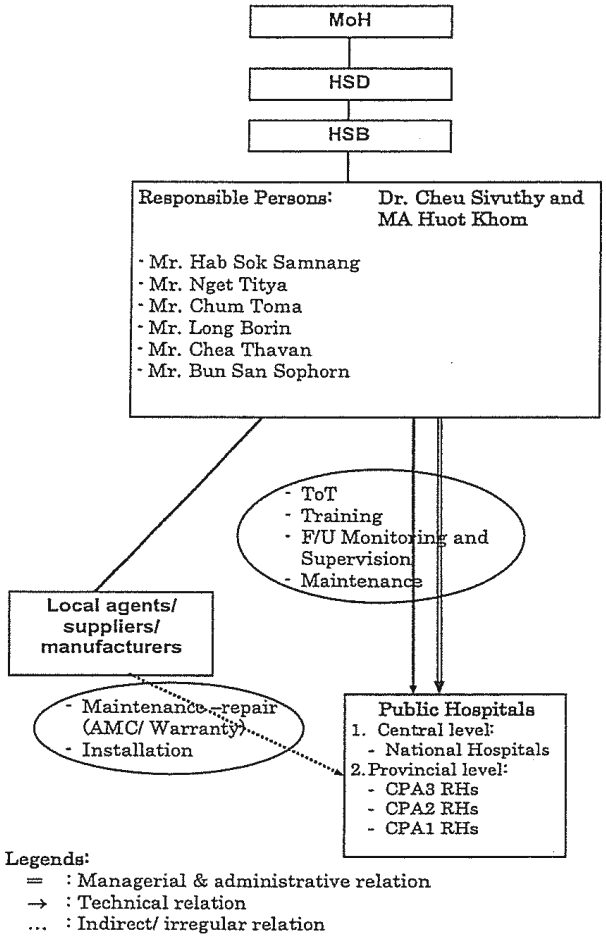
With response to the recommendation by the Project Midterm Evaluation Team, we Project staffs held a series of meetings and discussions. As the result, structure and job description of respective organization were reviewed and revised as follows:

- Structure of HSD and its bureaus and units (Refer to annex-6);
- Job description of HSD, HSB and its units (Refer to annex-7);
- Structure of Engineering Section of the National Maternal and Child Health Center (Refer to annex-8);
- Job description of Engineering Section of the National Maternal and Child Health Center (Refer to annex-9).

3.2 Restructure of National Workshop (NW) and responsibility

Since MoH has planned to enlarge capacity of the NW, it is restructured as below. In addition, MoH has strong commitment to recruit more technicians for the NW next year.

A) Figure 1: Component of NW Team



Formerly Project staffs have met some difficulty on the line of instruction because NW belonged to NMCHC. Therefore we reviewed and revised, as NW is a hybrid organization with HSB and previous NW member. It is understood that new NW is a team, which provides any implementations for improving ME management at target hospitals and support activities for example maintenance service, training, follow up etc., (refer to the table on next section). We will be able to recognize new NW is like a think tank (expert group). Function of part of NW may be similar to national programs, which already exist in this country. Responsible people will conduct new NW under responsibility of HSD. Member of new NW officially belong to each HSD and NMCHC but when they perform NW activity, they collaborate with each other and work as a team. New NW doesn't have own account, but we will try to find a way to motivate the staffs and give an incentive.

B) Responsibility

	Role of each body for ME management issues in the country in general	Role of each body for activities related to MEDEM Project
NMEW	Overall Roles: Take responsibility for development of necessary documents and implementation of necessary activities on ME management, maintenance and operation. Roles in Details: - Make necessary action plan (AOP), which needs to promote medical equipment management and maintenance - Discuss with organizations/ agencies concerned for a better plan - Develop policy, guideline on medical equipment maintenance and operation based on national/ international standard. - Provide Training of Trainer (ToT) for selected ME technicians, and assist them to provide technical training for ME technicians of CPA1&2 RHs, with HSB. - Support MoH to establish Provincial ME Workshop (satellite workshop), and strengthen their ME maintenance activity. - Conduct monitoring and supervision of ME management, maintenance and operation to referral hospitals, together with HSB. - Assist HSB to analyze ME data information and report forms from target hospitals - Coordinate and collaborate with local agents/ suppliers/ manufacturers regarding maintenance (AMC, warranty), installation and repair of ME. - Provide ME maintenance services (maintenance, repair, installation, consultation etc.) to national and referral hospitals upon their request and availability of the NW. The services may be carried out at the workshop or at the site. - Make semiannual and/or annual report	- Make necessary action plan (AOP), which needs to promote medical equipment management and maintenance - Develop ME management and maintenance guidebook - Provide technical training on ME management and maintenance - Conduct monitoring and supervision to ex-trainees - Hold brush up training for ME technicians - Assist HSB to analyze ME data information and report forms from target hospitals

