

Evaluation Report

The Ex-Post Evaluation Study on Project for Strengthening of the Food Safety Programme in Malaysia

March 2008

**Japan International Cooperation Agency
Malaysia Office**

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評価調査結果要約表

1. 案件の概要															
国名：マレーシア		案件名：食品衛生プログラム強化プロジェクト													
分野：食品工業		協力形態：プロジェクト方式技術協力													
所轄部署：医療協力部医療協力第一課		協力金額：485,416 千円													
協力期間	2001年6月1日 ～2004年5月31日 フォローアップ	先方関係機関：保健省													
	2004年6月1日 ～2005年5月31日	日本側協力機関：厚生労働省（食品衛生品質部食品保健課、検疫所等）													
他の関連協力 特になし															
<p>1-1 協力の背景と概要</p> <p>マレーシアにおいては、輸入食品（食用肉、農産物、加工食品等を含む）の割合が近年急速に増加し、2004年時点では輸入食品が全食品の40%を占めるに至っている。このような状況のなか、食品衛生行政の強化および食品検査技術の向上がマレーシアの課題となり、同政府は我が国に対し食品衛生分野における協力を要請した。同要請を受けて、消費者に対する安全な食品供給体制を整備することを目的として、「マレーシア国食品衛生強化プロジェクト」が2001年6月1日から開始された。</p>															
<p>1-2 協力内容</p> <p>(1) 上位目標</p> <ol style="list-style-type: none"> 1) 食品関連の病原体による汚染や危害等を減少させる。 2) 食品の安全性に対する消費者の信頼を増大させる。 <p>(2) プロジェクト目標</p> <p>消費者が安全な食品を入手できるようになる。</p> <p>(3) アウトプット（成果）</p> <ol style="list-style-type: none"> 1) 食品衛生行政の実施体制が強化される。 2) 食品法に適合しない食品市場への流通を排除するための措置が強化される。 食品検査能力の向上 輸入食品監視システムの構築 モニタリングプログラムの強化 3) 消費者への食品安全性に関する情報提供手段が改善される。 <p>(4) 投入（プロジェクト終了時）</p> <p>日本側：</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">長期専門家派遣</td> <td style="width: 10%;">4名</td> <td style="width: 30%;">機材供与</td> <td style="width: 30%;">227,145千円</td> </tr> <tr> <td>短期専門家派遣</td> <td>27名</td> <td>ローカルコスト負担</td> <td>31,953千円</td> </tr> <tr> <td>研修員受入れ</td> <td>20名</td> <td></td> <td></td> </tr> </table>				長期専門家派遣	4名	機材供与	227,145千円	短期専門家派遣	27名	ローカルコスト負担	31,953千円	研修員受入れ	20名		
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研修員受入れ	20名														

相手国側： カウンターパート配置 28名 土地・施設提供 ローカルコスト負担 RM5,588,345		
2. 評価調査団の概要		
調査者	(担当分野：氏名、所属先、職位) 評価計画 河添 靖宏 JICA マレーシア事務所 評価分析 PE Research Sdn. Bhd.	
調査期間	2008年2月4日～3月4日	評価種類：事後評価
3. 実績の確認		
3-1 プロジェクト目標の状況 食品検査のために積送された品数は2003年の11,683件から2006年には143,121件へと増大し、これは食品衛生管理体制強化の現れであると評価できる。一方、食品衛生品質部は食品衛生管理手法を徹底するために標準作業書を作成し、管理手法を全国各地で均質的に実施できる体制が整っており、一方で食品法遵守に係る執行体制の強化ともあいまって、1983年食品法に違反するサンプルの割合は2003年の9.4%から2007年には4.8%へと削減される結果につながっている。このような事実から、プロジェクト目標は達成されていると評価できる。		
3-2 上位目標の達成状況 プロジェクト目標の達成により、適切なサンプリング手法に基づく生物学的検査が実施される体制は整っており、食品の病原体による汚染や危害の危険性は低減されてきているといえる。食品の安全性については、今後とも増大する流通量や検査技術の高度化への対応をさらに強化する必要があると思われるが、現段階においては目立った懸案事項はないため、現状では消費者の満足をレベルに到達している状況であるといえることができる。		
3-3 終了時評価での提言の活用状況 プロジェクトフォローアップ期間中に信頼性保障、化学物質暴露評価の評価手法に関する技術指導を行うとともに、カウンターパートにおける技術の定着度に関する評価を行った。 現在、国立公衆衛生試験所に信頼性保障部門が設立されており、試験結果の信頼性確保のための評価が実践されていることから、食品の安全性を確保するための適切な試験が検査現場で行われる体制は整備されていると評価できる。		
4. 評価結果の概要		
4-1 評価結果の要約 (1) インパクト a. 上位目標の達成 プロジェクト目標の達成により、適切なサンプリング手法に基づく生物学的検査が実施される体制は整っており、食品の病原体による汚染や危害の危険性は低減されてきているといえる。検査された積送品数は、2003年の11,683件から2006年には143,121件へと増大した一方で、1983年食品法に違反するサンプルの割合は2003年の9.4%から2007年には4.8%へと低減されている。この結果については、保健省による食品流通業者への指導強化等の取り組みも貢献しているものと思われる。食品の安全性向上については、今後とも増大する流通量や検査技術の高度化への対応をさらに強化する必要があると思われるが、現段階におい		

ては目立った懸案事項はない。

b. 予想外の効果

分析的方法と手順に対する標準マニュアルの開発による ISO9000 認証取得があげられる。これにより、国際基準にのっとった品質管理要求水準を満たしていることが公に認められることになり、組織の取り組みに対する信頼性も高まる結果につながっている。

また、プロジェクトにおける技術移転の成果の延長として、国立公衆衛生試験所は 2005 年にマイコトキシンの国立リファレンスラボラトリーとして任命されている点も国内における研究拠点として認められている証である。

(2) 自立発展性

a. 制度面

食品衛生品質部には 3 つの部署がある。標準および品質管理課 (2004 年に設置)、食品化学課と食品微生物学課である。プロジェクト期間に、主に標準および品質管理部のスタッフに対する技術指導が行われた。現在に至るまでに 3 名が辞職しているが、3 つの中心的な研究所 (国立公衆衛生研究所、ジョホール公衆衛生研究所、プルリス公衆衛生研究所) における現在の技術スタッフは 71 名から 81 名へと増大した。

b. 財務面

食品衛生品質部においては、プロジェクト終了後も食品衛生向上活動を円滑に実施、展開する予算は配分されている。プログラムの年間予算はプロジェクト終了時に RM12.2 百万であったのに対し、組織の現在の予算は RM22.9 百万になっており、年々増大する傾向にある。

c. 技術面

食品衛生品質部においては、供与機材を有効に活用するとともに標準マニュアルを運用しながら検査、輸入食品の監視を行っている。また、プロジェクトのカウンターパートから新たに標準および品質管理部へ配属された職員に対して、カウンターパートにより技術移転が図られている。

4-2 プロジェクトの促進要因

(1) インパクト発現を促進した要因

プロジェクトは保健省の食品安全プログラムに対して非常に有益であり、マレーシア政府はその成果を持続・発展させながら食品安全プログラムに対する人員、予算を拡大しているところであり、プロジェクトの対象とした研究所以外にもその研究・検査手法は拡大している。

(2) 自立発展性強化を促進した要因

プロジェクト終了後、新しい検査手法と標準手順書 (マニュアル) が整備されてきた。カウンターパートはプロジェクトにより身につけた技術と知識を有効に活用していきたいとの強い意志を有しており、より多くの輸入エントリーポイントへのモニタリングシステム導入が図られている。検査、分析を行うための新たな人員の訓練が継続的に実施されており、組織的能力も高まっている。

4-3 プロジェクトの阻害要因

(1) インパクト発現を阻害した要因

特に見当たらない。

(2) 自立発展性強化を阻害した要因

ジョホール公衆衛生研究所の指摘によると、プロジェクトのカウンターパートの異動により、技術を身につけた職員が不足する状況が一時期生じたことがあったようだが、組織のなかでの訓練を通して人材育成が行われ、成果は継続しているとのことである。

4-4 結 論

食品衛生品質部は、既に分析的方法を含む合計 127 の標準手法書を開発している。また、食品検査件数も 2003 年の 11,683 件から 2006 年には 143,121 件と増大しており、食品検査に対するマレーシア政府の取り組みは強化されつつある。消費者の信頼性獲得については、食品の高度化、多様化に伴い時々刻々と評価は変化するものと思われるが、現状ではメディア等で大きな問題は指摘されるに至っていない。したがって、上位目標であるところの、「食品の安全性に対する消費者の信頼を増大させる」については、マレーシア側の対応がなされていると評価できる。また、1983 年食品法に違反するサンプルの割合は 2003 年の 9.4%から 2007 年には 4.8%へと削減されており、本プロジェクト以外の食品衛生品質部の取り組みともあいまって、「食品関連の病原体による汚染や危害等を減少させる」という上位目標についても計画通りの進捗をみせている。

4-5 提 言

(1) マレーシア政府に対する提言

人的資源と予算の配分に関する保健省のコミットメントがプロジェクトの持続発展性を高めている。食品衛生プログラムに対する保健省幹部の重点的な取り組みが、現在の成果に至る主要因であるところ、継続した取り組みが望まれる。

(2) JICA への提言

本邦において調達した機材について、現地企業においてメンテナンスが難しい機材が一部存在した点、現地調達を優先的に検討し、可能な範囲で機材の選定を行うことも一考の余地がある。

