GCP/PHI/049/AUL

ERADICATION OF FOOT-AND-MOUTH DISEASE IN THE PHILIPPINES

Report of the Mid-term Evaluation Mission

Manila, April 2005
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<th>Description</th>
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<tbody>
<tr>
<td>ACIAR</td>
<td>Australian Centre for International Agricultural Research</td>
</tr>
<tr>
<td>AusAID</td>
<td>Australian Agency for International Development</td>
</tr>
<tr>
<td>BAI</td>
<td>Bureau of Animal Industry</td>
</tr>
<tr>
<td>CAR</td>
<td>Cordillera Administrative Region</td>
</tr>
<tr>
<td>CMT</td>
<td>Compliance Monitoring Team</td>
</tr>
<tr>
<td>DA</td>
<td>Department of Agriculture</td>
</tr>
<tr>
<td>DA-RFU</td>
<td>DA-Regional Field Units</td>
</tr>
<tr>
<td>EMPRES</td>
<td>Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases (FAO)</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
</tr>
<tr>
<td>FMD</td>
<td>Foot and Mouth Disease</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td>GOP</td>
<td>Government of the Philippines</td>
</tr>
<tr>
<td>IAEA</td>
<td>International Atomic Energy Agency</td>
</tr>
<tr>
<td>LDC</td>
<td>Livestock Development Council</td>
</tr>
<tr>
<td>LFM</td>
<td>Logical Framework Matrix</td>
</tr>
<tr>
<td>LGU</td>
<td>Local Government Unit</td>
</tr>
<tr>
<td>NCR</td>
<td>National Capital Region</td>
</tr>
<tr>
<td>NFMDTF</td>
<td>National Foot and Mouth Disease Task Force</td>
</tr>
<tr>
<td>NMIS</td>
<td>National Meat Inspection Service</td>
</tr>
<tr>
<td>OIE</td>
<td>Office International des Epizooties</td>
</tr>
<tr>
<td>PIA</td>
<td>Philippine Information Agency</td>
</tr>
<tr>
<td>PNP</td>
<td>Philippine National Police</td>
</tr>
<tr>
<td>PVO</td>
<td>Provincial Veterinary Office</td>
</tr>
<tr>
<td>SEAFMD</td>
<td>South-East Asia Foot and Mouth Disease</td>
</tr>
<tr>
<td>TCP</td>
<td>Technical Cooperation Programme</td>
</tr>
</tbody>
</table>
Executive Summary

Project GCP/PHI/049/AUS was the third AusAID-funded, FAO-implemented project to support the Philippines in its efforts to eradicate foot-and-mouth disease (FMD), following a major breakout in 1994-95. Earlier projects had successfully reduced the endemic area; the objective of the present project was to maintain the existing FMD-free zones without vaccination, elimination of clinical cases in Regions III and IV and recognition of Luzon as an FMD-free zone with vaccination.

The mid-term evaluation found that the project was well justified, based on the progress made previously and the importance of total eradication of FMD, from a trade and health perspective. However, given the number of cases still present and the inherently unpredictable nature of biological processes, it was unrealistic to expect Luzon to be recognized as disease-free with vaccination in the 18-month time period of the project. The mission believes that the Philippines should maintain the present target of no clinical cases by the end of 2005 and, while that may be an optimistic target, it feels that realistically the Philippines can be rid of clinical cases in the near future, i.e. by the end of 2006.

Although there were some initial start-up problems due to staffing changes, the National Foot-and-Mouth Disease Task Force (NFMDTF) now has good leadership, motivated staff and possesses the skills to lead the effort to bring the FMD campaign to success. During the project, noticeable progress has been made in all aspects of the programme (disease monitoring and surveillance, public awareness, animal movement control and vaccination). Coordination with local government units is improving, efforts are being made to involve the private sector (producers, traders and slaughterhouse owners) more closely and the NFMDTF is recognized for the quality of its work within the Southeast Asia region.

Support from the Philippine Government, both policy and financial, has been good. However, the absence of a dependable, central indemnity fund for backyard farmers who experience FMD cases is a barrier to achievement of the project’s main goal. There is also every justification to request a greater financial contribution from the private sector for FMD control efforts. Both the indemnity fund and a slaughterhouse levy have received political support but need to be put into operation, as vital parts of the campaign.

Before the project began, slaughterhouses were not perceived as sources of FMD infection, since it was the end point for the animals. However, recent outbreaks in the NCR have caused the NFMDTF to focus more on slaughterhouses, through a 24-hour “all in, all out” policy, compliance monitoring and more awareness efforts. The focus in the remaining time of the project will be on NCR, in addition to Regions III and IV-A, which continue as sources of outbreaks.

The project has made a contribution to the continued FMD-free status of Mindanao, the Visayas, Palawan and Masbate, a significant achievement considering the amount of commerce between those areas and Metro Manila, where FMD remains endemic.

Given that the task of eliminating FMD is not yet achieved but feasible, the mission recommends that the project should be extended until at least June 2006, or until December 2006 if existing funds are sufficient or if additional funds could be made available. NFMDTF should prepare the revision proposal. The mission suggests adding an objective to
the project for a functional and effective system for monitoring and evaluating livestock movement from farm to slaughterhouse. Other project-related recommendations include:

- provision for technical backstopping from FAO and improvement of operational backstopping;
- evaluation of the public awareness campaign;
- computerization of the permit system and FMD status reporting;
- assistance from an epidemiologist for completing the animal health information system;
- changes in selection methods for blood sampling;
- periodically carrying out of simulated FMD outbreak response trials;
- more support to local government units, including assistance in creation of local Task Forces for FMD in endemic areas particularly, encouraging LGUs to appoint full-time Community Coordinators who could be assisted by the project and assignment of staff, as necessary, to the areas where FMD must still be eradicated.

The mission also recommended to the Government of the Philippines the initiation of the indemnification fund for backyard farmers whose animals are affected by FMD and also a slaughterhouse levy, to raise funds for the eradication campaign and for funding surveillance and control measures needed for nation-wide OIE certification in the future. It also recommended more links between this and other AusAID projects related to animal health in the region.
1. Introduction

Project GCP/PHI/049/AUS “Eradication of Foot-and-Mouth Disease in the Philippines” is the third project funded by the Australian Government (AusAID) and executed by FAO, aimed at total eradication of this economically significant disease from the Philippines. Approved for a duration of 18 months, the project began operations in March 2004, with a donor budget of $1,106,204 and Government counterpart funds of $846,720, for a total of $1,952,924.

As part of the project management process, the project document called for a tripartite evaluation to be carried out during 2005. In agreement with the three parties to the project, it was decided that the evaluation would take place in April 2005. The terms of reference (attached as Annex I to the report) called for an assessment of progress to date, with a view to making recommendations to allow the successful achievement of the project’s objectives.

The evaluation took place from 10-22 April 2005. The mission visited Regions I, II, III and IV-A in Luzon, and made a two-day trip to the Visayas and Mindanao to assess surveillance work in those areas, which had already been declared FMD-free by the OIE. The mission itinerary and key persons met appear in Annex II.

The evaluation team was Mr. Robert Moore, FAO Senior Evaluation Officer and Team Leader, Dr. John Copland, ACIAR Research Programme Manager (representing Australia) and Dr. Romeo Gundran, Chairman of the Department of Veterinary Clinical Sciences, Central Luzon State University (representing the Philippines).

The mission members wish to thank the many persons that they interviewed who are involved in the challenge to rid the Philippines of foot-and-mouth disease. In addition to giving us the required information, we greatly appreciated the kindness and hospitality shown to us throughout our mission. We would like to give our special thanks, through the Director of the Bureau of Animal Industry, Dr. Jose Molina, to the National Food-and-Mouth Task Force members that were our primary interlocutors in the mission, including the Chief of the Task Force, Dr. Victor Atienza and the Deputy Chief, Dr. Reildrin Morales.