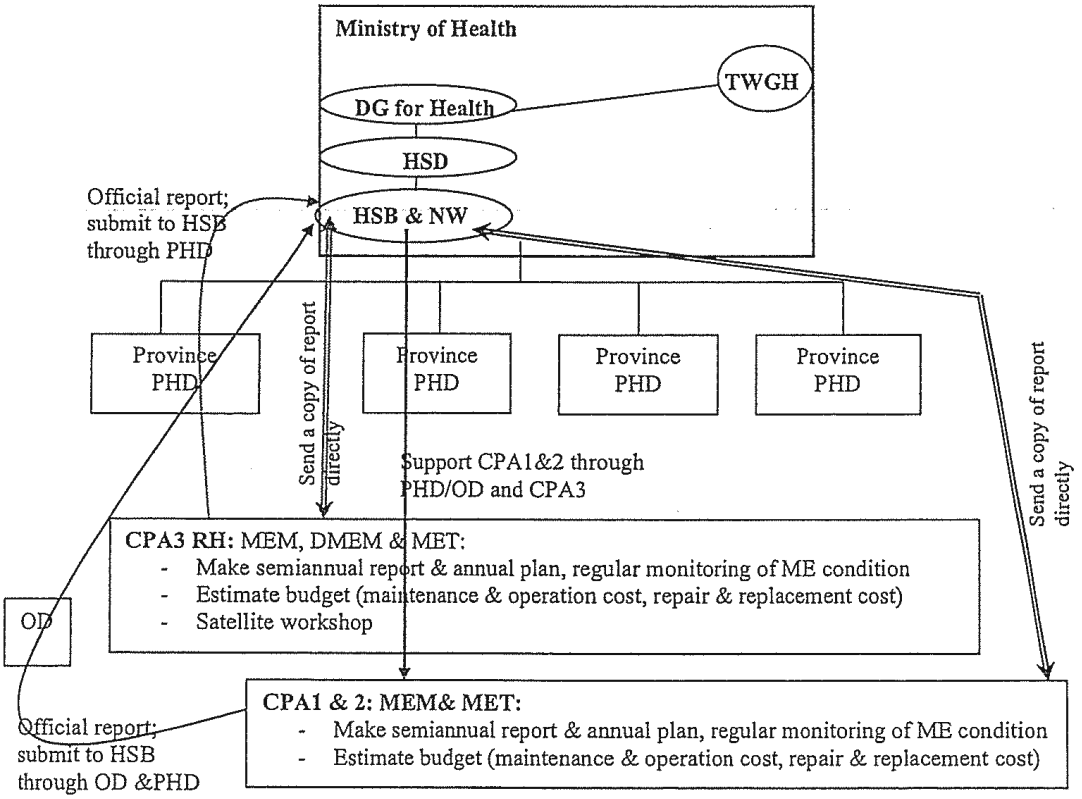
(For more detail, refer to Annex-10).

3.3 The vision of ME management for the future

As a future vision of ME management, MOH would like to achieve 95% of ME usage rate at all public hospitals by 2018. Considering the fact that there were no concrete measures to implement our existing ME policy document before this Project, we will still have to take a number of steps to realize this target. For example, we believe it is necessary to ensure a number of points, such as MOH administration, HSD administration, quarterly activity reports, hospital administration and so on, as elaborated in ANNEX-11. This requires, of course, continuous improvement of the capacity of MOH staff.

In response to the recommendation of the Mid-term evaluation, we would like to elaborate some key issues concerning the future vision here. Our idea is to establish a system compose of the following activities, workflow and figure, which is to ensure sustainable ME management in this country. Some parts, for example collection of ME management report forms from CAP3 RHs has been starting and it is in the pipeline. This shows the linkage of the current activities and the vision for the future. For more detailed idea for step toward the 2018 target please refer to ANNEX-11

Figure 2



A) Overall Activities:

- Organize ME Advisory Group
- Establish and strengthen activity of satellite workshop (provincial workshop)
- Strengthen capacity of ME Management Working Group at CPA3 RHs including ME maintenance activity
- Expand Medical Equipment Management Working Group to CPA1&2 RHs, and recruit ME technician for all referral hospitals.