4-6 教 訓

政策的コミットメント、予算配分が本プロジェクトの持続発展性に大きく寄与しているところ、これら要因が十分に担保されることを確認したうえで案件を実施する必要がある。また、食品衛生品質部を中心に地方の公衆衛生研究所（現場）に対する協力を行ったことも効果的であったため、効果的な協力を行うためには、組織の把握とそれに合わせた協力を計画する必要がある。

4-7 フォローアップ状況

フォローアップ期間中の取り組みとしては以下の項目があげられる。

(1) 信頼性保障

(2) 化学物質暴露評価に関する評価手法

これにより、国立公衆衛生試験所に信頼性保障部門が設立・運営されており、試験結果の信頼性確保のための評価が実践されている。

Summary Sheet

Ex-Post Evaluation conducted by JICA Malaysia Office

1. Outline of the Project				
Country: Malaysia		Project title: “Strengthening of the Food Safety Programme in Malaysia”		
Field: Food safety and hygiene management		Cooperation scheme: Project-type Technical Cooperation		
Section in charge: Food Safety and Quality Division, Ministry of Health		Total cost: (note RM1 = JPY 32) Japanese side (Yen ¥169,214,668) Malaysian side (RM 12,626,785)		
Period of Cooperation	1 June 2001 to 31 May 2004 (3 years)	Partner Country’s Related Organization(s): Food Safety and Quality Division, Ministry of Health		
	Follow Up 1 June 2005 to 31 May 2006	Supporting Organization in Japan: Ministry of Health and Labor		
Related Cooperation:				
1-1 Background of the Project				
<p>In 1999, the JICA examined the possibility of providing support for a food safety programme in Malaysia. A JICA-assisted project was started in June 2001. The project targeted 5 out of the then operating 14 food laboratories, i.e., 1 National Public Health Laboratory (Sungai Buloh), 1 Public Health Laboratory (Johor Bahru) and 3 Food Quality Control Laboratories (Perlis, Sarawak and Kelantan).</p>				
1-2 Project Overview				
To strengthen the food safety and hygiene programme implemented by the Ministry of Health				
(1) Overall Goal	1) To reduce health hazard caused by eating contaminated food 2) To increase consumer’s confidence in food safety in Malaysia			
(2) Project Purpose	To increase the availability of safe food for Malaysian consumers			
(3) Output	1) Food hygiene management is strengthened 2) Means to prevent food in the market, which is not in compliance with the Food Act and Regulations, are strengthened. 3) Means of providing information on food safety for consumers is improved.			
(4) Input	Japanese side:			
	Long-term Experts	4	Equipment	227.1 million yen
	Short-term Expert	27	Local Cost	31.9 million yen
	Trainees received	20		
	Malaysia’s side:			
	Counterparts	28		
	Equipment	RM 7,038,451		
Local Cost	RM 5,588,344			

2. Evaluation Team		
Members of Evaluation Team	JICA Malaysia Office (commissioned PE Research Sdn Bhd)	
Period of evaluation	February 14 to March 4, 2008	Type of Evaluation: Ex-Post Evaluation
3. Project Performance		
3-1 Performance of Project Purpose		
<p>Number of consignments inspected has increased from 11,683 in 2003 to 143,121 in 2006. This means FSQD achieved strengthen food safety management system. On the other hand, FSQD has developed a total of 127 SOPs for establish standard testing and analysis methodology at each laboratories. FSQD also has conducted public relation activities for industries and strengthen enforcement of laws. As a result, percentage of samples that contravened the Food Act 1983 has reduced from 9.4 per cent in 2003 to 4.8 per cent in 2007. By taking these facts into consideration, the project purpose has been achieved.</p>		
3-2 Achievement related to Overall Goal		
<p>FSQD established a management system of food safety based on appropriate sampling and proper biological research and testing method through the project. This means the risk of eating contaminated foods became lower. It will be necessary for FSQD to catch up with new technology of research and improve management system to tackle with increasing varieties of foods while there is no obvious problem regarding food safety in present situation. This will be a challenge of FSQD in the future.</p>		
3-3 Follow up of the Recommendations by Terminal Evaluation Study		
<p>Technical transfer on securing credibility of research and testing method and evaluation of exposure level of chemical contains were held by Japanese experts and, at the same time, acquisition level of counterparts regarding these topics are evaluated. Their skill and knowledge were satisfactory. The credibility section was established in NPHL and practices of securing credibility have been done regularly. It is concluded FSQD established a system to practice proper checking method at each PHLs.</p>		
4. Result of Evaluation		
4-1 Summary of Evaluation Results		
(1) Impact		
a. Achievement of the Overall Goal:		
<p>FSQD established a management system of food safety based on appropriate sampling and proper biological research and testing method through the project. FSQD has developed a total of 127 SOPs including analytical methods. Percentage of samples that contravened the Food Act 1983 has reduced from 9.4 per cent in 2003 to 4.8 per cent in 2007. Number of consignments inspected has increased from 11,683 in 2003 to 143,121 in 2006. Therefore, it is concluded that the Overall Goal has almost been achieved.</p>		
b. Unintended Effects:		
<p>ISO certification due to the development of SOPs on analytical methods and procedures.</p>		

(2) Sustainability

a. Institutional Aspect:

The FSQD has 3 departments i.e., Standard and Quality Control Department (formed in 2004), Food Chemical Department and Food Microbiology Department. 40 staff was trained during the project period. Out of this, three have since resigned. Current technical staff at the three core laboratories (NPHL Sungai Buloh, PHL Johor and PHL Perlis) has increased to 81 persons from 71 persons at the time of project completion.

b. Financial Aspect:

In terms of financial aspects FSQD management indicated that they have both financial and economic capacity for implementing and developing project activities smoothly. The annual budget for the programme has been increasing yearly as evidenced by the current budget of the organization at RM22.9 million compared to RM12.2 million at the time of project completion.

c. Technical Aspects

In terms of technological aspects FSQD management indicated that they have been using the equipment, their staff have used the SOPs and performed the activities as envisaged since completion of the project. Echo training especially in laboratory analysis has been an ongoing activity. Currently they are in the process of expanding and redeveloping the FOSIM application.

4-2 Factors that have promoted Project

(1) Impact

The impact of the project has been very beneficial to the Ministry of Health's programme on food safety. The project's resources have been expanded with the Government of Malaysia increasing manpower, budget and resources to the food safety programme. The activities of the project have been rolled out to more PHLs, with concomitant training provided since project completion.

(2) Sustainability

New methods and SOPs have been developed since project completion as a result of knowledge transferred from the project. Counterparts have shown their commitment in utilizing the skills and knowledge acquired from the project. Ongoing improvements in the application of FOSIM with an expansion of the system to more entry points have strengthened the inspection of imported food to Malaysia. Continuous echo training undertaken to train new personnel in laboratory analysis has yielded good results.

4-3 Factors that have inhibited Project

(1) Impact

None was found in the evaluation.

(2) Sustainability

PHL Johor indicated the lack of trained personnel due to a high turnover of staff, particularly those who are transferred elsewhere. This situation has reduced the effectiveness of the PHL Johor's role as the reference laboratory for Food Packaging.

Some of the equipments (particularly from Japan) installed during the project period did not have any service contracts, and no local agency was able to provide service maintenance. Thus, the cost of repair and maintenance, parts replacement, has been high and time consuming.

4-4 Conclusion

The overall goal of the JICA Project is to reduce health hazard caused by eating unsafe food and to increase consumer's confidence in food safety in Malaysia. This is the intended overall impact of the Project. The indicators are: (1) Contamination by food borne pathogens and other hazards is reduced; and (2) Customers' satisfaction with food safety.

The project purpose was to increase the availability of safe food for Malaysian consumers. The indicator for the project purpose was that the Ministry of Health improves the system of food safety.

FSQD has already developed and completed a total of 127 SOPs including analytical methods. Percentage of samples that contravened the Food Act 1983 has reduced from 9.4 per cent in 2003 to 4.8 per cent in 2007. Number of consignments inspected has increased from 11,683 in 2003 to 143,121 in 2006.

The JICA Project has also made significant contribution towards improving FSQD's institutional capacity in terms of trained counterparts being able to undertake more complex analysis, as well as in development of new methods directly from Project imparted skills. In short, the overall goal of the Project has been achieved.

In terms of the unintended impacts, the positive impact has been the ISO certification and the appointment of the NPHL Sungai Buloh as the National Reference Lab for Mycotoxin in 2005.

4-5 Recommendations

(1) Recommendations for Malaysian Government

Institutional commitment with regards to human resource and budget allocations are necessary for the Project outcomes to be sustained. The commitment of the top management of the Ministry of Health to the project is necessary for the sustainability of the programme.

(2) Recommendations for JICA

The main issues are the lack of local service agents for the equipments donated by JICA for the project. Maintenance, repairs and parts replacement was an issue as the equipments donated by JICA could not be replaced by the FSQD.

4-6 Lessons Learned

In future projects, donor agencies should be encouraged to review with their partner agencies the issue of financial implications of maintenance and replacements.

Focus should also be given to administration and management functions besides the technical content.

4-7 Follow-up Situation

During the follow up cooperation period, the project conducted technical transfer on method of securing credibility and evaluation method of chemical contains' exposure level. As a result, credibility section was established and evaluations of testing result are practiced regularly.