2. Background and Context

In September 1994, an increased number of outbreaks of Foot-and-Mouth Disease (FMD), a highly contagious viral disease affecting cloven-footed animals such as swine, cattle, caribou, sheep and goats, were recorded in the Philippines. At the end of 1994, cases were detected in Rizal province and in various parts of Metro Manila. The disease incidence reached epidemic proportions and the situation continued to deteriorate further. In 1995, regions badly hit included Ilocos, Central Luzon, Southern Tagalog and Southern Luzon (Bicol) Regions. During its peak in the same year, a total of 1,553 field reports of outbreaks were recorded involving 98,604 clinical cases. The disease caused major production losses mostly in pigs, and it constrained livestock movement and trade throughout the country. It was claimed that revenue losses amounted to Pesos 2 billion due to reduction in sales caused primarily by consumers’ fear to eat infected pork. A total of 22 provinces in Luzon were hit with the FMD virus type O (O1 Cathay topotype) at that time.
In December 1994, FAO responded to a request from GOP for assistance and launched a Technical Cooperation Programme project (TCP/PHI/4453 – Assistance with the Control of Epidemic Foot-and-Mouth Disease in the Philippines), which was implemented from 1995 until March 1996. In September 1996, a National Plan for the Control and Eradication of Foot-and-Mouth Disease was developed and funding support for its implementation through project GCP/PHI/041/AUL was received from AusAID. This project commenced in December 1996, with the main objective of controlling FMD and eradicating it in the Bicol Peninsula. By the end of the project, the Philippines National Programme had reduced the endemic focus of FMD to 4 provinces to the immediate north of Manila (Bulacan, Pampanga, Tarlac and Nueva Ecija) and 4 to the south (Batangas, Laguna, Rizal and the western section of Quezon). Sporadic outbreaks occurred in adjoining provinces and these highlighted the necessity for complete eradication.

When the project terminated in November 1999, substantial savings were left due to an earlier decision by the GOP to fund the provision of FMD vaccines (which saved the project approximately US$1 million). Following an independent technical review and a Tripartite Review, a consolidation phase was approved, utilizing funds generated from the savings in the first phase. The project commenced in December 1999 and terminated in November 2001. Savings were also generated in this second phase, which were used to fund an extension-consolidation phase that commenced in December 2001 and terminated in September 2003.

The consolidation and the extension phases have resulted in significant accomplishments, as follows: the OIE international recognition of Mindanao as an FMD free zone without vaccination on 30 May 2001, the OIE recognition of the Visayas, Palawan and Masbate as FMD free zones without vaccination on 30 May 2002; a heightened public awareness of FMD; an institutionalized surveillance activity; improved animal movement management; the maintenance of additional disease-free zones; improved linkages between national offices, local offices and the private sector for FMD control; a training module on FMD; and membership of the FMD Diagnostic Laboratory in the FAO/IAEA programme on quality assurance.

While progress has been significant, FMD outbreaks were still being recorded at the conclusion of the consolidation and extension phase, particularly in the areas closest to Metro Manila (Regions III and IV-A). In order to assist the GOP in a final push for eradication, AusAID decided to fund a third and final phase. The current project, GCP/PHI/049/AUL, commenced on 15 March 2004 and ends on 15 September 2005. The focus is eliminating clinical cases of FMD from the remaining endemic areas in Luzon specifically Regions III, IV-A and NCR, while maintaining the FMD-free status of the OIE-declared FMD free zones without vaccination of Mindanao, Visayas, Palawan and Masbate.

3. Assessment of Project Objectives and Design

3.1 Justification
The project is part of continuing AusAID support channelled through FAO, aimed at eventual eradication of FMD in the Philippines. It was predicated on protecting the existing FMD-free areas and reducing occurrence in the endemic areas, which were particularly identified as Regions III and IV. The project was intended to have four components:
1. Disease monitoring and surveillance - to ensure continuing freedom from disease and to determine the actual disease situation in those parts still affected;
2. Public awareness – to deepen understanding about the need to keep free or eliminate FMD in the Philippines;
3. Animal movement control – to prevent movement of infected animals by enforcing regulations aimed at preventing incursions into free areas; and
4. Vaccination – focused on eradication of FMD in Regions III and IV, which were believed at the time to be the main remaining affected areas for FMD.

The new project built on its predecessor, GCP/PHI/041/AUS, which had essentially the same strategy. The present project did not, however, foresee the need for a “stamping out” programme in the National Capital Region (NCR). At the time, it was perceived that NCR was an end-point for pigs that were transported to the many slaughterhouses in the Metro Manila area. Only during the implementation of the project, as cases in Regions III and IV were successfully reduced, was it realized that NCR itself was a significant source of outbreaks.

The mission believes that the project addresses a significant problem for the Philippines and was well-justified. From the outset, the chances of eventual success had to be rated as very good. The incidence of FMD had declined significantly and the chances for total elimination were enhanced by a strong national commitment, good human resources and the natural advantages of the Philippines as an island state which, if freed from FMD, was more likely to stay that way.

### 3.2 Objectives

The project document states a clear long-range goal, the eradication of FMD in the Philippines. It then lists five “specific objectives” relating to the various components of the project, which are not expressed in very “specific” terms, i.e.

1. improving early response in Regions III and IV;
2. institutionalizing public awareness programmes;
3. strengthening field surveillance in free areas;
4. further strengthening quarantine activity; and
5. maintaining capabilities of the FMD diagnostic laboratory.

The document then lists five key result areas, which describe the desired end-of-project situation and thus much more clearly serve as project objectives¹, i.e.

1. no clinical cases or reports in Regions III and IV;
2. recognition of Luzon as FMD-free with vaccination;
3. maintenance of Mindanao, Visayas, Palawan and Masbate as FMD-free without vaccination;
4. a heightened public awareness on FMD; and
5. disease emergency preparedness plans in place.

It is clear from key result area 2 above that the nature of the FMD problem in NCR was not sufficiently appreciated, since recognition of Luzon as FMD-free would mean that there were no clinical cases or reports in NCR, besides Region III and IV. It was over-optimistic to expect recognition of Luzon as FMD-free after a project that lasted only 1½ years, given the

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¹ They are incorrectly labeled as “outputs” in the project document. Outputs are tangible goods produced by the project, e.g. trained staff, lab samples examined, FMD field manuals.
extent of the disease situation when the project began. However, the mission deems that the other objectives were appropriate and realistic within the time frame and resources available to the project.

3.3 Project Design
By classical project design standards, the project document presents many faults (e.g. no specification of target beneficiaries, absence of clear linkages between inputs→ activities→ outputs→ objectives). However, the mission does not view this as a serious impediment, since the success of the project is thoroughly wrapped up in the success of the national programme for eradication of FMD and the overall goals and targets to measure success for the national FMD programme were clear. The present project is a means of support to the Philippine Government programme. The Government counterpart funding and the project funding are used flexibly and in some cases, interchangeably. The mission finds this type of flexibility particularly appropriate as a means to achieve the goals being pursued.

Annex 1 of the project document is a logical framework matrix (LFM). An LFM exercise is useful to clarify ideas when a project or programme is being initially designed, when a problem is identified but the way to solve the problem is not yet known. In the case of this project, where the goals were known and the methods for addressing the problem already established, preparation of an LFM was not analytically useful.

4. Assessment of Project Implementation, Efficiency and Management

4.1 Project Budget and Expenditure
The project began operations in March 2004. At the time of the mid-term evaluation in mid-April 2005, the project is at 75% of its original duration in time (18 months), but project delivery is only 37% of the total budget. Low delivery has been particularly noted for General Operating Expenses (22% on a budget line of $396,000) and Expendable Procurement (18% on a budget line of $100,000). The overall status of the project budget at the time of the evaluation is shown in the Table below.