B) Workflow (summary specific activities):

a) CPA1 &2 Referral Hospitals:

- Recruit ME technician respectively
- Assemble ME Management Working Group
- Make necessary ME management reports to HSB/HSD, through OD/PHD
- Attend necessary trainings and any other events concerning ME

b) National and CPA3 Referral Hospitals (selected hospitals):

- Submit ME management report forms to HSB regularly
- Strengthen ME maintenance activity
- Attend ToT on ME management, maintenance and operation
- Provide user training for ME operators in respective hospital
- Provide Technical Training on ME Maintenance to CPA1&2 referral hospitals
- Conduct follow up, monitoring and supervision to ME technicians in CPA1&2 referral hospitals
- Attend necessary trainings and any other events concerning ME

c) HSB and NW

- Develop, introduce and update ME policy, regulation, etc.
- Discuss and set up budget for ME management, maintenance and operation
- Collect ME management report forms from national and referral hospitals regularly.
- Integrate information from all hospitals, analyze the information/data, and then report to DG through HSD, or report to TWGH directly if delegated by DG.
- Provide ToT on ME management and maintenance to selected national and referral hospitals
- Monitor and supervise national and referral hospitals regarding medical equipment. Give feedback and additional instruction to hospitals as need arise.
- Support activity of provincial (satellite) workshop

In addition, there are others ideas about the future vision, those ideas or plans are very important issues. However in this moment, with discussion, we haven't concluded yet. We will continue to consider and should have further discussion with forethought. The following subjects might be concerned:

① Qualification of ME technician

At present, there is no qualification on ME technician neither exist school for ME maintenance. The person who is called as ME technician and we train, their academic background is usually variety, for instance electricity, mechanic and sometimes nurse etc., Because of no standard or qualification, their knowledge and skill vary from low level to high. It might be a threat when MOH try to standardize a capacity of ME management including ME maintenance skill. Therefore qualification of ME technician should be considered in the future.

② Connection with Human resources Department (HRD) and Technical School for Medical Care (TSMC)

One of the ways to qualify the ME technician is establishment of official training course or school. The Project executes ME maintenance training for ME technician at NW of NMCHC, and contribute a certificate of training completion. It is better or might be good incentive if TSMC provide a training and gives official certification under authorization of HRD, moreover we could try to find a possibility if TSMC can organize ME maintenance technician course and set rule and regulation on ME technician. We need to have a feasibility study and needs assessment for this matter.

③ Establishment of Central Workshop

There is the description about the Central workshop in the policy document, which HSD developed in 2000 (Refer to Chapter 7), and also the opinion is still raised in the discussion among stakeholders. According the description, it says that MOH may establish new Central workshop under direct authorization of MOH, and Central workshop provides ME maintenance and repair service to referral hospitals.

The idea, which is as an independent organization promotes ME management system, may solve current weakness on a relationship between HSD and NW.

However, there are many issues predicted as following;

- Hardware (land, building, facility, furniture, tools....)
- Human resource (officer, engineer, technician, ordinary staff....)
- Budget (recurrent cost, development cost....)

Moreover we must recall that only the repair work is unable to meet the end. Endless means we have to increase every input such as budget, number of personnel, repair skill, day-by-day, year-by-year.

Establishment of the central workshop is one of the options, which MOH shows but we have to have more information and organize feasibility study before starting the implementation.

④ Promotion of standardization of ME

MOH has developed ME standard list for CPA1, 2,3 hospitals in 2004 (revised in 2006). HSSP and JICA have utilized this standard list when they procured the ME for renovation of the referral hospitals. However it is difficult to say all CPA referral hospital have been standardized yet. For providing equal medical service to every people, hospital standardization is essential needs. And ME standardization is also indispensably required in the sense of quality standard. We should organize research of number of ME, and assessment as soon as possible for fulfill the standard ME at all referral hospitals.