Abbreviations

FQCL	Food Quality Control Laboratory
FSQD	Food Safety and Quality Division
GMO	Genetically Modified Organism
JICA	Japan International Cooperation Agency
MoH	Ministry of Health
NPHL	National Public Health Laboratory
PHL	Public Health Laboratory
SOP	Standard Operating Procedure

1. Introduction

1.1 Project Background

This Ex-Post Evaluation Report of the JICA project for Strengthening of the Food Safety Programme in Malaysia (hereafter known as the Project) from June 2001 to May 2004 was carried out in February 2008. The Terms of Reference of the evaluation is attached as **Annex 1**.

A terminal evaluation report was produced about six months before the Project was officially terminated in 2004. That report outlined the progress/condition of the Project, the outcomes and achievements made at that time.

It is important to note that the impact of a project after its termination is different from the impact during the time of the project. There are no longer any “project” resources that can be directed to assist in reaching the goals. Institutional, organisational, political, market and economic factors are likely to influence the outcomes and directions of the project goals and purpose, as well as the institution’s performance. Thus, the extent of the project’s impact on and sustainability within the organisation and the counterparts is a function of its design and implementation, and its ability to demonstrate its relevance to the organisation’s purpose and existence. In this regard, an Ex-Post evaluation helps in learning how to improve on the design and implementation of future projects. Such an exercise will help both donor and recipient evaluate the facts on whether project elements are still relevant to the core business, particularly the size of the impacts, and whether the outcomes could be sustained.

1.2 Study Objectives

In an Ex-Post evaluation, the most important objective is **to gain an understanding of the impact and sustainability of the project**. In this case, the evaluation is done four years after termination of the Project. In undertaking this exercise, JICA has determined that the evaluation should comprise mainly of interviews with key stakeholders, i.e. Food Safety and Quality Division (FSQD), selected food laboratories and Project counterparts. Other inputs, such as examination of records, were compiled to supplement this effort.

1.3 Key Evaluation Objectives

The objective of the evaluation is to verify important issues relating to the impact and sustainability of the Project. The main evaluation questions are listed as follows:

- a) Impact: Achievement of Project Goal since completion
 - i) How much further has the Project Goal been attained?
 - ii) What factors have contributed to the impacts?
 - iii) Any unanticipated outcomes?
 - iv) Any external factors affecting the achievement of Project Goal?
- b) Sustainability: Continuation of Project activities and services
 - v) How has sustainability been continued?

- vi) Have Project outcomes been maintained? And how?
- vii) What factors have affected its sustainability?

1.4 Evaluation Team

The Evaluation Team for this study was put together by PE Research Sdn Bhd and comprised of Chang Yii Tan as Team Leader and T..Rajavijayan as Researcher.

1.5 Structure of Report

The structure of this report is as follows. **Section 2** discusses the methodologies, particularly those used in this evaluation. **Section 3** discusses the results of the evaluation, focussing on the two main issues of impact and sustainability. The discussion is focussed on aspects of policy, technology, environment, socio-cultural, institutional and management and economics and finance. **Section 4** gives a conclusion of the evaluation. **Section 5** provides the key lessons learnt with regards to impact and sustainability, and **Section 6** makes recommendations to resolve the issues that have surfaced during the evaluation.

2. Evaluation Study Approach

2.1 Methodology

The principal technique used is the logical framework (Logframe) approach. Specifically, the terminal evaluation report provides the basis for the evaluation as it establishes the baseline at the completion of the project. The project's objective/goal and purpose are defined as follows.

Project Goal: (i) To reduce health hazard caused by eating contaminated food

(ii) To increase consumer's confidence in food safety in Malaysia

Project Purpose: The Ministry of Health via the Food Quality and Safety Division will be able to increase the availability of safe food for Malaysian consumers.

2.2 Implementation

The following methodologies were used in this ex-post evaluation:

Table 2.1 Methodologies used in ex-post evaluation

Methodology	Implementation
Preparation of an evaluation grid (Annex 2)	An evaluation grid establishes the main questions of the evaluation. Sub-questions were developed alongside the key questions. Indicators were identified (e.g. quality), and their measures were defined (e.g. poor to excellent) . Another key aspect was data requirements, sources of data and method of its collection. Hence, the evaluation grid provided the scope of work that was envisaged at the start of the Evaluation, and thus guided the evaluators in terms of answering the main and sub-questions. It is important to note that the grid was defined without detailed knowledge of the record keeping or documentary procedures or what was accessible to the study team. In this particular evaluation, the study team had the benefit of an initial meeting with FSQD that provided information for many of the key issues that were eventually discussed. The study team also had the benefit of information in the terminal evaluation report and documents that were prepared during the Project and these were also used to prepare the final evaluation grid.
Surveys and interviews with FQSD, NPHL (Sungai Buloh), PHL (Johor and Perlis) and counterparts (Annex 3)	Using the evaluation grid, the survey instruments were then developed based on the main and sub-questions. In this evaluation, three different questionnaires were designed, i.e. to the three levels of impacts indicated earlier. In this study, interviews were conducted with the management of FQSD (Putrajaya), NPHL (Sungai Buloh), PHL (Johor and Perlis) and all available counterparts (10 counterparts).
Checklist of status of equipments and facilities left behind (Annex 4 & 5)	In any donor project, the status of use of the equipment and facilities post-project form an important indication of the relevance of the technology that was delivered, especially after project completion where project resources are no longer available to sustain the maintenance and upkeep. A checklist of equipment that was handed over/donated at the time of the terminal evaluation report was handed over to FSQD, and their status is shown in Annex 4. An analysis of the state of the equipment has also been made, and this is discussed in Annex 5 of the report.
Organisational review of FSQD and key changes since 2004 (Annex 6)	In order to better understand the results of the evaluation, it is important to have an appreciation of the organisational and institutional changes that occurred since the terminal evaluation report. An outline of the key changes is shown in Annex 6.

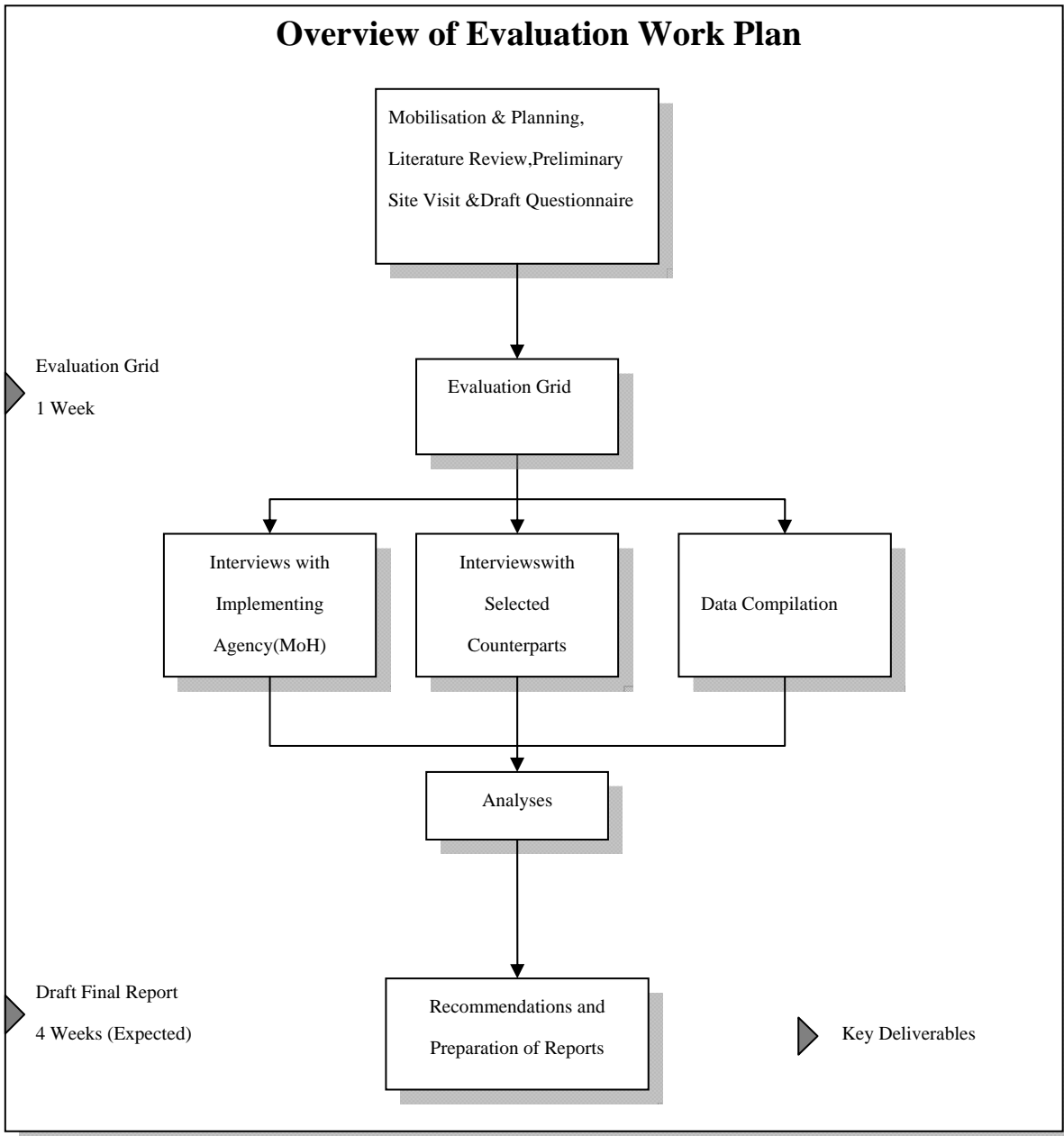


Figure 2.1: Overview of Evaluation Work Plan

3. Results

3.1 Evaluation Result

3.1.1 Impact

3.1.1.1 Achievement of the Overall Goal

The impact of the project on the achievement of the overall goal can be assessed via the achievement of project, particularly the outputs, expansion of the program to other sites, and the greater dissemination of educational materials.