<table>
<thead>
<tr>
<th>Budget Item</th>
<th>Budget</th>
<th>Expenditure</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Salaries</td>
<td>27 000</td>
<td>0</td>
<td>27 000</td>
</tr>
<tr>
<td>General Service Salaries</td>
<td>97 500</td>
<td>35 656</td>
<td>61 844</td>
</tr>
<tr>
<td>Consultants (all National)</td>
<td>93 888</td>
<td>69 359</td>
<td>24 529</td>
</tr>
<tr>
<td>Locally-Contracted Labour</td>
<td>60 200</td>
<td>35 999</td>
<td>24 201</td>
</tr>
<tr>
<td>Travel</td>
<td>30 000</td>
<td>16 914</td>
<td>13 086</td>
</tr>
<tr>
<td>Training</td>
<td>50 000</td>
<td>45 093</td>
<td>4 907</td>
</tr>
<tr>
<td>Expendable Procurement</td>
<td>100 000</td>
<td>18 336</td>
<td>81 664</td>
</tr>
<tr>
<td>Non-Expendable Procurement</td>
<td>100 000</td>
<td>62 508</td>
<td>37 492</td>
</tr>
<tr>
<td>Technical Support Services</td>
<td>24 355</td>
<td>0</td>
<td>24 355</td>
</tr>
<tr>
<td>General Operating Expenses</td>
<td>396 000</td>
<td>86 617</td>
<td>309 383</td>
</tr>
<tr>
<td>Support Costs</td>
<td>127 261</td>
<td>43 145</td>
<td>84 116</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1 106 204</td>
<td>413 627</td>
<td>692 577</td>
</tr>
</tbody>
</table>
Although delivery to date is only 37%, the mission is convinced that the project has been effectively managed to best use the available resources. Underspending has been most noticeable in GOE and Expendable Procurement. These are two areas where Government funding can also be used. Thus, the project management has preferred to utilize available Government funds, which will lapse if not used, with a result that project funds are conserved since they will not lapse until the project ends. Delivery is also understated because, although little expenditure has been entered against them so far, the FAO-managed budget lines for Technical Support Services and Support Costs will be fully utilized.

As was mentioned earlier, it was unrealistic to expect that Luzon would be declared FMD-free with vaccination in the 18-month period of this final phase, given the level of disease incidence and the unexpected need to focus more strongly on a stamping-out campaign in the NCR. The evaluation mission has attempted to assess the likelihood of early FMD eradication and whether existing funds would provide the necessary level of support to the Government programme.

Clearly an extension of the existing project would require a budgetary revision, to adjust with the different circumstances. If the project were to be extended, it would be necessary to increase the budget lines for national consultants and locally-contracted labour, both of which will have 100% delivery (or nearly) by the present NTE date of September 2005. Training and perhaps travel would also have to be increased. However, through judicious use of Government counterpart funds, it is the best estimate of the mission that current funds, if re-allocated to the “needy” budget lines, may be sufficient to sustain on-going project activities and support additional priority activities identified by project management until June 2006. However, this would have to be confirmed through a more in-depth study of project expenditures to date and future requirements than the mission was able to make with the available information. It will be argued later that, from a technical standpoint, it would be preferable for project funds to be available until December 2006, given the inherent difficulty of establishing deadlines for disease eradication. The mission’s assessment from information presently available is that the present project budget could not accommodate a revision of that duration, without eliminating some activities already planned, or increasing funds for the project. But this remains to be confirmed.

4.2 Activities and Outputs

4.2.1 Disease Monitoring and Surveillance
Active surveillance activities are done in all free and protected zones to detect the FMD virus and prove freedom from the disease. Through the Regional FMD Coordinators, thirty serum samples each from pigs, large ruminants (cattle and caribou) and small ruminants (sheep and goat) are collected and submitted. This is conducted twice a year (90 serum samples every six months or a total of 180 samples per year). For the free zones of Visayas, Palawan and Masbate, samples are collected in each province while for Mindanao samples are collected on a regional basis. The collectors of blood samples employ non-probability (biased) sampling method. Although this method is appropriate in some cases, it is preferable if the collectors will also employ the probability sampling method (e.g. multistage, simple random) in order to get a representative sample of the entire population and thus increase the significance of the result. An example of the details of collection in the different areas is as follows:
<table>
<thead>
<tr>
<th>Category</th>
<th>Number of sampling areas</th>
<th>Number of samples collected per year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Free Zones</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mindanao</td>
<td>6 regions</td>
<td>1,080 samples</td>
</tr>
<tr>
<td>Visayas</td>
<td>16 provinces</td>
<td>2,880 samples</td>
</tr>
<tr>
<td>Palawan</td>
<td>1 province</td>
<td>180 samples</td>
</tr>
<tr>
<td>Masbate</td>
<td>1 province</td>
<td>180 samples</td>
</tr>
<tr>
<td><strong>Surveillance Zone</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Region V</td>
<td>5 provinces</td>
<td>900 samples</td>
</tr>
<tr>
<td><strong>Protected Zones</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Region IVB</td>
<td>4 provinces</td>
<td>720 samples</td>
</tr>
<tr>
<td>Region I</td>
<td>4 provinces</td>
<td>720 samples</td>
</tr>
<tr>
<td>Region II</td>
<td>4 provinces</td>
<td>720 samples</td>
</tr>
</tbody>
</table>

The same sampling and collection procedures would be employed in Regions III, IV-A and NCR if there are no outbreaks for 6 months. Regional FMD Task Force Coordinators ensure that serum samples are submitted twice a year to the FMD Diagnostic Laboratory for antibody detection using Liquid Phase Blocking ELISA. In 2004, a total of 10,870 samples were serologically tested and 1,130 samples yielded positive, giving a seroprevalence of 10.4%. In the FMD-free zones of Mindanao, Visayas, Palawan and Masbate, a total of 3,950 samples were tested and one was seropositive. This was, however, considered to be a false positive.

Records are kept for trace back and trace forward investigations, if necessary. However, these records are not computerized and are therefore not sufficiently accessible. Aside from the active surveillance activities in each region, breeder/fattener commercial farms also submit serum samples when they apply for accreditation and to maintain accredited status.

Monitoring is done through reports submitted from all regions. Hard copies of disease monitoring forms come from all provinces and information is encoded at the National office. Reports are sent at least once a month per province, even if there is no outbreak (zero reporting or negative monitoring). The team was informed that late reports, especially on negative monitoring, still occur particularly from areas with no reported incidence. Computerization of the records and submission of electronic files through the Internet would help solve the problem.

Monitoring is also done through investigation of reports of suspect disease outbreaks. Based on data available, disease monitoring has improved in 2004. About 60% of the suspected outbreaks get visited by field personnel within 24 hours, compared to 46% in 2003.

Slaughterhouses particularly in the endemic areas are better monitored today as compared in the past, through the Compliance Monitoring Team (CMT) which was created in coordination with the NMIS. Monitoring activities have become more efficient because of CMT. They randomly visit premises in NCR and if infected animals are found, these are confiscated and condemned right away to prevent further disease spread. They also go to auction markets and stockyards. A report given to the team showed that in 2004, CMT condemned a total of 371 pigs from slaughterhouses and 100 pigs from stockyards without indemnification. In the absence of any indemnification however, the team has to struggle with some resistance and threats from traders and slaughterhouse owners.
The work of the international veterinary epidemiologist international consultant was significant to the national programme. This input provided epidemiological training in FMD information systems and an analysis of ten years data, which showed an apparent pattern of cyclical dynamics of FMD outbreaks in the Philippines. It highlighted the importance and urgency to eradicate FMD in the next eighteen months before another possible upsurge, which would undo the progress achieved to date.

4.2.2. Public Awareness
The Public Awareness campaign continued along similar lines to the earlier FMD projects. A major effort was given to alerting the several layers of government and the pig industry of their role in the FMD eradication campaign. The assistance of the Philippine Information Agency (PIA) has continued. The campaign, using various types of media, was focussed on regional and provincial issues relating to FMD control and eradication and was done effectively. Clear, succinct extension materials suitable for farmers and farmer groups were provided.

During the project there have been several public awareness events. To encourage consumers to demand inspected pork, a mascot called “Super Pig” was designed. Super Pig parades in special events through meat markets, accompanied with publicity materials about FMD and how it affects meat quality. The NFMDTF initiated the display and prepared the programme and then provincial officers took over the campaign. Anecdotal feedback indicates raised awareness about pork quality and its availability.

The Public Awareness component of the project has been active and prolific. Five radio plugs have been broadcast. There have been twenty-seven radio and TV interviews, press reports to agricultural journalists, extensive regional press releases in endemic and free areas and the project has assisted all regions with their FMD communication plans. Brochures have been produced on several aspects of the FMD campaign and on meat quality using Super Pig images. In the regional press there have been 31 articles published so far in local newspapers. The publication of The Monitor, the FMD task force newsletter has continued and it is a well-respected source of information on FMD status and happenings.