⑤ Preparation of fund for procurement of spare parts

There are common understanding that ME maintenance and repair should be done under responsibility of each hospital. In other words, hospital should consider and implement ME management and prepare budget for ME maintenance and repair. However because of many reasons, in fact the hospital often faces a difficulty for disbursing a cost for purchasing spare parts of ME. We already started to instruct them how to prepare the budget for ME maintenance in the ME management seminar, however we have to find a fund for relief them if the hospital cannot treat.

⑥ Integrate into hospital management activities

As we are aware ME management is a part of the hospital management. One organization, National Institute of Public Health (NIPH) implements training for hospital management with receiving support from GTZ. And several donors support to individual hospitals for hospital management. So far, there are not strong connection between HSD and those implementers. HSD should strengthen the

connection and sometimes ME management may integrate into hospital management.

⑦ Guideline for donation of used ME

There were message from Project director on JCC meeting 2006, MOH should develop a guideline for referral hospital or health center when they receive used ME from donors. We have many experiences that some donor donated used ME, but many of those ME raises problems and just increases number of unused ME at hospitals. We have to make an actual plan to develop the guideline as soon as possible.

4. Prioritize the Project activities and additional activities

We have already implemented almost all of the activities on Output 2 and 3. Especially Output 2 (Technical skill of medical equipment technician in target hospitals is improved)) has been proceeded well. We developed ME maintenance guidebook, checklist and other necessary documents and provided the training to the ME technicians in 18 of 22 target hospitals, thus only 4 hospitals remained. Also we made the post-training monitoring sheet for ME technician. Monitoring and follow up trip was executed 22 times in total. Concerning monitoring result, the score of visited target hospitals are improving time by time. Since we defined the attainment level of ME technician on above chapter, we will be able to achieve almost all of subjects we expect on ME technician. Therefore we just continue monitoring and follow up activities (including brush up training) steadily that is to say priority is not necessary high.

According Output 3 (Management skill of medical equipment managers in target hospitals is improved) by comparison with Output 2, we have just finished the dissemination stage with preparation study, 2 times of seminar and few times of follow up trip. We prepared monitoring chart for ME management improvement but because of main role of the ME manager is writing ME management report twice a year, set of ME management report might be an indicator of the improvement (refer to chapter 2-4).
Unfortunately we have only two times opportunity for assessment in the remaining year of the Project, because a submission timing of ME management report from target hospitals is December and June of every year. The first submission period, which MOH will receive, is the coming end of December 2007. However as we recognized by the result of second ME management seminar and follow up trip, an awareness as the member of ME management working group and acquirement of ME management knowledge and skill were still unsatisfactory. So that we cannot expect much that all target hospital submit complete set of ME management report forms to MOH in this period. Due to these circumstances, we must consider additional activities in this field. Possible new activities are as follows, however we may observe a result of submission in this period for fixing the plan finally:

- Provide 3rd ME management seminar (possibly early March 2008)
- Brush up training (possibly May 2008)
- Strengthen follow up activities (February to December 2008)
- Revise ME management protocol (ME management manual for target hospital) more simpler and easier (January 2008)

We would like to propose above activities as additional activities, and certainly the Output 3 is high priority.

Output 1 (Administrative instruction of HSD of MOH on medical equipment management for target hospital is strengthened with technical guidance of NW) is the most difficult output to assess how much the improvement appears. There are quantitative indicator listed in the PDM but only 5 indicators could not represent total capacity of the function of HSD. On the other hand, by the qualitative assessment, we found many of improvements and progress such as arrangement of the meeting room, preparation of the official letter, and better communication between Cambodian and Japanese Project counterpart. Hereinbefore we recognize that the assessment of Output 1 may be done by both quantitative and qualitative information (indicator) at the period of final evaluation. However there is no clear and specific activity for realizing the indicator 3 (HSD prepares annual work plan by considering available human resources, financial resources and materials) in the PDM. Therefore we would like to propose to add one additional activity as follows:

- Prepare an appropriate Annual Operation Plan (AOP) for the following year. (Probably February to April 2008)

Also the Joint Evaluation report shows in the recommendation for future 2, evidence based drafting, proper budgeting and disbursement on AOP is indispensably expected.

Due to the fact that the capacity development of HSD (HSB) is always essential assumption for improvement of ME management at target hospitals, Output 1 is high priority.