Table3.1: Achievement of Project Activities

	Prior to project (2004)	Project completion (2005)	Post-Project (2008)
Number of SOPs	32	57	127
Analysis by parameter			
Veterinary Drug	2	22	33
Pesticide	17	52	68
Nutrient	0	6	6
GMO	0	6	9
Micro	12	17	18
Molecular Micro	0	0	4
Micotoxin	1	6	10
Packages	0	10	35
FOSIM application	0	3 sites	20 sites
Educational materials	n.a.	26	45

Source: Food Safety and Quality Division, Ministry of Health

In terms of achievement situation of Overall Goal, the following have been achieved:-

- Percentage of samples that contravened the Food Act 1983 was reduced from 9.4 per cent in 2003 to 4.8 per cent in 2007;
- Number of inspections of consignments increased from 11,683 in 2003 to 143,121 in 2006;
- More educational materials had been produced and disseminated to the public; and
- 6 promotional road shows of Food Safety had been conducted with an additional allocation of RM2 million being allocated for future Food Safety promotion and the production of education materials.

Overall FSQD indicated that food safety activities have been strengthened and the achievement of the Overall Goal is deemed to be very high.

3.1.1.2 Impact of Project to Individual Agencies under FSQD

The evaluation team interviewed 3 agencies, i.e., NPHL in Sungai Buloh, PHL in Perlis and Johor to ascertain the impact of the project to these agencies. The Sarawak Health Department e-mailed the completed Agency questionnaire. Table 3.2 below summarises the impacts of the project to individual agencies.

The impact of the project has been an overall increase and expansion of the capacity and capability in using analytical methods to measure food safety levels. All agencies indicated that the project was and still is relevant to their agencies objectives and strategies and that the project has improved their capability in conducting similar programs.

However, all agencies also indicated that the duration of training and short term experts dispatched should be increased or managed properly for more effective results to beneficiary agencies or counterparts.

Table 3.2: Impact of the project to the Agencies

	NPHL Sungai Buloh	PHL Perlis	PHL Johor	Sarawak Health Dept
What are the positive impacts of the project?	Gave a boost to their capacity building	Provided guide in analytical methods and standard procedures	Expanded the scope of food analysis	Provided new knowledge and methods
What are the negative impacts of the project?	Nil	Nil	Nil	Some methods are too complicated
Project relevant to your agencies objectives and strategies?	Yes	Yes	Yes	Yes
Project improved capability in conducting similar future programs by your agency?	Yes	Yes	Yes	Yes
Equipments donated by the Project?	Still in use	Still in use	Still in use	Did not receive any equipment
Non-quantifiable contributions of this agency towards the project	Commitment of the top management for this project.	No comments	Setting up of food packaging analysis unit in PHL Johor	Adapting and utilising the methods trained under the project.
Changes for improvement or better implementation of the project?	Time management of short term consultants with the various agencies/counterparts.	Expert attached at Perlis for a minimum of 3 months to provide training in heavy metals, pesticides and microbiology.	Duration of training need to be increased.	No comments.

Source: Agency interview

3.1.1.3 Impact of Project to Individual Units under FSQD

Looking at the impact of the project to the various units or sections under FSQD, impacts can be seen in 6 units and 1 section. The Quality Assurance Section under FSQD was developed during JICA counterpart training at NPHL in 2004 under the purview of the NPHL Director. However later it was relocated under the purview of the Food Division. This division is responsible for (1) internal audit and proficiency testing, (2) quality system and documentation and (3) method development and training. The other 6 units that have indicated impacts include the Food Microbiology Unit, Food Biotechnology Unit, Pesticides Residues Unit, Veterinary Drug Unit, Mycotoxin Unit and Nutrient Unit.

Table 3.3 summarises the impact of the project to the various units/section. Overall there has been an increase in both the documents/SOPs as well as analytical capabilities during the project and the post project period. However, the number of staff except for the Veterinary Drug Unit has decreased for the other units.

Table3.3 Impact of the project to Section and Units under FSQD

	Project Period (2001 to 2004)	Post-Project (Up to Feb 2008)
Quality Assurance Section	<p><u>Staff</u> 4 persons</p> <p><u>Tasks and responsibilities</u> -Preparation of SOPs -Conducting internal audit to Food Section, NPHL -Conducting evaluation on internal quality control using QCAS Software</p> <p><u>Documents/SOP produced</u> -Internal Audit. -Evaluation of Internal Quality Control. -Proficiency Testing for Internal Quality Control. -Handling of Reagent. -Management of freezer and refrigerator. -Management of Balance. -Pre-treatment of samples.</p> <p><u>Training program</u> -14 Sept to 9 Nov 2004 by Ms Asumi Hirata to 4 counterparts on establishment of QA Section in NPHL, development of Internal Quality Control in analytical section and development of SOPs in analytical section. -26 Jan to 23 Mar 2005 by Ms Tomoko Inoue to 4 counterparts on conducting internal audit based on GLP system.</p>	<p><u>Staff</u> 2 person, 1 vacant and 1 on study leave until 2009.</p> <p><u>Tasks and responsibilities</u> -Review and control all technical documents centrally. The unit issues documents to all 14 Public Health Laboratories and the Food Safety and Quality Lab at MoH. -Conducting internal audit of all 14 PHL. -Planning, organising and monitoring national and international proficiency testing for analytical section of NPHL. -Conducting method development of new analytical technique using high-end instruments. -Provide training to all staff of NPHL and other laboratories of MoH on quality assurance system.</p> <p><u>Documents/SOP produced</u> -Laboratory Quality Manual -Quality Standard Procedures -SOPs (30)</p> <p><u>Training program</u> -4 training in 2006 -7 trainings conducted in 2007.</p>

	Project Period (2001 to 2004)	Post-Project (Up to Feb 2008)
Food Microbiology Unit	<p><u>Staff</u> 5 persons</p> <p><u>Analytical Capability</u> -Indicator Organism (4 types) -Pathogenic Organism Conventional Method (7 types) -Pathogenic Organism Molecular Method (3 types) -Bacteria Toxin (3 types)</p> <p><u>Test Method/SOP</u> -9 methods and SOP.</p> <p><u>Training program</u> -In-House training (2 conducted in Aug 2002 and Mar 2002) -Echo training (2 conducted)</p>	<p><u>Staff</u> 6 persons.</p> <p><u>Analytical Capability</u> -Indicator Organism (4 types) -Pathogenic Organism (11 types) -Pathogenic Organism Molecular Method (carried out by Molecular Unit) -Bacteria Toxin (3 types) -Others (1 type)</p> <p><u>Test Method/SOP</u> -17 methods and SOP</p> <p><u>Training program</u> -In-House training (1 conducted in 2005) -In-House training (7 conducted in 2006) -In-House training (10 conducted in 2007)</p>
Food Biotechnology Unit	<p><u>Staff</u> 6 persons</p> <p><u>Analytical Capability</u> -7 types</p> <p><u>Test Method/SOP</u> -8 methods and SOP.</p> <p><u>Training program</u> -In-House training (2 training in 2002) -In-House training (8 training in 2003) -In-House training (8 training in 2004) -Echo training (1 training in 2002)</p>	<p><u>Staff</u> 3 persons.</p> <p><u>Analytical Capability</u> -11 types</p> <p><u>Test Method/SOP</u> -19 methods and SOP</p> <p><u>Training program</u> -In-House training (4 conducted in 2005) -In-House training (2 training in 2006) -In-House training (2 seminars in 2006)</p>
Pesticide Residues Unit	<p><u>Staff</u> 5 persons (2 persons before JICA project)</p> <p><u>Analytical Capability</u> -62 types (23 types before JICA project)</p> <p><u>Test Method/SOP</u> -12 methods and SOP (none before JICA project)</p> <p><u>Training program</u> -JICA's trainers (2 training conducted in 2001, 1 in 2002 and 3 in 2003). -Training in Japan (1 in 2001, 1 in 2003 and 1 in 2004) -Workshop conducted in 2002. -Echo training (1 in 2004)</p>	<p><u>Staff</u> 4 persons.</p> <p><u>Analytical Capability</u> -66 types</p> <p><u>Test Method/SOP</u> -14 methods and SOP</p> <p><u>Training program</u> -In-House training (2 in 2005, 1 in 2006 and 2 in 2007) -Continuous in-house training by NPHL for 10 counterparts -Echo training (3 conducted in 2006)</p>