The various actors in the livestock sector were continually involved in the public awareness campaign with the dual purpose of informing them of the current status of the FMD campaign and seeking their assistance for a successful outcome. Although this placed a heavy demand on the FMD Task Force, the effectiveness of their efforts is evident by the increased interest and involvement of most sectors of the livestock industry. This included all significant agencies being invited to participate in workshops, and subsequently leading to the involvement of the NFMDTF in relevant industry sub-committees.

Considerable effort was required to involve the many government agencies in the FMD campaign. Meetings were held with the Local Government Executives, Municipal Agricultural Officers, League of Municipal Mayors and Provincial staff. A similar range of agencies in the commercial livestock sector, such as meat inspectors, abattoirs managers and transport agencies were also involved in the public awareness activities. The outcome of this public relations effort was enhanced local support for many aspects of the FMD eradication programme, such as the location and staffing of checkpoints, enhanced communication channels and agreements between provinces on FMD activities.
An indicator of the successful profile of the Public Awareness campaign was the invitation to the Bureau of Animal Industry to prepare an audio-visual presentation for FMD endemic areas in the region by the Southeast Asian FMD Sub Commission.

While there has been effective linking with PIA and others, there has not yet been any formal evaluation of the impact of the public awareness activities on the rural communities and private sector, although it is reported to be planned.

4.2.3. Animal Movement Control
Control of animal movement is vital for infectious disease control and prevention, particularly FMD. This is particularly important in the Philippines as there are internationally certified disease-free areas in the south and at the same time known FMD infected areas in the north. The fundamental components on the control of animal movement used are:

- a movement permit system from the farm to the place of destination;
- regulations and rules permitting declaration of FMD disease free status;
- requirements that allow movement of pigs to FMD protected areas;
- the ability to hold pigs in quarantine and formal legislation to return pigs to place of origin or to destroy them if necessary.

Monitoring of livestock movement is done by evaluation of the permit issued, with inspection at several checkpoints. All pigs need a permit to move from place of origin to final destination. The permit system is effective in terms of the documentation, recording, and availability of the permits at all hours of the day.

The movement of pigs is mainly to the metropolitan markets and slaughterhouses and this is covered by Administrative Orders proclaimed by the Department of Agriculture, Bureau of Animal Industry and provinces. They are applied by registered government officers of the Bureau of Animal Industry. Some non-government veterinary officers are also registered for signing movement permits. The permits are controlled at checkpoints and at slaughterhouses by NMIS. There are no fines for non-compliance, but pigs can be sent back to the place of origin. The embargo on the transport of pigs from the north to the FMD-free southern areas is effective. The FMD-free areas are under constant threat of illegal movement of pigs from the infected Region III and IVA. Illegal movement of pigs are suspected in a recent FMD outbreak in Region I.

The effectiveness of the checkpoints is not clear. They do serve as an important public awareness reminder, however, there are several issues that may compromise their effectiveness, including the best location for the checkpoints and desirable hours of operation. As a result, not all pigs are checked. The fee charged at some checkpoints is ten pesos per pig, collected by the Municipality/Province. The funds then are cycled back to support the checkpoints by the Municipality/Province. Communications between the checkpoints and senior authorities are adequate.

The support by Local Government Units of some checkpoints by provinces is a clear indication that they are perceived to be of value to the FMD programme. The presence of the Philippine National Police force at checkpoints reinforces the priority given to the FMD campaign.

4.2.4. Vaccination
The vaccination policy consists of the Bureau of Animal Industry providing free vaccines to the small holder for the first vaccination and the second being provided by the province. The commercial sector meets its own vaccine requirements and costs. The type of the FMD vaccine used is of major importance given the large number of FMD strains circulating in Southeast Asia. The Philippines has experienced FMD outbreaks by three serotypes over the last 80 years. The FMD strain infecting pigs at the moment is type O. This has been confirmed by the World FMD Reference Laboratory and 12 FMD viral isolates have been forwarded to the reference centre for serotyping. The selection of vaccine strain is based on the virus serotype of the World FMD Reference Laboratory. The support of the World Reference Laboratory is valued by the Bureau of Animal Industry. Vaccine efficacy is also monitored by antibody testing in accredited herds for potency. Herd immunity testing is also being done.

The commercial sector in endemic regions in Luzon is encouraged to gain accreditation by BAI. At present there are around 5% of commercial herds accredited. This policy is supported by only allowing accredited pig farms to move pigs to protected FMD clean areas such as Region I. No vaccination is allowed in the protected areas as some regions have declared themselves free of FMD, such as Region II, IVB and V. This is based on a national proclamation and is a form of zoning in protected regions.

The process and maintenance of herd accreditation is dependent on the FMD Diagnostic Laboratory and its capabilities to undertake the increasing number of serological tests required. The project has facilitated the participation of the FMD Laboratory in another project supported by FAO and IAEA that has introduced the relatively new test that can serologically distinguish between vaccinated and active infection. The testing and speed of response of the FMD Laboratory is good.

The supply of imported vaccine is adequate and timely. It is provided by Philippine commercial drug stores that import the vaccine. Some funding restrictions may limit vaccine purchase by the public sector.

Vaccination is carried out for accreditation of pig herds in endemic areas. Vaccination is increasing, but the target of 80% is not being met in all endemic areas. Ring vaccination is carried out during outbreaks and along high risk routes.

4.3 Government Support
The Bureau of Animal Industry (BAI), through the National FMD Task Force, coordinates and supervises the implementation of the National FMD Programme. It disseminates information on the status of FMD in the Philippines and the gains achieved on the eradication efforts. The National Meat Inspection Service (NMIS) is to ensure that all slaughterhouses and other related facilities comply with the control and preventive measures against FMD. In particular, it enforces all pertinent and applicable laws, rules and regulations to ensure that only healthy animals are slaughtered, that abattoirs comply with the “All In, All Out Policy” and properly disinfect their premises. The Livestock Development Council (LDC) coordinates with the different farmers’ organizations on its activities related to the FMD Programme. The Department of Agriculture-Regional Field Units (DA-RFUs) implement and coordinate the programme at the regional level.

The Local Government Units (LGUs) enact ordinances regarding the eradication of FMD in their locality. The Provincial, City and Municipal Veterinarians/Municipal Agricultural
Officers exercise authority in their respective areas. They are the front-liners on disease control as they have direct links with the farmers and are supposed to ensure that activities related to the implementation of the programme are given utmost importance.

The above system of support from the government, particularly the LGUs, may vary from place to place depending on the level of awareness, commitment and political will of the local chief executives regarding the FMD eradication campaign. Consultation meetings with the local key officials are thus viewed as necessary to boost their commitment.

The project document calls for a Government counterpart contribution of $846,720. For 2004, the Government reportedly budgeted 29 million Pesos (~US$532,000) for FMD control. However, no funds were made available from a central fund for indemnification, in case pigs were found to be infected with FMD, even though this was a key part of the programme strategy and was mentioned as important in the project document. The NFMDTF is convinced that the existence of an indemnification fund for backyard farmers would remove incentives to hide FMD cases.