5 Revision of the PDM and PO

5.1 Proposal for revising PDM

In the Joint Evaluation Report, evaluation team recommends the following revisions on the PDM. (Reason and proof are abbreviated)

- Delete "PHD" from the Project Purpose and Output 3.
- Insert an indicator for the Output 1 to measure the capacity of HSD and NW to conduct the training.
- Revise one of the "objectively verifiable indicators" under the Project Purpose to read "Medical equipment management procedure are....."

As a result of the discussion between evaluation team and the Project staffs, we agreed above revision offered. We thank to the evaluation team for an appropriate suggestion and precise analysis of our Project's PDM and its activities.

In addition, as this report mentioned in chapter 4, we would like to add one new activity for Output 1.

- Prepare an appropriate Annual Operation Plan (AOP) for the following year.

Final draft of revised PDM at this time is as shown in (Refer to Annex-12). Since the Project terms remained only one year, this is a last revision of the Project's PDM.

5.2 Proposal for revising PO

If we trace back to the Chapter 4, prioritize the Project activities, the last year of the Project term should be focused on ME management and strengthen of HSD (HSB) capacity. Also it is not necessary to spend for new activities on ME technician such a development or revise of guideline, and monitoring or follow up of the ME technician became like a routine work. Therefore if we complete 4th group of ME technician's training as soon as possible, we could concentrate on activities of Output 1 and 3. For this reason, we would like to organize 4th group of ME technician's training in February 2008. (Refer to Annex-13)

In addition, the original PO shows that 3rd year of the Project involves a dispatch of one short-term expert. Expert's T/R is assigned as Monitoring and Evaluation of the activities on ME management and ME maintenance. However, this expert is expected to carry out follow up or more implementation of the activities of Output 3.

6 Additional input

6.1 Proposal for additional input

We have already implemented basic provision equipment for the Project activities, since concept of our Project is "compact input bears large impact" we think, the Project has enough hard wear resources, however when we observe ordinary work at HSD, it seems staffs face problems frequently due to lack of the office equipment such as copy machine, facsimile or printer. Direct counterpart team at HSD is biomedical engineering unit of HSB, and HSB involves others four units. It is required a horizontal collaboration and corresponding among units for smooth coordination and logistic operation. In fact without improvement of total function of HSB, only biomedical engineering unit could not improve alone. Therefore installation of new office equipment is indispensably needed.

6.2 Short term expert

It is pointed out in the Joint evaluation report that if number of short-term expert dispatches at same time, effectiveness by the expert might be low because of limited number of the Cambodian counterpart in spite of being good point of coherence among their activities. We have a dispatch plan of short-term expert already in the coming year for about 5 months, therefore we don't propose an additional short-term expert in the next year. However there is an opinion that if it is possible a dispatch of short-term expert within 1-2 month at around February to March 2008 is very effective for the follow up of ME management and streamlining of HSB capacity including designing appropriate AOP.

7 Others information

7.1 Effort for sustainability

In response to the recommendation 6 (to rise awareness and ownership) in the Joint evaluation report, Cambodian side tried to find the way to show the effort, and we negotiated with HSSP about budget support for ME management seminar held on early November. As a result, we could get it with well understanding by HSSP and we shared event expenses with JICA. Actually HSSP spent almost all of the event cost, about $8,500, (Refer to Annex-14). Of course HSSP fund is precious resource but also we have recognized that this expense was very valuable as for disseminating actual ME management method to all target hospitals and not to oppose HSSP strategy.

In the process of discussion for restructure of organization chart of HSD with whole bureau, HSD decided to assign new staff to biomedical engineering unit. And we reorganized assignment of the Project counterpart at HSD. Assignment name as "part time counterpart" has been disused, then finally total number of the Project counterpart is 5 at HSD. The issue on frequent change of personnel of HSD was pointed out in the Joint evaluation report. In deed, we have some times counterpart of HSB changed and transferred, but it was very reasonable because we tried to reform the organization for realizing the performance of ME management more effectively and efficiently. In fact, we could observe HSB and biomedical engineering unit work much better than before. We expect this new staff assignment will affect the Project implementation more smoothly (Refer to Annex-15).