	Project Period (2001 to 2004)	Post-Project (Up to Feb 2008)
Veterinary Drug Unit	<p><u>Staff</u> 4 persons (3 persons before JICA project)</p> <p><u>Analytical Capability</u> -28 types (5 types before JICA project)</p> <p><u>Test Method/SOP</u> -9 methods and SOP (2 before JICA project)</p> <p><u>Training program</u> -JICA's trainers (1 training conducted in 2002, 1 in 2003 and 1 in 2004). -Echo training (2 workshops in 2002)</p>	<p><u>Staff</u> 16 persons.</p> <p><u>Analytical Capability</u> -43 types</p> <p><u>Test Method/SOP</u> -17 methods and SOP</p> <p><u>Training program</u> -In-House training (4 in 2007) -Continuous in-house training by NPHL for 13 counterparts -Echo training (1 conducted in 2007)</p>
Mycotoxin Unit	<p><u>Staff</u> 5 persons</p> <p><u>Analytical Capability</u> -3 types</p> <p><u>Test Method/SOP</u> -10 methods and SOP</p> <p><u>Training program</u> -nil</p>	<p><u>Staff</u> 3 persons.</p> <p><u>Analytical Capability</u> -5 types</p> <p><u>Test Method/SOP</u> -15 methods and SOP</p> <p><u>Training program</u> -Training in Japan (2 in 2005) -Technical Workgroup Meeting (done annually since 2006) -In-House training (1 in 2006 and 1 in 2007) -Continuous in-house training by NPHL for 13 counterparts -Echo training (1 conducted in 2007)</p>
Nutrient Unit	<p><u>Staff</u> 5 persons (4 persons before JICA project)</p> <p><u>Analytical Capability</u> -1 types (none before JICA project)</p> <p><u>Test Method/SOP</u> -1 method and SOP (none before JICA project)</p> <p><u>Training program</u> -2 trainings conducted by JICA Experts</p>	<p><u>Staff</u> 3 persons.</p> <p><u>Analytical Capability</u> -2 types</p> <p><u>Test Method/SOP</u> -14 methods and SOP</p> <p><u>Training program</u> -In-House training (2 in 2007)</p>

Source: Food Safety and Quality Division, Ministry of Health

3.1.1.4 Impact of Project to Counterparts

A total of 10 counterparts were interviewed for this evaluation exercise, i.e., 7 in NPHL Sungai Buloh, 1 in PHL Johor and 2 in PHL Perlis. The counterparts who completed the survey form include 2 Heads of Section and 8 Food Technologists.

Overall counterparts indicated that the programme was and is very useful to their current duties. In terms of dissemination of knowledge and skills all counterparts interviewed indicated that they have given on the job training to their colleagues on the skills learned via the programme. Development of new scope of analysis as well as testing methods are the issues that have been successfully tackled by counterparts by utilising knowledge gained in the programme.

About 30 per cent of the counterparts indicated that they do face problems in utilizing the skills learned in the programme due to lack of trained personnel (PHL Johor), lack of equipment (PHL Perlis) and maintenance of equipment (NPHL Sungai Buloh). The table below summarises the impact of the project to the Counterparts.

Table3.4: Impact of the project to Counterparts

		#	%
Current duties	Head of Food Section	2	
	Microbiological and chemical analysis	3	
	Veterinary drug residue and quality assurance	1	
	GMO analysis	1	
	Quality assurance	1	
	Heavy metal analysis	1	
	Pesticide residues analysis	1	
Have changed job since completing the programme?	Yes	1	10%
	No	9	90%
How do you rate the usefulness of the programme to your current duties?	Very useful (utilise more than 80%)	10	100%
	Some degree (utilise more than 50%)	-	-
	A little (less than 50%)	-	-
	Not applicable	-	-
Have you disseminated the knowledge and skills acquired? (multiple answer)	Seminar	5	50%
	Workshop	7	70%
	Reporting to superiors and colleagues	8	80%
	Circulation of text materials and references	8	80%
	Through daily work (on the job training)	10	100%
	Echo training	2	20%
Issues that you have tackled by utilizing the knowledge gained from the programme?	Development of new scope of analysis	4	40%
	Develop SOP and testing methods	3	30%
	Quality assurance issues in analysis/test	3	30%
Have any problems in utilizing these knowledge and skills in your current job?	Yes	3	30%
	Lack of trained personnel	1	10%
	Lack of equipment	1	10%
	Lack of funds	-	-
	Lack of foreign experts	-	-
	Others (maintenance of equipment)	1	10%
	No	7	70%

		#	%
Biggest benefit for you?	Gained knowledge and skills	4	40%
	Expand analytical skills	4	40%
	Development of new methods	2	20%
Still keep in touch with other participants/lecturers?	Yes	7	70%
	Other participants	5	50%
	Lecturers	7	70%
	Others	-	-
No	3	30%	
Positive impacts of the programme?	Transfer of technical knowledge and skills	3	30%
	Improvement of technical knowledge	7	70%
Negative impacts of the programme	No comments	8	80%
	Communication problem with JICA experts	1	10%
	Counterparts could not transfer knowledge to others	1	10%

Source: Counterpart interview

3.1.2 Sustainability

3.1.2.1 Institutional and Management Aspects

The FSQD has 3 departments i.e., Standard and Quality Control Department (formed in 2004), Food Chemical Department and Food Microbiology Department. 40 staff was trained during the project period. Out of this, three has already resigned. Current technical staff at the three core laboratories (NPHL Sungai Buloh, PHL Johor and PHL Perlis) has increased to 81 persons compared to 71 persons at the time of project completion.

Counterpart staff trained in the Project is still working in FQCD but there has been cases that they have been transferred to state health departments or state food laboratories. Table 3.5 shows the situation with the staff.

Table 3.5 Status of Trained Counterpart Staff

	No. Staff trained by Project	No. staff remaining 2008 (interviewed)	Staff who has left
Food Quality Control Division	16	14	2
NPHL Sungai Buloh*	15	14 (8)	1
Kedah Food Quality Control Laboratory	2	2 (1)	-
Kedah State Health Dept	1	1	-
Klang Food Quality Control Laboratory	1	1	-
Sarawak Food Quality Control Laboratory	1	1	-
Kelantan Food Quality Control Laboratory	1	1	-
Ipoh Public Health Laboratory	1	1	-
Kota Kinabalu Food Quality Control Laboratory	1	1	-
Johor Public Health Laboratory	1	1 (1)	-
Total	40	34 (10)	3

Source: List of counterparts, FSQD and Counterpart survey

* Some staff has been transferred to other states, this include 1 staff who is currently stationed in Perlis. The counterpart from Kedah Food Quality Laboratory is also stationed in Perlis.

The FSQD management has indicated that their organization has the capacity for implementing and developing project activities smoothly. This was also cited by the agencies visited, i.e., NPHL Sungai Buloh and PHL Perlis except PHL Johor. PHL Johor's problem is due to lack of trained personnel as trained laboratory personnel are often transferred to other laboratories. In fact PHL Johor indicated that they have a very high turnover of trained personnel. This has affected the performance of the laboratory as new staff assigned had to be trained. The counterpart trained in Johor has been promoted and is currently handling more administrative duties thus cutting her time to give training to other personnel.

Furthermore, in some cases, staff originally trained in the project has been transferred out to regional offices; these places cannot use the knowledge and skills that were provided for in the JICA assisted program. Echo training of new staff by the trained counterparts has not gained full benefits either due to:
-Capacity of counterparts to disseminate their knowledge and skills not up to organization's expectations (Perlis); or
-Counterpart currently assigned administrative duties thus having less time to spend in laboratory for new staff training (Johor).

It has to be noted that all agencies visited indicated that they can continue the program without support from JICA.

3.1.2.2 Economic and Financial Aspects

In terms of financial aspects FSQD management indicated that they have both financial and economic capacity for implementing and developing project activities smoothly. The annual budget for the programme has been increasing yearly as evidenced by the current budget of the organization at RM22.9 million compared to RM12.2 million at the time of project completion.

3.1.2.3 Technological Aspects

In terms of technological aspects FSQD management indicated that they have been implementing and developing project activities since completion project. Echo training especially in laboratory analysis has been an ongoing activity. Currently they are in the process of expanding and redeveloping the FOSIM application.

3.2 Factors that have promoted the Project

3.2.1 Impact

The commitment to and ownership of the project by FSQD management has helped to sustain and improve the impact of the project. Increases in manpower, budget and commitment from top management has contributed to the successful implementation of the project. The Project's outcome is part of the Government's policy objective.

3.2.2 Sustainability

In terms of maintaining the sustainability of the project impacts, the continuous echo training

undertaken to train new personnel in laboratory analysis has provided good results. New methods and SOPs have been developed since the project completion and this is a result of the technical knowledge transferred from the project and that trained personnel has shown their commitment in utilizing the skills and knowledge acquired through the project. Ongoing improvement on the application of FOSIM and expanding the system to more entry points will ensure the strengthening of inspection of imported food to Malaysia.

3.3 Factors that have inhibited Project

3.3.1 Impact

No significant factors are identified.

3.3.2 Sustainability

Some impediments are evidenced in the sustainability of the project impacts. PHL Johor indicated the lack of trained personnel due to high turnover of staff who were transferred out. Therefore the objective of PHL Johor to become the reference laboratory for Food Packaging is still not successful. Some of the equipments from Japan that was installed during the project have no local service agencies thus making it costly and time consuming for parts and maintenance. However, this issue has not been significant yet as these equipments are still functioning and being used currently. The Ministry of Health has allocated a one-off budget of RM22 million and newer equipments have been bought and installed in NPHL Sungai Buloh.

4. Conclusion

The overall goal of the JICA Project is to reduce health hazard caused by eating contaminated food and to increase consumer's confidence in food safety in Malaysia This is the intended overall impact of the Project.

The original PDM indicators are as follows:

- Contamination by food borne diseases is reduced; and
- Customers' satisfaction with food safety.

This has been modified as follows in the final evaluation:

- Contamination by food borne pathogens and other hazards is reduced; and
- Customers' satisfaction with food safety.