During the evaluation mission (on 14 April 2005), the NFMDTF made a presentation to senior officials of the Department of Agriculture, including the Secretary, in which they requested additional funds for field operations this year and creation of an indemnification fund. Although the Philippine Government is under severe budgetary restrictions, the Secretary agreed to the creation of the indemnification fund, with an initial allocation of 4 million Pesos, an amount which would have been sufficient to cover indemnification of about 1,500 pigs, the same number that were condemned due to FMD in 2004. The Secretary also agreed to finance FMD-related activities and to be funded by a levy of five Pesos per head on each pig slaughtered. Support now needs to be sought from hog producers associations for the levy, which could bring about 2,000,000 Pesos per month. Given that currently commercial farmers in Luzon pay 100 Pesos per animal for vaccinations and antibiotics, the amount sought would appear to be a good investment.2

4.4 Project Management
The project is fully managed by the National FMD Task Force (NFMDTF). The NFMDTF, located at the Bureau of Animal Industry (BAI), is headed by a Chairman who is also the Deputy Director of BAI. The Chairmanship of the Task Force has changed three times recently, with adverse effects due to a lack of continuity, but the situation now appears stabilized. The current incumbent is an effective leader of the Task Force with long experience. Much of the operational responsibility for the project is vested in the very capable Deputy Chairman of the Task Force, who is also new since the project began. Besides the Manila-based staff of the NFMDTF, there are Regional Coordinators for each Region of the Philippines. They work closely with Provincial Veterinary Officers on FMD-related work. The mission’s impression is that coordination is generally effective; communication facilities are good, including cell phones, fax and Internet. However, in the remaining endemic areas there is a need for a stronger field presence to ensure adequate disease surveillance. The project management is developing proposals to address the issue.

There is no separate mechanism for supervision of the AusAID/FAO project. However, access of FAO and the Australian Embassy to the NFMDTF is considered to be good.

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2 The savings on medicines are such that pigs from the Visayas and Mindanao, who are not vaccinated, are competitive in the Luzon market, even after shipping costs are paid.
Project reports have been submitted in timely fashion, although receipt of formally submitted reports at local level has been slow, due to the lengthy system of clearances and transmission of the reports through Rome-based channels.

4.5 Technical and Operational Backstopping
Formal responsibility for technical backstopping of the project rests with the Senior EMPRES officer in FAO Headquarters. The project budget does not include funds for any backstopping visit, but it is understood that the officer plans to attend the tripartite review meeting scheduled at the end of the present evaluation mission, funded by other sources. Additional technical backstopping is provided by an officer in the Regional Office for Asia and the Pacific in Bangkok. As this officer is Filipino and formerly the Chairman of the NFMDTF, she has a personal interest in the activity and she has kept in touch with the project. Given the proximity and interest of this officer, and familiarity with all the principals, it would be preferable if she would have primary responsibility for backstopping the project. Inclusion of funds for a backstopping visit during the remaining project period is recommended by the mission.

Operational backstopping is provided from the FAO Representation in Manila. While in the previous project, the imprest account was directly controlled by the project itself, the imprest is now held by the FAOR and cash advances are made to the project. The unpredictable cash requirements for the project (i.e. greater when there is an outbreak that must be brought under control quickly) means that the current system is less flexible and less suitable to implementation requirements. There is a need for the project management to discuss directly with the FAO Representation ways in which operational backstopping can be improved during the remaining project period.

5. Assessment of Results and Effectiveness

5.1 Effects and Impact
The national prevalence of FMD in the Philippines has been decreasing, from 1,553 outbreaks in 1995, to a plateau of around 450 outbreaks per year between 1996 to 1999 and then a consistent gradual decline to 123 FMD outbreaks in 2004. The decrease in FMD outbreaks between 2003 and 2004 was 276 to 123 outbreaks respectively, which represents a decline of 55% from 2003. From 1 January to 20 April 2005, there have been 34 FMD outbreaks reported, a comparable level to 2004 at the same time.

The project in its various phases of AusAID/FAO support has been a major contributor to Government efforts to control FMD, the combined effect of which has been that half of the Philippines has been declared FMD-free by OIE. The project has established a viable structure that links the central government agency, the Department of Agriculture, through its Bureau of Animal Industry to the regions then to the provinces, municipalities and barangays. The decentralised national structure, where local technical officers are administratively responsible to local government units, has provided a challenge that the programme has successfully overcome. The four-pronged strategy for FMD control, involving disease monitoring and surveillance, animal movement control, vaccination and public awareness, is now well established. The project support is managed integrally with government funding. The move of the former National FMD Task Force Chairman to FAO two years ago has led to increased inputs of FAO to the programme. Similarly, the recruitment of a successor Task
Force chairman as the Regional Coordinator of the SEAFMD has welded strong regional links to the Philippines national FMD programme.

The net effect of the FAO involvement has been most beneficial to the progress of the national FMD programme. Examples of these positive impacts are the roles that the Philippines has had in hosting the SEAFMD regional meetings and its involvement in the FAO/IAEA FMD technical programme that ensured the quality control of the serological testing undertaken in the national FMD programme. Also, the introduction of serological tests to allow diagnosis of vaccinated animal from infected animals.

The project has been instrumental in the consolidation of the field activities of the Philippine national FMD programme to the point where eradication is now considered feasible. The existence of the project has enabled the NFMDTF to realistically advocate a stamping out activity to ensure the full eradication of FMD and the creation of an indemnity fund needed to do this. Such a request to central government by a national programme without international support would have had a greater challenge to be successful.

The project design did not formally include the National Capital Region as it was thought that pigs entering the region would be going direct to the slaughter houses and there would not be any chance of FMD transmission. However, evidence has emerged that some slaughter houses have become a point of infection and this has been blamed for the spread of the disease, by mechanical carriers, to other regions on some occasions. Using the experience gained, and with established links to the National Meat Inspection Services and to industry, a programme of activities has been designed to eliminate this unexpected source of FMD virus. The cause of the problem has been identified as incubating FMD infections in pigs that are not slaughtered within 24 hours. Using the movement permit system, prompt trace backs have been successfully made to the source of infection, usually from the infected regions of Regions III and IV and the appropriate measures taken to control outbreaks before they have a chance to spread.

The two areas that may need to be further consolidated are the permit system for livestock movements and the animal health information system. The effectiveness of both would be greatly enhanced if they were computerised. This would allow ready analysis and epidemiological modelling of eradication processes and progress.

The training provided by the FAO project has been central to the establishment of an effective national FMD Task Force. The training capacity and public awareness skills are now robust and consolidated in the Bureau of Animal Industry of the Department of Agriculture. The strengths and experience of FMD control and eradication programme in the Philippines is recognised throughout Southeast Asia.

The maintenance of international FMD free status of the Visayas, Mindanao, Palawan and Masbate is a major positive impact of the FAO project, especially given the danger posed by active FMD outbreaks in Luzon.

The mission was able to briefly visit a training course on animal health systems, supported by a regional AusAID project. The AusAID project “Strengthening Animal Health Management and Biosecurity in ASEAN” was highly relevant to the FMD eradication campaign. There are other AusAID regional projects on FMD implemented by the Department of Agriculture, Fisheries and Forestry in Australia. The NFMDTF is a member of the technical Working
Group on Information of the AusAID/OIE SEAFMD Campaign. The mission considered that further involvement in these other projects would benefit the NFMDTF.

With an effective permit system, strategic vaccination, accreditation of commercial herds, an effective public awareness programme, adequate movement controls, an indemnification capacity and an FMD information system, the chance of success for a final campaign to eradicate FMD is high. Most of the system is in place and recent developments point in the right direction.

A significant beneficial impact of the FAO project has been the ability of the Philippines to provide a national cover and surveillance capacity for the recent regional threat of Avian Influenza. While not a part of the FAO project the does illustrate the positive impacts of the project across a wider range of animal health issues. The infrastructure created by the FAO project provided a ready made institutional framework for the Bureau of Animal Industry to evaluate the status of Avian Influenza in the Philippines. Similarly, local specific serological monitoring of other priority diseases such as Classical Swine Fever, has been made possible by the FAO project by using the same serum samples as used for the FMD surveillance and monitoring.

**5.2 Sustainability and Environmental Impact of Results**

In order to muster the needed political and financial backing for a final push to FMD eradication, and because it is not impossible that it will be achieved, the mission feels that the target date of 2005 for no clinical cases. However, prudent planning dictates that there may be a need to continue the eradication programme to December 2006 should an untoward delay in the stamping out campaign occur. This is suggested as the NFMD Task Force is dealing with a complex biological system with no strict time bound rules and this needs to be appreciated by all parties. Under a positive scenario, it is likely that FMD will be eradicated by June 2006, however, a three month period of observation may be necessary to confirm eradication of FMD in Luzon. The target of no clinical FMD cases with vaccination in Luzon is feasible and achievable. The mission would like to draw attention to the fact that should there be just one outbreak in June, 2006, it has to be dealt with quickly and efficiently as this may be the last FMD outbreak of the campaign. It would be a great loss of opportunity should the NFMDTF be not prepared for this event. It would also compromise all the efforts and contributions of everyone involved in the FMD eradication programme. For this reason, some flexibility in timing is suggested and should be considered. The extension to December 2006 is seen by the mission as a form of insurance and a contingency option for the successful eradication of FMD in the Philippines.