7.2 Record of follow up activities for the Joint evaluation

For the certain issues mentioned in the Joint evaluation report, we organized work group and hold many times of meeting and discussion, and two times workshop (Refer to Annex-16)

- 28 November 2007 launching workshop
  - Participant: All Project staff
  - Agenda: Presentation of work schedule
    Presentation and discussion of attainment level of Output 1
    Presentation of role of organization and job description
- 5 December 2007 Follow up meeting
  - Participant Work group member
  - Agenda Presentation of organization chart
    Presentation and discussion the attainment level of Output 2
- 14 December 2007 Follow up meeting
  - Participant Work group member
  - Agenda Presentation of future vision
    Discussion of attainment level of Output 2 and 3
- 19 December 2007 Follow up meeting
  - Participant Work group member
  - Agenda Role and responsibility of NW
    Future vision of ME management
- 28 December 2007 Finalizing workshop
  - Participant All Project staff
  - Agenda Discuss and share final draft of the counter report (finalized)

7.3 Existing policy documents (related to the vision)

HSD developed the Policy document, Basic maintenance and Implementation plan and guideline in the year 2000, in collaboration with the consultant dispatched by Communicable Diseases Control and Health Development Project. Especially the notion and future model of ME management has been drawn in those documents, however it seems there are some gaps between the design and actual circumstances. In fact, as of the year 2005 when JICA dispatched preliminary study mission, HSD had not been able to take any action for implementation to realize the policy. JICA preliminary mission team with Cambodian counterpart designed the Project with respect toward existing policy document, however because of above gaps seemed, JICA team proposed to design the Project with an accurate study of current condition of ME management at target hospitals. In addition, mission team recommended to verify actual activity of the Project

and the policy document after finding proper ME management method for target hospitals.

The policy document also includes the future vision of ME management for example establishment of the Central Workshop (not same as NW), satellite workshop etc., We could refer the policy document when we consider our vision as an useful information.

8 Conclusion

Since the joint mid-term evaluation for the Project has been decided to practice, we staff members of the Project, both Cambodian and Japanese, have taken various activities, for example attending workshop, discussion, presentation, study, preparation of documents, and answer to questionnaire etc., We could find concreted achievement by our activities. Although we are proud to show our true movement, we should clear some of remained issue or constrain we hold as well. It was sometimes very hard for us to demonstrate our weak point. However we think the most important point on the management of the Project is sharing the fact and understanding among partners. In this viewpoint, these series of the mid-term evaluation activities brought us many of benefits.

As we are aware, the name of the Project is started from the word "promotion", we understand this is the beginning stage of the implementation for improvement of ME management at referral hospitals. We have just disseminated one of a seed namely ME management, and the coming final year of the Project is that we have to spent a time to grow it carefully. The root of this plant is still very shallow and growing slowly, it is thought because of characteristic of the "management"; therefore, we need to continue looking after more and more until fixing the root concretely.

We remember when we started to consider about this Project in the period of preliminary stage, in October 2005, Cambodian and Japanese side had many times of discussion for designing of the Project. Cambodian side requested at least 5 years cooperation program for the Project. However Japanese side considered carefully and proposed to start with 3 years because there was not enough experience of such a ME management project and wanted to ensure the progress and achievement by the first 3 years period.

In this year MOH submitted the application to JICA for the new project on "strengthening of ME management in referral hospital" after the Project. Cambodian counterpart side expects further cooperation and support from JICA. Even though the next project will not be a big scale of the input or implementation, we need to continue long –winded but concrete activities with JICA support.

In closing, we would like to say thank to all the Project staff and JICA for their active participation in this mid- term evaluation and warm observation.

9 List of Annexes

- Annex-1: Score Criterion of the Follow up and Monitoring for Ex-trainee (ME technician)
- Annex-2: Result of Evaluation on ME Maintenance
- Annex-3: Set of ME Management Report Forms
- Annex-4: ME Management Follow up Check Sheet (ME managers and deputy manager)
- Annex-5: Result of Evaluation on ME Management
- Annex-6: Structure of HSD and its bureaus and units
- Annex-7: Job Description of HSB and its unit
- Annex-8: Structure of Engineering Section of the National Maternal and Child Health Center
- Annex-9: Job description of Engineering Section of the National Maternal and Child Health Center
- Annex-10: A Guide to the National Medical Equipment Workshop
- Annex-11: Table of Future Vision and Target
- Annex-12: Revised PDM
- Annex-13: Revised PO
- Annex-14: Financial Report of ME Management Seminar 2
- Annex-15: Name list of Counterparts
- Annex-16: Schedule of Mid Term Follow up Meeting