The project purpose was to increase the availability of safe food for Malaysian consumers. The indicator for the project purpose was as follows:

- Original PDM – XX% of surveillance samples comply with the food safety standards
- Modified – The Ministry of Health improves the system of food safety.

FSQD has already developed and completed a total of 127 SOPs including analytical methods. Percentage of samples that contravened the Food Act 1983 has reduced from 9.4 per cent in 2003 to 4.8 per cent in 2007. Number of consignments inspected has increased from 11,683 in 2003 to 143,121 in 2006.

The JICA Project has also made significant contribution towards improving FSQD's institutional capacity to undertake more complex analysis, as well as in development of new methods directly from the Project's imparted skills. Nevertheless at the overall level, FSQD has indicated that the Project has expanded their capacity in providing testing and analysis of food thus directly strengthening the food safety programme.

Although FSQD's capacity and capability has not been assessed by any other party, their overall assessment of the impact of JICA Project has been very positive. In short, the overall goal of the Project has been achieved.

In terms of the unintended impacts, the positive impact has been the ISO certification and the appointment of the NPHL Sungai Buloh as the National Reference Lab for Mycotoxin in 2005.

5. Recommendation

5.1 Recommendation for Malaysian Government

The most important recommendation with respect to sustainability is that institutional, human resource and budget must continue to be allocated if the intended outcomes are to be sustained. The government's commitment to the food safety programme has been strong, and needs to be kept strong if the outcomes are to be sustained.

5.2 Recommendation for JICA

The main issues in the post-project period are the lack of local service agents for the equipments donated by JICA for the project. Maintenance, repairs and parts replacement will be issues for all equipments that originate from Japan for which there are no local agents. Hence, in the future, it is important to examine the availability of equipment suppliers or agents that can provide supporting roles to ensure that there are no bottlenecks in the servicing of equipments and facilities.

However with the bulk purchase of newer equipments by NPHL Sungai Buloh utilising the one-off budget allocated, it has precipitated the reliance on the machines donated by JICA. This is not the scenario in PHL Perlis and Johor, whereby JICA donated equipment is still being extensively utilised.

Another issue is the dispatch of experts, regional offices (Johor and Perlis) indicated that a long term expert attached at their laboratory can enhance and expand their scope of knowledge and skills transfer. In terms of communication gaps, there have been complaints on the lack of fluency in English for some of the experts dispatched by JICA thus inhibiting the transfer of knowledge and skills to counterparts. Hence, English facility is important aspect when selecting experts for foreign posting.

6. Lessons Learned

The key lessons learned in this evaluation are as follows:

1) Ownership and Commitment of Counterpart Agency

Donor agencies should be encouraged to review with their partner agencies the issue of ownership and commitment. It is obvious that the successful implementation of the project and the high quality of outcomes has been due to the strong government support, commitment and allocation of resources to the food safety program. Hence, an existing program, particularly a start-up program that has strong government support, will be one of the ingredients for donor assistance.

2) Institutionalisation of Project Outputs

It is clear that the Food Safety Programme's SOPs and the training to counterparts, including echo training which extended the benefits to others not in the program has been key features of the project. Institutionalisation of project outputs would enhance its sustainability. In addition, the high motivation of the participants has also been a very important ingredient for the success of the project.

3) Maintenance of Equipments

One key weakness in the program has been the need to maintain and repair the donated equipment after the project completion period. Identifying the availability of local suppliers and agents of equipment is important to ensure that in the immediate post-project period, there is support given to the institutions and the equipment donated.

It is thus important to appoint local suppliers to equipments and also to use local parts as much as possible in order to avoid the situation where maintenance and repairs are impossible because suppliers cannot be traced. Alternatively is to train the counterpart agencies in the hardware so that they can maintain the equipment and thus having to avoid the problem of non-traceable suppliers.

4) Language fluency of Experts

Experts need to be fluent in English in order that their capacity building objective is delivered effectively. In this regard, the selection criteria need to be more stringently enforced. On the government side, the language fluency of the counterparts also needs to be a criteria for selection.

ANNEX

- 1 . Terms of Reference
- 2 . Evaluation Grid
- 3A . Management Survey
- 3B . Counterpart Survey
- 4 . Equipment Checklist

1. Terms of Reference

Terms of Reference for the Ex-Post Evaluation Study on

The project for strengthening of the food safety programme in Malaysia

1. Outline of the Targeted Project

As stated in the annex1.

2. Purpose of the Study

(1) Title of the Study

The Ex-Post Evaluation Study on The project for strengthening of the food safety programme in Malaysia

(hereinafter referred to as "the Study")

(2) Purpose

The Study is expected to verify the important issues relating to the project impact and sustainability observed after three (3) years from the completion of the Project. The results of the Study contribute to the better-informed decision-making based on the lessons learned, and the promotion of the greater accountability. The results will also be shared by Ministry of Health, Malaysia.

3. Implementation of the Study

The Study will be carried out considering the following items;

(1) Main Evaluation Questions

The Study will seek answers to the following main evaluation questions:

a. Impact

- How far has the Overall Goal of the Project been achieved since the final evaluation?
- What kinds of factors have contributed to positive and negative impacts?
- Besides the Overall Goal of the Project, have the unexpected positive/ negative impacts observed?
- Are there any external factors that affected the achievement of the Overall Goal?

b. Sustainability

- How has the counterpart agency continued the Project activities and service?
- Have the Project outcomes been maintained since the termination of JICA's

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assistance?

- What kinds of the factors contribute to or inhibit the sustainability?

c. Specific questions

- How recommendations made in the joint final evaluation report on the Project dated on January 19, 2004 has been implemented?
- Assessment of economic and financial sustainability of this project taking into consideration trend of world economy.

(2) Suggested/Required Evaluation methods

The Consultant is responsible for identifying specific evaluation methods of data collection. It is suggested that actual inquiries use the methods, which can assess both quantitative and qualitative measurements of the changes. The Consultant is requested to come up with the objectively variable indicators to measure up these changes. In addition to that, it is important to investigate the factors that positively and negatively contributed to the changes. Data and information will be collected through the surveys including the followings:

- a. Site visit to National Public Health Laboratory (hereinafter referred to as "NPHL"), Johor Bahru Public Health Laboratory (hereinafter referred to as "JB PHL"), Perlis Food Quality Control Laboratory (hereinafter referred to as "Perlis FQCL"), and/or other authorities concerned.
- b. Questionnaire surveys and Interviews with NPHL, JB PHL, Perlis FQCL and counterparts / ex-counterparts who worked together with the JICA Experts, and also who were trained in Japan.
- c. Qualitative investigations to measure the Project impacts, such as;
 - numbers of trained counterparts in each field
 - numbers of reports prepared by VRI
 - budget allocation for the Project activities

JICA requires that all evaluation studies present the recommendations and the lessons learned in the Evaluation Report based on the qualitative and quantitative analysis. The recommendations should document practical and specific suggestions to improve the Project that is subject to evaluation. On the other hand, the lessons learned present specific suggestions for the formulation of future projects in a similar context.

4. Implementation Schedule

The Study is scheduled to commence from 21 January 2008, and complete by 19 February 2008.

JICA estimates the total amount of man-month (M/M) required for the Study approximately as follows;

- Leader:	0.50M/M
- Researcher/ Evaluation Analysis:	1.00M/M

5. Deliverables

The Consultants shall submit the following deliverables to JICA.

(1) Evaluation Grid

The evaluation Grid is to be prepared within 5 days of the first meeting with JICA and to be presented by 25 January 2008. The Consultants will be requested to modify their evaluation planning if JICA finds it inappropriate.

(2) Draft Evaluation Report

The Consultants shall submit the 5 copies of the Draft Evaluation Report to JICA Malaysia Office. The comments on the report will be given by JICA, Ministry of Health and the authorities concerned, and will be sent back to the Consultants for the revision of the report.

(3) Evaluation Report

The Consultants shall submit the Evaluation Report to JICA Malaysia Office by 19 February 2008.

- 5 copies in printed format
- 2 copies in CD-ROM (PDF format)

It should be concise and be no longer than 15 pages in A4 size form. The evaluation results and conclusions should be supported by the data gathered through the interviews and questionnaires and/or the additional information and data. The graphic presentation of data is recommended wherever applicable. The report should include the following issues;

- Scope of evaluation study
- Project overview

- Evaluation methods used
- Results of evaluation
- Conclusions
- Recommendations
- Lessons learned
- Annex (Logical Framework, Evaluation Grid and supporting data)

(4) Evaluation Summary Sheet

The Consultants shall submit the Evaluation Summary Sheet to JICA Malaysia Office by 19 February 2008. It should be prepared in accordance with the format which will be provided by JICA.