Staff continuity is likely to be an important factor for sustainability. While the turnover of trained staff was high at the start of the project, newly appointed staff have been adequately trained using national and FAO project resources. The quality of the FAO project team is good. There is clear evidence of a sense of purpose and dedication at all levels of the project from the national to the municipalities visited during the evaluation. This augurs well for a sustainable commitment after the end of the FAO project.

Related to the leadership of the project is the effective liaison, involvement and cooperation of all the stakeholders involved in FMD control and eradication. The contributions of industry to FMD eradication has been spasmodic although it is likely to increase significantly in the future with the proposed slaughter levy. The combining of effort by all sectors of the
pig industry is a positive sign with regard to long term sustainability which may even expand to include other related priority animal health issues.

A major factor involving sustainability is the provision of funding after the completion of the project. The government has been providing considerable support during the implementation of the current project and will want to maintain a structured FMD surveillance activity to maintain international accreditation. The funding required in the future should be less than currently provided once FMD is eradicated. However, as most of the benefit of FMD-free status would accrue to the commercial sector, the government would be justified in seeking support from the commercial sector for the continued maintenance of FMD-free status, through a mechanism such as the proposed slaughter levy. In the long run, this may prove a more sustainable financial mechanism.

The environmental impact of the results are likely to be neutral to beneficial. The eradication of FMD does not involve major chemicals that are dangerous to the environment. The spraying of vehicles and the foot baths are not likely to have any long term negative environmental impacts. The improved hygiene of the slaughterhouses should result in better waste management practices and cleaner effluent, which would be a positive benefit. There was no evidence of negative environmental impacts in the FMD free zones visited by the evaluation team that could be attributed to the project.

5.3 Gender Equity in Project Implementation and Results
Some women keep and trade pigs, but it is primarily a male activity. A key role played by women in pig production is the preparation of swill, so the message that swill must be cooked as a means of FMD prevention needs to reach women in the backyard producers’ situation. This is one of many messages that need to reach pig producers.

Within the National FMD Task Force, women play a very significant role. Of the technical members of the Task Force, three of the five veterinary staff are women, as are two of four staff in the public awareness section and all the staff in the laboratory section.

5.4 Cost-effectiveness
In terms of project implementation, the mission finds that the project has been cost-effective. It relies almost exclusively on lower-cost, national staff for project implementation and is fully integrated into an on-going national programme. This promotes efficiency of resource use, since both Government and project funding sources can be utilized. The project has taken major steps to improve field mobility by purchasing low-cost, locally-assembled vehicles that can be more widely distributed with the existing funds.

At a macro level, the cost effectiveness of the national FMD programme was the subject of a study published in 2002, “The Economic Impact of Foot and Mouth Disease Control and Eradication in the Philippines”. Under varying assumptions regarding the development of exports of livestock products following eradication, estimated benefit-cost ratios for the investment range from 1.63 in the most pessimistic scenario, up to 9.89 in the most optimistic scenario now possible\(^3\). The return on investment of public funds is expected to be 2.4:1. Benefits are expected to accrue largely to the commercial farm sector, through eliminating the (high) costs of vaccination and possibilities for export of meat.

\(^3\) Confirmed eradication that would permit exports is no longer possible in the scenario predicated on achieving eradication by 2005; eradication by 2007 remains possible. The most pessimistic scenario considered in the study is elimination by 2010.
The study also points out that policy makers are justified in expecting the commercial sector to contribute to the eradication effort, given the commercial nature of the benefits through access to export markets and the fact that FMD eradication cannot be expected to have a significant impact on poverty reduction. The contribution will likely be particularly important to protect the FMD-free status, once it is achieved.

5.5 Major Factors Affecting the Project Results
There was an expectation that the Philippines may have been close to having eradicated active FMD by the time of the evaluation. This has not occurred and there are several factors accounting for this.

Firstly, changes in the Chairmanship of the NFMDTF and other staff assignments resulted in some loss of momentum and slowed some of the planned activities.

Secondly, the emergence of the importance of slaughterhouses in the NCR as a source of infection was unexpected. After the project began, it became clear that this was a more important issue than realised at the time of the project design.

Thirdly, the lack of involvement by senior provincial staff and consequently the farmers in the regions, slowed down the control and eradication programmes. A greater involvement of provincial staff is essential for a successful outcome.

Fourthly, the two target areas, Region III and IV have almost 50% of the pig population in the Philippines, which provided a logistical problem and when coupled with the limited provincial involvement evident in the past, has limited the eradication FMD programme.

Fifthly, the role of the livestock traders as agents for spreading of FMD virus and their intermittent non compliance in FMD control procedures has exacerbated the difficulties of reaching an FMD free status in Regions III and IV-A. It is now apparent that the full involvement and cooperation of the traders is an essential component for the eradication of FMD in the Philippines. Efforts to include the traders as full partners in the control and eradication programme have commenced and need to be further consolidated.

Sixth, the reduction of FMD outbreaks in Luzon is now at a level where the most efficient way to eradicate the FMD virus from the country is to undertake a pig replacement programme with an Indemnity Fund to compensate the owners loss of pigs. The availability of an adequate indemnity funds is essential for the removal of the last pockets of active FMD. Also, this will encourage farmers to report possible FMD cases rather than try to sell infected pigs that spread FMD virus.

There has been an ongoing risk assessment for the FMD eradication programme with the last formal risk assessment being done in 2002\(^4\). The programme lacks access to a strong epidemiological back up for risk management. The need for practical epidemiological and risk management skills will be needed for the final campaign to monitor progress and target effort at the high risk sites and activities.

\(^4\) See Benigno et al 2002 “Survey of risk factors, awareness and practices for FMD in backyard swine farms”, publ FMD Monitor, BAI.
A major factor for the continuing positive impact of the FAO project is the strength of the team, their high motivation and now the sector wide involvement of the livestock industry in the FMD campaign. Of considerable importance is that pigs are still the major livestock species infected with FMD. There was an FMD outbreak with serotype O in caribou in Region III in 2003. Should the current FMD virus cross infect other livestock species, the task of FMD eradication increases in difficulties exponentially. The ongoing support by BAI for the programme and the FAO project inputs through training, supply of vaccination, livestock movements, and quick response teams plus the allocations of some FMD funds to the regions has helped to build up a reservoir of competence and ability that gives the evaluation team some confidence that FMD can be eradicated in the short term. The support of the various sectors of the pig industry has been gained and although limited financial support is provided at present, there is considerable and impressive cooperation in the national FMD campaign.
6. Conclusions and Recommendations

6.1 Conclusions

1. After initial start-up difficulties due to personnel changes, the project has been well implemented, providing sound technical and public awareness assistance in FMD control and eradication activities to all levels of the regionalised government system, including the private sector of the pig industry. The impact of the FMD Task Force is evident from the central government to the municipalities and through them to the farmers.

2. The prevalence of FMD in the Philippines from 1995 to 2004 has decreased by 93%, from 1,553 to 123 outbreaks. The project objective of Luzon being free of clinical FMD with vaccination by September 2005 may not occur. However, almost all conditions are in place for FMD eradication in the near future. While it is difficult to estimate time where biological systems are concerned, if all conditions are in place eradication by the end of 2006 is feasible.

3. Regions III and IV-A in Central Luzon are still FMD endemic areas, although at a lower prevalence than in the past. The project needs to continue work in these regions and expand its activities in NCR, which is now realized as a source of infection.

4. The lack of an active indemnity fund, anticipated during the implementation of the project, hampered reaching the final stages of eradication of the FMD in the Philippines.

5. Slaughterhouses and livestock traders have emerged in the last two years as the source of significant risks for the spread of FMD in pigs. This has been countered by an “all in, all out policy” within 24 hours of arrival at the slaughterhouses. However, the FMD eradication campaign now needs to focus much more on slaughterhouses in the NCR.