2. Evaluation Grid

Evaluation Questions		Achievement Criteria/Measures	Data Sources	Data Sources	Data Collection Method
Main Questions	Sub-Questions				
1. How far has the Overall Goal ¹ of the Project been achieved since the final evaluation?	<ul style="list-style-type: none"> - How much (in %) has the contamination by food borne diseases, pathogens is reduced? - Has customers satisfaction in food safety increased? - How much has food hygiene management been strengthened? - Has the Standard Operating Procedures and analytical methods been developed? - Implementation of food import control network system 	<ul style="list-style-type: none"> - Compare the number of recorded cases involving contamination from food borne diseases. - Increase in amendments to regulation and standards. - Increase in food safety monitoring. - Standard Operating Procedures including analytical methods. - No. of premise location. 	<ul style="list-style-type: none"> - Number of recorded cases involving contamination. - Number of counterparts trained - No. of amendments to regulation and standards. - No. of food safety monitoring. - No. of Standard Operating Procedures including analytical methods. - No. of premise location. 	<ul style="list-style-type: none"> - Statistics from MoH 	<ul style="list-style-type: none"> - Literature & Document Search - Interviews with MoH - Interviews with Counterparts
2. What kind of factors have contributed to positive and negative impacts?	<ul style="list-style-type: none"> - What are the factors that have contributed to positive impacts? - What are the factors that have contributed to negative impacts? 	<ul style="list-style-type: none"> - Compare 	<ul style="list-style-type: none"> - Instructor 	<ul style="list-style-type: none"> - Counterparts - MoH 	<ul style="list-style-type: none"> - Literature & Document Search - Discussion, interviews with Counterparts / ex-counterpart officers & who were trained in Japan
3. Besides the Overall Goal of the project, are there unexpected positive/	<ul style="list-style-type: none"> - What are the positive unintended effects of the Project? Particularly benefits 			<ul style="list-style-type: none"> - Counterparts - MoH 	<ul style="list-style-type: none"> - Literature & Document Search - Discussion, interviews with JMTI

IMPACT

¹ Overall Goal: To Satisfy the Industrial needs for industrial technologies in the field of high technology.

Evaluation Questions	Sub-Questions		Achievement Criteria/Measures	Data Sources	Data Sources	Data Collection Method
	Main Questions					
	negative impacts observed?	<ul style="list-style-type: none"> - What are the negative unintended effects of the Project? Particularly issues and problems 				Counterparts / ex-counterpart officers & who were trained in Japan
4.	Are there any external factors that affected the achievement of the Overall Goal?	<ul style="list-style-type: none"> - Are there changes in government policy that might affect/impact on Project goals? - Any other changes, particularly industrial trends? 	<p>Description and analysis of current situation of food safety programme</p> <ul style="list-style-type: none"> - Government policies - Change in technology needs 	- MoH		<ul style="list-style-type: none"> - Literature review - Interview MoH
1.	How has the counterpart agency continued the Project activities and services?	<ul style="list-style-type: none"> - Is Project facility/equipment still in use? - Is Project facility/equipment adequately maintained? - Does MoH face any issue in sustaining Project outcomes? 	<ul style="list-style-type: none"> - Compare the newly obtained information with the terminal evaluation; and - Determine whether MoH can carry out programme without JICA's support 	<ul style="list-style-type: none"> - MoH records - Counterparts - MoH 	<ul style="list-style-type: none"> - Utilisation rate of Project skills - Utilisation rate of Project equipments - Persons trained after project end 	<ul style="list-style-type: none"> - Literature review - Interview with Counterparts - Interview with MoH
2.	Have the Project outcomes been maintained since the termination of JICA's assistance?	<ul style="list-style-type: none"> - Are the programme outcomes still valid? - How does MoH keep up to date on requirements and needs? - In terms of officers, equipment and financing, what are the impediments? 	<p>Compare this information with terminal evaluation</p>	<ul style="list-style-type: none"> - MoH records - Counterparts - MoH 	<ul style="list-style-type: none"> - Needs vs outputs - Operating and development budget allocation 	<ul style="list-style-type: none"> - Literature review - Interview with Counterparts - Interview with JM TI Management - Data Compilation

SUSTAINABILITY

Evaluation Questions		Achievement Criteria/Measures	Data Sources	Data Sources	Data Collection Method
Main Questions	Sub-Questions				
3. What kinds of the factors contribute to or inhibit the sustainability?	<ul style="list-style-type: none"> - Any budget allocations? - Any additional instructors & equipment procured to sustain project outcomes? - Are there any other donors/ agencies involved after project completion? - If yes, who are the donor agencies and amount of budget etc? - Are there any budgetary constraints? 	Describe the significant changes and analyse findings	<ul style="list-style-type: none"> - Additional staff recruited - Staff training budget - Additional investments to procure equipment - Current projects from other donor agencies - Budget requests approved and rejected - Institutional changes 	- MoH	<ul style="list-style-type: none"> - Interview with Counterparts and MoH
	<ul style="list-style-type: none"> - Are there any technology transfer or skills issues? - Are there any institutional challenges? 				-

Time Period of data requests: 2004-2007

Overall Project Purpose: To increase the availability of safe food for Malaysian consumers

JICA (MALAYSIA) OFFICE

EX-POST EVALUATION STUDY PROJECT FOR STRENGTHENING OF THE FOOD SAFETY PROGRAMME IN MALAYSIA

QUESTIONNAIRE FOR AGENCY

This questionnaire survey aims at collecting relevant information, opinions, and comments of ex-participants of the Project for Strengthening of the Food Safety Programme in order to evaluate the programme.

You are kindly requested to complete the questionnaire. We appreciate your frank opinions and constructive suggestions.

Background Information of Respondent:

- 1 . Name : _____
- 2 . Position : _____
- 3 . MOH Unit : _____
- 4 . Address : _____

- 5 . Contact : Telephone _____
Facsimile _____
e-mail _____

About the Programme:

- 6 . Programme : _____
- 7 . Duration : _____ days/weeks/months (*please circle where applicable*)
- 8 . Period : From ____/____/____ to ____/____/____
dd mm yyyy dd mm yyyy
- 9 . No. of Participants: _____ (Malaysian)
- 10 . No. of Lecturers : _____ (Foreigners)
_____ (Malaysian)
- 11 . Training methods : [] Lecture sessions (____ %)
[] Practical work (____ %)
[] Site/Field visits (____ %)
[] Individual presentation (____ %)

12 . Please indicate the non-quantifiable contributions of your organization towards the implementation of the Programme: _____

A. Management Survey

13 . List of Equipment donated by the Program/ Tick all that are still in use?

14 . What was the impact of this programme to your unit/division?

Positive: _____

Negative: _____

15 . Was the programme relevant/appropriate to your organization's development objectives and strategies? (*please ✓ tick*)

Yes

No (explain: _____)

16 . Did the programme improve your capability in conducting similar future programs?

(*please ✓ tick*)

Yes

No

(explain: _____)

17 . What changes would you recommend for improvement/better implementation of future programmes?

Capacity of Organization:

18 . Does your organisation face any difficulties or problems in implementing the programme?

(*please ✓ tick*)

Yes (please explain: _____)

No

19 . Does your organization conduct similar programme for other institutions?

(*please ✓ tick*)

Yes (Please give details, e.g. course content, sponsor etc) No

20 . Does your organization have the capacity to offer and conduct more programmes?

Yes

No

(why? _____)
(skip next question)

21 . What other programmes would your organization like/be able to offer and conduct?
Please provide details. If necessary, use separate sheet

22 . Has the government invested to enhance or develop the programme further? Please explain.

23 . Is it possible for your organisation to continue the programme without support from JICA?

Yes
 No

If No, why? (Please ✓ tick all that are applicable)

Lack of trained personnel
 Lack of equipment
 Lack of funds
 Lack of foreign experts
 Others (Explain: _____)

24. What are your suggestions/recommendations to JICA to improve the implementation of similar programme?

Thank you for your cooperation.

Please return completed questionnaire to PE Research by fax (Fax: 603-78042863) or as an email attachment to yiitan@yahoo.com or raj29@streamyx.com. Thank yo

JICA (MALAYSIA) OFFICE

**EX-POST EVALUATION STUDY PROJECT FOR STRENGTHENING
OF THE FOOD SAFETY PROGRAMME IN MALAYSIA**

QUESTIONNAIRE FOR EX-PARTICIPANTS

This questionnaire survey aims at collecting relevant information, opinions, and comments of ex-participants of the Project for Strengthening of the Food Safety Programme in order to evaluate the programme.

You are kindly requested to complete the questionnaire. We appreciate your frank opinions and constructive suggestions.

(A)GENERAL QUESTIONS

1 . Name : _____

2 . Position : _____

3 . MOH Division : _____

4 . Programme : _____

5 . Year Attended : Indicate the period: _____

6 . Contact : Telephone _____
Facsimile _____
email _____

7 . Please give a brief outline of your current duties

8 . Please briefly explain the present situation of activities in the program related field in your organization or country.

9 . Have you changed jobs since completing the programme?
[] Yes (reason: _____; when? _____)
[] No

(B) KNOWLEDGE/SKILLS USAGE AND TRANSFER (Kindly ✓ tick in the appropriate box)

10 . How do you rate the usefulness of the programme to your current duties?

- Very useful (utilise more than 80%)
- Some degree (utilise more than 50%)
- A little (less than 50%)
- Not applicable. Why? Please explain: _____

11 . Have you disseminated the knowledge and skills acquired through the programme after completion of the programme?

- Yes If Yes, how? (✓ tick all that are applicable)
 - Seminar
 - Workshop
 - Reporting to superiors and colleagues
 - Circulation of text materials and references
 - Through daily work (on the job training)
 - Others (Explain: _____)
- No (Why?: _____)

12 . What kind of issues have you tackled by utilizing the knowledge and skills you acquired through the programme?

13. Do you have any problems in utilizing these knowledge and skills in your current job?

- Yes If Yes, why? (Please ✓ tick all that are applicable)
 - Lack of trained personnel
 - Lack of equipment
 - Lack of funds
 - Lack of foreign experts
 - Others (Explain: _____)
- No

(C) BENEFITS FROM THE COURSE AND FOLLOW-UP

14. For yourself, what is the biggest benefit of the programme?

15 . For your organization, what is the biggest benefit of the programme?