6. More effective use of the permit system and animal health reporting would enhance the progress of the eradication programme.

7. There is evidence of the involvement, and support and an increasing degree of collaboration from all sectors in the pig industry. The benefits of FMD free status are accepted by all, but are most important to the commercial sector, because of export possibilities and lower costs of production. Functional and active linkages have been established between all layers of government and industry.

8. The Visayas, Masbate and Palawan areas were recognised as free of FMD by OIE in 2002, as was Mindanao in 2001. Their FMD free status has been maintained. This is a major positive outcome, to which the project has made a significant contribution.

9. Project delivery has been slow, due largely to a correct decision to maximize use of Government counterpart funds. While precise information on expenditures and projected resource use was not available, best estimates are that sufficient funds are available to extend the project until June 2006, and possibly longer. This would be of great benefit to the final FMD eradication campaign.
6.2 Recommendations

1. While the present Government target of no clinical cases by 2005 should be maintained, the AusAID/FAO project should be revised and extended to June 2006 at least (up to December 2006 at a maximum), within presently available resources, to allow the project to support the Government programme for the completion of FMD eradication in Luzon, while maintaining freedom without vaccination in the Visayas, Mindanao, Palawan and Masbate. An additional objective for the project should be that a functional and effective system for monitoring and evaluating livestock movement from the farm to slaughterhouses should be in place.

2. The revision proposal should be prepared by the NFMDTF, with assistance as required from FAO. The project revision should accommodate necessary additional activities in training (particularly for disease monitoring and surveillance), public awareness, animal movement control and vaccination. It should include a workplan with an indication of activities to be undertaken, outputs to be produced and staff members responsible. The concentration of project activities should be for the eradication of active FMD in Region III, IV-A and NCR, involving all parties in the livestock sector. Particular emphasis is to be given to effective monitoring of livestock movements and rapid follow up of any activities that may be required.

3. Technical backstopping for the project should be provided by the former NFMDTF Chairman who is now based at the FAO Regional Office in Bangkok. Funds for one backstopping visit should be included in the project revision.

4. The FAO office in Manila should seek ways to more quickly release funds to the project, particularly when there is an FMD outbreak that requires immediate control measures.

5. An internal evaluation and monitoring of the impact of the Public Awareness component programme should be undertaken to determine impact and determine the most suitable form of media presentation for the targeted Regions III, IV-A and NCR.

6. The permit system and FMD status reporting should be computerised at the Provincial level at least, and include electronic transfer of information to the National FMD Task Force. The project should support this activity.

7. The input of an epidemiologist should be obtained to assist in the completion of the Animal Health Information system and analysis for Region III, IV-A and NCR. This model then can be extended to other regions.

8. Collectors of blood samples should employ the probability sampling method, to increase the significance of results obtained.

9. All regions should undertake a simulated FMD outbreak as a “Quick Response” exercise every six months in selected provinces. The purpose of the exercise is to test the coordination, involvement and participation of all necessary parties, during an emergency situation such as an FMD outbreak in a free or protected zone.

10. Local Government units in FMD-affected areas should establish Task Forces for the elimination of FMD, including full-time Community Coordinators in the endemic areas. To support this effort, the project should assist funding of operations and give necessary technical back-up, including assignment of staff as necessary to the affected areas.

11. The Government of the Philippines should take immediate, concrete steps to establish an indemnification funds, to compensate backyard farmers for loss of pigs due to FMD. The initial amount of the fund should be, as a minimum, equivalent to what would have been required to compensate farmers at the level of losses that existed in 2004. The NFMDTF should prepare the guidelines for use of the indemnification fund.

12. The Government of the Philippines should initiate a slaughterhouse levy on hog raisers. The current proposal of five Pesos per animal is fair and adequate. The funds raised from...
the levy should be used for the final eradication campaign in the first instance and for activities aimed at national OIE certification of freedom without vaccination, once FMD is eliminated. Given the benefits that the commercial sector will realize from FMD freedom, their further participation in a tangible way to the campaign is warranted.

13. AusAID and NFMDTF should explore increased linkages and support from other regional AusAID projects such as the “Strengthening Animal Health Management and Biosecurity in ASEAN” project and the SEAFMD campaign.
Annex 1

Terms of Reference for a Joint Evaluation Mission by AUSAID, FAO and the Government of the Philippines

Background

The Eradication Phase of the Foot and Mouth Disease Control and Eradication Programme, GCP/PHI/049/AUL is an eighteen month project that commenced on 15 March 2004 and ends on 15 September 2005. The project carries a budget of US $1,106,204.00. This is the final phase of the three-phased project (which started in 1996).

The goal of the project is to eradicate Foot and Mouth Disease (FMD) in the remaining areas in the country and maintenance of the previously declared FMD-Free Zones.

The project also aims to improve on early response to outbreaks in the endemic areas; institutionalize public awareness programmes; strengthen surveillance in activities the free areas; strengthen quarantine activities on entry and exit points between free and endemic areas and maintain the capability of the diagnostic laboratory in detecting virus type using the latest diagnostic techniques available.

The strategy of the programme is anchored on four components; disease monitoring and surveillance; public awareness; animal movement management and vaccination with the following output expected to be achieved:

- No clinical cases or report in Region 3 and 4
- Recognition of Luzon as FMD Free Zone with vaccination
- Maintenance of Mindanao, Visayas, Masbate and Palawan as FMD Free Zones without vaccination
- Heightened public awareness on FMD
- Disease Emergency Preparedness Plan in place

The necessary elements of the strategy at this phase are:

- Continued coordination and implementation of national FMD control
- Control of FMD in the South and North Luzon, isolating and continually reducing the foci of infection for eventual eradication
- Enjoin the support of both government and private sectors – stakeholders- in this campaign and their corresponding commitments
- Institutionalization of the programme at the Local Government Unit level for the ownership of the campaign and sustainability of the control plan

These shall give control programme a solid front to eradicate FMD, as the critical pathway of the disease has already been identified.
Purpose of the Evaluation

The evaluation is intended to provide objective assessment on the progress of the planned activities as indicated in the project document and agreed upon by all parties concerned. The evaluation is also intended to provide recommendations based on the progress of planned activities, as to any further steps, or necessary changes in the orientation of the programme that may be needed to ensure achievement of objectives.

Scope of the Evaluation

The mission will assess the:

1. National coordination of the FMD control programme
2. Disease situation of 2004 compared to 2003 and the period of 1998 to 2001
3. Determine the factors that contributed to the current disease situation
4. Surveillance work done in the protected zone, surveillance zone and control zone
5. Surveillance work done in the free areas
6. Progressive zoning approach in Luzon
7. Animal movement management in the free, protected, and control zones as well as in the free zones
8. Progress on institutionalization of the Public awareness activities at local levels
9. Involvement of the private sector in the campaign
10. Present capabilities of the Local Government Units to sustain the FMD control programme after the project duration

Composition of the Mission

The mission will be comprised of:

Team Leader (FAO) with experience on evaluation of animal health programme or similar disease control programmes and of livestock development projects
Member (AUSAID) with experience on animal health programmes and evaluation
Member (GOP) with experience on animal health programmes and development projects

Mission members should be independent and thus have no previous direct involvement with the project either with regard to its formulation, implementation or backstopping. They should preferably have experience of evaluation.
**Timetable and Itinerary of the Mission**

The mission will assemble at the Bureau of Animal Industry (BAI)- National FMD Task Force office on the 1st day of the evaluation and meet with the staff of the task force and see first hand the centre of activities of the control and from there shall make the necessary courtesy visits.

10 April  
Arrival

11 April  
Courtesy visits (DA Secretary/BAI Director, FAO Representative) Briefings

12 April  
Fly to Laoag/Region 1 Briefing/continue to Region 3

13 April  
continue visit Region 3/ return to Manila

14 April  
visit Cavite / Batangas Port /Calapan/ Sto Tomas

15 April  
fly to Cebu/ visit airport quarantine, local offices, port

16 April  
fly to Davao/ local meetings/p.m. return to Manila

17 April  
report writing

18 April  
visit to Region IV-A (Rizal)

19 April  
briefing on public awareness programme/report writing

20 April  
Report writing

21 April  
Report writing

22 April  
Debriefing/ Return to home country

**Consultations**

The mission will maintain close liaison with the representative of the FOA and the concerned national agencies as well as with the national and international project staff. While the mission is free to discuss with the concerned authorities any relevant facts to its assignment, it is not authorize to make commitments on behalf of the government, FAO and the donor.

**Reporting**

The mission is fully responsible for its independent report which may not necessarily reflect the views of the Government, FAO or the donor, the report will be written in conformity with the standard format.
The report will be completed, to the extent possible, in the country and the findings and recommendations fully discussed with all concerned parties and wherever possible, a consensus be achieved.

The mission will also complete the FAO Project Evaluation Questionnaire

The mission Leader bears responsibility for the finalization of the report, which will be submitted to FAO within two weeks of mission completion. FAO will submit the report to the Government and the donor together with its comments.
Annex 2 - Itinerary and Key Persons Met During the Evaluation Mission

11 April 2005 (Monday)
1. Bureau of Animal Industry
Visayas Avenue, Diliman, Quezon City 1125
Dr Jose Molina, Director of BAI
Dr Victor Atienza, Project Leader, FMD National Task Force
Dr Reildrin Morales, Deputy Project Leader, FMD National Task Force
Dr Catherine Umandal, Veterinary Services Specialist
Mr Domingo Caro, Community Awareness Specialist

2. National Meat Inspection Service
Visayas Avenue, Diliman, Quezon City, 1125
Dr Efren Nuestro, Executive Director, NMIS
Dr Minda Manantan, Deputy Executive Director, NMIS

3. AusAID, Australian Embassy
Level 23 Tower 2 RCBC Plaza
6819 Ayala Avenue, Makati City 1200
Angus Barnes, First Secretary, Development Cooperation
Erika Montero-Geronimo, Senior Programme Officer
Rolando Inciong, Public Awareness Manager
John Alikpala, Programme Manager

4. FAO Philippines Office
29th Floor, RCBC Plaza
6819 Ayala Avenue, Makati City 1200
Ramesh Jain, FAO Representative
Arcadio Cruz, National Programme Officer, FAO Philippines
Sarah Lacson, Programme Assistant

12 April 2005 (Tuesday)
1. Laoag City, Region I
Dr Loida Chee, Provincial Veterinarian, Ilocos Norte, Luzon
Dr Sarah Jayme, Veterinary Field Officer
Dr Arturo Cabello, City Veterinary Officer, Laoag City.
Dr Annie Bares, Regional FMD Coordinator, Region I, San Fernando City, La Union

2. Urdaneta City, Region I
Dr Felix Olegario, Chief Licensing and Inspection Officer, Region I, San Fernando City, La Union
Danny Uy, Pig producer, DCU Farm, Pangasinan
Rosendo So, Pig producer, Urdaneta City

13 April 2005 (Wednesday)
1. City of San Fernando, Pampanga, Region III
Dr Cesar Rodriguez, Regional Executive Director, Dept of Agriculture, Region III
Dr Romeo Manalili, Regional FMD Task Force Coordinator, Dept of Agriculture
Dr Robert Lo, Chairman, RAC-ADCE, Region III
Dr Ferdinand Montano, Quarantine Officer, Dept of Agriculture, Region III
Dr Augusto Baluyut Jr, Provincial Veterinary Officer, Clark Airport, Region III
Dr Arnold Lopez, Field Veterinary Officer, National FMD Task Force, Region III

2. San Jose Del Monte City, Bulacan Province, Region III
Dr Benjamin Avanceña, City Veterinarian, San Jose del Monte City, Bulacan

3. University of the Philippines, Diliman
Dr. Ronello Abila, Office International des Epizooties, Bangkok, Thailand

14 April 2005 (Thursday)
1. Trece Martires, Cavite Province, Region IV
Dr Ma. Gina Belisario, National Veterinary Officer, Dept of Agriculture, Region IV
Dr Gloria Digma, Veterinarian, Cavite Provincial Office, Trece Martires City
Dr Anita De Castro, Office of the Provincial Veterinarian, Trece Martires
Dr Rustum Bernal, Provincial Veterinary Officer, Trece Martires
Marikit Castillo, Communication Assistant, National Task Force, Quezon City

2. Batangas City/Port, Region IV
Dr Rodrigo Bautista, Provincial Veterinarian, Batangas City
Dr Flora Sheila Lualhati, Veterinary Officer, Office of City Veterinary and Agriculture Services, Batangas City
Dr Nehemias Burgo, Veterinary Officer, Batangas Port
Dr Ben Bagui, Veterinary Officer, Batangas Port
Dr Noel Guzman, Veterinary Officer, Batangas Port

3. Manila
Dr Carolyn Benigno, FAO Regional Office, Bangkok, Thailand
Dr Angus Cameron, International Consultant, AUSVET, Australia

15 April 2005 (Friday)
1. Cebu City, Cebu Province, Region VII
Dr Eduardo Lecciones, Regional Executive Director, Region VII, Cebu City
Dr Alice Utlang, City Veterinarian, Cebu City
Dr Pablo Balite, FMD Regional Coordinator, Regional Quarantine Officer, Cebu City
Dr Arnie de la Marias, Cebu Airport Quarantine Officer.
Dr Daniel Ventura, Dean, Southwestern University, College of Veterinary Medicine, Cebu City, Chairman, RAC-ADCE.
Hon. Secretary Arthur C. Yap, Secretary of the Department of Agriculture

16 April 2005 (Saturday)
1. Davao City, Mindanao, Region XI
Dr Jane Bacayo, Regional FMD Task Force Coordinator and Regional Quarantine Officer, Davao City.
Dr Teresa Bacayo, Veterinary Quarantine Officer, Davao City

2. Nenita Farms, Davao City
Dr Edmond Dantes, Assistant Vice President, Nenita Farms, Marapangi, Toril

18 April 2005 (Monday)
1. Rublou Slaughterhouse, #131A. Bonifacis Avenue, Cainta, Rizal
Rizal Province Region IV
Mr. Almario Garcia, Slaughterhouse Manager
General Luizo Ticman, Slaughterhouse Owner, President of Slaughterhouse Owners
Association and Gen, Philippine National Police.
Dr Ofelia Montilla, FMD Regional Coordinator, Region IV A
Dr Reynaldo Bonita, Supervising Agriculturist, Office of Provincial Agriculturist
Dr Catherine Gorospe, Veterinarian, Rizal Province
Dr Jeny Banzon, Veterinary Field Officer, National FMD Task Force, Rizal
Leoncio Orca, Office of Provincial Agriculturist, Rizal
Francisco Natividad, Office of Provincial Agriculturist, Rizal

2. North Harbour, Manila Port, NCR/Region IV
Dr Jose David, National FMD Task Force, Veterinary Field Officer, Manila
Mr Mervin Quijano, Public Awareness Coordinator, National FMD Task Force
Mr Dionisio Acasio, Veterinary Quarantine Officer, North Harbour.
Mr Herminigildo Mojica, Livestock Inspector, North Harbour
Ms Marikit Castillo, Communications Specialist

19 April 2005 (Tuesday)
Dr Victor Atienza, Project Leader, FMD National Task Force
Dr Reildrin Morales, Deputy Project Leader, FMD National Task Force
Dr Catherine Umandal, Veterinary Services Specialist
Mr Domingo Caro, Community Awareness Specialist
Mr Percival Gealone, Systems Analyst, Bureau of Agricultural Research

20 April 2005 (Wednesday)
Dr Reildrin Morales, Deputy Project Leader, FMD National Task Force
Maritess Gealone, Resource Person for GIS and Microsoft Server, Bureau of Animal Industry

22 April 2005 (Driday)
Dr Jose Molina, Director of Bureau of Animal Industry
Dr Victor Atienza, Project Leader, FMD National Task Force
Dr Reildrin Morales, Deputy Project Leader, FMD National Task Force
Erika Montero-Geronimo, Senior Programme Officer, AusAID, Australian Embassy