16. Do you still keep in touch with persons met in the programme after completion?
[] Yes If Yes, whom? (Please ✓ tick all that are applicable)
[] Lecturers (including Japanese experts)
[] Others (Who?: _____)
[] No (Why?: _____)

17. Do you need support for disseminating and utilizing the knowledge and skills you acquired through the programme?
[] Yes If Yes, from whom? (Please ✓ tick all that are applicable)
[] My organization
[] Government of my country
[] Government of Japan (including JICA)
[] Implementing Organization of the Course
[] Other donors
[] Others (Explain: _____)
[] No (go to question 19)

18. What kind of support do you need? (Kindly describe the content in detail)

19. What do you think are the positive and negative issues of the programme?
Positive issues:

Negative issues:

20. What kind of programmes would you like the Japanese government to organize to support the activities of your organization?

21. Your recommendations for better implementation of similar programmes?
Content: _____

Length of Course: _____
Others: _____

Thank you.

4. Equipment Checklist

ITEM	DESCRIPTION	MAKE	LOCATION	QUANTITY	Please tick ✓ the relevant field						Remarks/Comments	
					Still in use	Require repair (not in use)	Maintenance done in 2003	Maintenance done in 2004	Estimated cost of repair	Reason for breakdown		Average hours used per week
Japanese Side												
Gas Chromatography Mass Spectrometer Detection (GCMS) System	GCMS-2010	Shimadzu	FQCL, Perlis	1	X							
Bench Top Liquid Chromatograph Mass Spectrometer (LCMS)	QP5050	Shimadzu	NPHL Sungai Buloh	1	X							
Server	Altos 600	Acer	Information & Technology Center, MoH	1	X							
Hub	10/100	3 COM	34 entry points	34	X							
Computer	Power Sx	Acer	34 entry points	34	X							
Digital Camera	Power Shot A40	Canon	13 State Health Department, MoH	13	X							
Vehicle	Pajero V31	Mitsubishi	FQCD, MoH / The Project at FQCD, MoH / Sarawak State Health Dept, MoH	3	X							
Gas Chromatography Mass Spectrometer Detection (GCMS) System	QP5050A	Shimadzu	NPHL Sungai Buloh, PHL Johor Bahru, FQCL Perlis	3	X							
High Performance Liquid Chromatograph (HPLC) System	LC-10A VP Series	Shimadzu	NPHL Sungai Buloh, PHL Johor Bahru,	3	X							

Please tick ✓ the relevant field

ITEM	DESCRIPTION	MAKE	LOCATION	QUANTITY	Still in use	Require repair (not in use)	Maintenance done in 2003	Maintenance done in 2004	Estimated cost of repair	Reason for breakdown	Average hours used per week	Remarks/Comments
Separatory Funnel Shaker	AW-1	Iuchi	FQCL Perlis NPHL Sungai Buloh, PHL Johor Bahru, FQCL Perlis	3	X							
Rotary Evaporator	N-1000V	Tokyo Rikakikai	NPHL Sungai Buloh, PHL Johor Bahru, FQCL Perlis	3	X							
PCR Workstation		Labconco	NPHL, Sungai Buloh	1	X							
Fluoresce Detector for HPLC	RF-10AXL	Shimadzu	NPHL Sungai Buloh, PHL Johor Bahru, FQCL Perlis	3	X							
HPLC (Solvent Delivery Pump for HPLC)	LC-10AT VP	Shimadzu	NPHL Sungai Buloh, PHL Johor Bahru, FQCL Perlis	3	X							
Homogenizer	PT-3100	Kinematic a	NPHL Sungai Buloh, PHL Johor Bahru, FQCL Perlis	3	X							
Rotary Evaporator	Laborota 40 02/HB/H4	Heidolph	NPHL Sungai Buloh, PHL Johor Bahru, FQCL Perlis	3	X							
Vacuum Manifold	VAC Master 10	International Solvent	NPHL Sungai Buloh, PHL Johor Bahru,	3	X							

Please tick ✓ the relevant field

ITEM	DESCRIPTION	MAKE	LOCATION	QUANTITY	Still in use	Require repair (not in use)	Maintenance done in 2003	Maintenance done in 2004	Estimated cost of repair	Reason for breakdown	Average hours used per week	Remarks/Comments
Funnel Shaker	AW-1	Tech luchi	FQCL Perlis NPHL Sungai Buloh, PHL Johor Bahru, FQCL Perlis	3	X							
Vacuum Controller for Rotary Evaporator	NVC-1100	Tokyo Rikakikai	NPHL Sungai Buloh, PHL Johor Bahru, FQCL Perlis	3	X							
HPLC (Column Oven for HPLC)	CTO-10AVP	Shimadzu	NPHL Sungai Buloh	1	X							
Blender	2 Speed IL Stainless & Glass	C. Parmer	NPHL Sungai Buloh	2	X							
Karl Fisher Moisture Meter	MKC-500 + MKS 500	Kyoto Electronic s	NPHL Sungai Buloh	1	X							
Rotary Evaporator	N-1000S-W with SB-1000	Eyela	NPHL Sungai Buloh	1	X							
Density Specific Gravity Meter	DA-100	Kyoto Electronic s	NPHL Sungai Buloh	1	X							
Mixer	GM-200	Retsch	NPHL Sungai Buloh	1	X							
Automatic Protein Analyser	2400/2460 Kjeltic Auto Sampler System	Kjeltic	NPHL Sungai Buloh	1	X							
Automatic Fat	2050 Soxtec	Soxtec	NPHL Sungai	1	X							

Please tick the relevant field

ITEM	DESCRIPTION	MAKE	LOCATION	QUANTITY	Still in use	Require repair (not in use)	Maintenance done in 2003	Maintenance done in 2004	Estimated cost of repair	Reason for breakdown	Average hours used per week	Remarks/Comments
Extraction Apparatus	Avanti Auto System		Buloh									
Sample Mill	1093	Cyclotec	NPHL Sungai Buloh	1	X							
Vacuum Drying Oven Set (1 unit) & Drying Pan Set (2 units)	ADP300 / DKN401	Yamato Scientific	NPHL Sungai Buloh	1	X							
Ultra Centrifugal Mill with 900ml cassette	ZM200	Retsch	NPHL Sungai Buloh	1	X							
Malaysian Side												
Pesticide Residue												
GCMS												
Rotary Evaporator			FQCL Sarawak	1	X							
			FQCL Perlis (2) / FQCL Sarawak (2)	4	X							
Blender with container			FQCL Perlis (2) / FQCL Sarawak (2)	4	X							
N-Evaporator			FQCL Perlis (2) / FQCL Sarawak (2)	2	X							
General Purpose Furne Cupboard			FQCL Perlis	1	X							
Air Condition			FQCL Perlis	4	X							
GC (ECD/ECD)			NPHL	1	X							
Blender (Warring Type)			NPHL	8	X							
Dispenser (0-20ml)			NPHL	2	X							

Please tick ✓ the relevant field

ITEM	DESCRIPTION	MAKE	LOCATION	QUANTITY	Still in use	Require repair (not in use)	Maintenance done in 2003	Maintenance done in 2004	Estimated cost of repair	Reason for breakdown	Average hours used per week	Remarks/Comments
Dispense (10-100ml)			NPHL	4	X							
GCMS			NPHL	1	X							
GC (ECD/ECD)			NPHL / JB PHL / FQCL Perlis / FQCL Sarawak	4	X							
GC (TCD/FID)			NPHL / JB PHL / FQCL Perlis / FQCL Sarawak	4	X							
Rotary Evaporator			NPHL / JB PHL	2	X							
Blender with container			NPHL / JB PHL	4	X							
Analytical Balance			NPHL / JB PHL / FQCL Perlis / FQCL Sarawak	4	X							
Top Pan Balance			NPHL / JB PHL / FQCL Perlis / FQCL Sarawak	4	X							
Chiller			NPHL / JB PHL / FQCL Perlis / FQCL Sarawak	4	X							
Freezer			NPHL / JB PHL / FQCL Perlis / FQCL Sarawak	4	X							
N-Evaporator			NPHL / JB PHL	2	X							
Drug Residue												
HPLC-DAD			FQCL Sarawak	1	X							
Vortex Mixer			NPHL	6	X							

ITEM	DESCRIPTION	MAKE	LOCATION	QUANTITY	Please tick ✓ the relevant field						Estimated cost of repair	Reason for breakdown	Average hours used per week	Remarks/Comments
					Still in use	Require repair (not in use)	Maintenance done in 2003	Maintenance done in 2004						
Accelerated Solvent Extraction System			NPHL	1	X									
HPLC Tandem Mass			NPHL	1	X									
Ultrasonic Cleaner/Washer			NPHL	1	X									
Acid Corrosion Resistant			NPHL	1	X									
Electronic Dessicator Cabinet			NPHL	1	X									
HPLC-DAD			NPHL	1	X									
Water Jet Vacuum Pump			NPHL	1	X									
Vacuum Manifold			NPHL	2	X									
Rotary Evaporator			NPHL	2	X									
Centrifuge			NPHL	1	X									
Homogenizer			NPHL	1	X									
Analytical Balance			NPHL	1	X									
Top Pan Balance			NPHL	1	X									
Chiller			NPHL	1	X									
Freezer			NPHL	1	X									
Ultrasonic Bath			NPHL	1	X									

Maintenance for this technical field are done in group so don't have breakdown cost for individual equipment