

Draft Plan of Operation
Capacity Building for the Quality Standard Control of Agricultural Materials (Chemical Fertilizers and Pesticides)

1-3	2009			2010			2011			2012	Person in charge	Implementers	Other major inputs		Remarks				
	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9				1-3	10-12		1-3	10-12	1-3	10-12
													Camboodian	Philippines					
Activities under Output 0																			
1	Preparation for the Project																		
1-1	Selected pilot area(s) based on the criteria.																		
1-2	Prepare questionnaire.																		
1-3	Conduct interviews with traders.																		
1-4	Develop baseline data report.																		
Activities under Output 1																			
Expected Outcome																			
Questionnaire sheet																			
Questionnaire sheet																			
Baseline data on registered chemical fertilizers																			
Baseline data on registered pesticides																			
Baseline data on labeling in Khmer																			
Expected Outcome																			
Property set-up laboratories																			
Training reports/records of training																			
Manual for analyses of chemical fertilizers																			
Manual for analyses of pesticides																			
Expected Outcome																			
List of collected information																			
Draft Quality Standards																			
Minutes of meetings																			
Quality Standards																			
Proceedings of seminars/workshops																			
Expected Outcome																			
Activities under Output 3																			
Expected Outcome																			
List of related documents																			
Project report(s)																			
Activities under Output 2																			
Expected Outcome																			
List of collected information																			
Draft Quality Standards																			
Minutes of meetings																			
Quality Standards																			
Proceedings of seminars/workshops																			
Expected Outcome																			
Activities under Output 3																			
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Project report(s)																			
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List of collected information																			
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Activities under Output 3																			
Expected Outcome																			
List of related documents																			
Project report(s)																			

Project Design Matrix (PDM)

Project Title: Capacity Building for the Quality Standard Control of Agricultural Materials (Chemical Fertilizers and Pesticides)

Project Period: 01 March 2009 to 31 March 2012 (3 years & 1 month)

Pilot Area: Kandal Province (Kien Svay, Koh Thom district)

Target Group: Beneficiary

(1) DAL and GDA staff of the MAFF

(2) PDA staff of the MAFF in the pilot area

(3) Retailers dealing with chemical fertilizers and pesticides in pilot area

(4) Farmers using the chemical fertilizers and pesticides in pilot area

Implementing organization: DAL & GDA

Version 2: 30 April 2010

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTION
<p>Overall Goal (w/in 5-10 years after the project)</p> <p>Proper usage and quality control of chemical fertilizers and pesticides is enhanced in Kandal and neighboring provinces.</p>	<ol style="list-style-type: none"> 1. Distribution of registered chemical fertilizers and pesticides with Khmer label are increased. 2. No retailers sell banned pesticides. 	<p>- Survey and interview</p>	
<p>Project Purpose</p> <p>Proper usage and quality control of chemical fertilizers and pesticides is enhanced in pilot area.</p>	<ol style="list-style-type: none"> 1. Two thirds of licensed retailers in pilot area utilize the following materials provided by the project on their sales in order to secure proper selection and usage of chemical fertilizers and pesticides; <ol style="list-style-type: none"> (1) Khmer labels on pesticides (2) Reference materials on proper selection and usage of chemical fertilizers and pesticides. 2. Number of licensed retailers who do not sell banned pesticides is doubled in pilot area. 	<ol style="list-style-type: none"> 1. Report of baseline survey 2. Survey and interview 	<ul style="list-style-type: none"> - MAFF keeps laboratories functioning. - Law is enforced against the illegal trade and sales of chemical fertilizers and pesticides. - The awareness and capacity of retailers dealing with chemical fertilizers and pesticides is continuously raised. - Capacity of MAFF staff is further and continuously improved.

<p>Outputs</p> <p>1 Baseline data for the Project is developed.</p> <p>2 Capability of laboratories is improved in terms of analyses of chemical fertilizers and pesticides.</p> <p>3 Development of Regulation related to Standard Requirement¹ for registration and post-registration of chemical fertilizers and pesticides is facilitated with the expectation of having the 1st draft.</p> <p>4 Awareness is raised on proper usage and quality of chemical fertilizers and pesticides.</p>	<p>1-1 Baseline data on registered chemical fertilizers in the pilot area(s) is in hand.</p> <p>1-2 Baseline data on registered pesticides in the pilot area(s) is in hand.</p> <p>1-3 Baseline data on labeling in Khmer in the pilot area(s) is in hand.</p> <p>2-1 Laboratory equipment/ facilities are properly set up and functioning.</p> <p>2-2 Fertilizer laboratory in the DAL and the GDA can analyze N, P, K and other elements (Fe, Mn, Zn, Cu, Ca, Mg).</p> <p>2-3 Pesticide laboratory can analyze at least 60% of 24 prioritized active ingredients.</p> <p>2-4 Manuals for analyses of N, P, K and other elements (Fe, Mn, Zn, Cu, Ca, Mg) for chemical fertilizers and at least 60% of 24 prioritized active ingredients for pesticides are developed.</p> <p>2-5 Manuals for operation and maintenance for laboratory equipment are developed.</p> <p>2-6 Analytical reports of samples collected by inspectors from licensed retailers are developed (to be shared among stakeholders).</p> <p>3-1 Policy option(s) related to Standard Requirement for registration and post-registration of chemical fertilizers and pesticides is provided.</p> <p>4-1 At least each type of materials; pamphlet, posters, and audio visual media is developed and disseminated for public awareness activities.</p> <p>4-2 Khmer labels and reference materials on selection and usage of pesticides are distributed to all of the licensed retailers in pilot area.</p> <p>4-3 Reference materials on selection and usage of chemical fertilizers are distributed to all of the licensed retailers in pilot area.</p>	<p>1. Report of baseline survey</p> <p>2.1 Laboratory inventory</p> <p>2.2 Manuals</p> <p>2.3 Records of laboratory works</p> <p>3.1 Project activity reports</p> <p>4.1 Awareness raising materials</p> <p>4.2 Reports of survey and interview</p>	
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¹ Standard Requirement is defined as "all the requirements covering technical specifications and procedures for registration and post-registration of chemical fertilizers and pesticides."

Activities	Inputs
<p>1-1 Select pilot area based on the criteria</p> <p>1-2 Prepare questionnaire.</p> <p>1-3 Conduct interviews with traders.</p> <p>1-4 Develop baseline data report.</p> <p>2-1 Set up of laboratories for analyses of chemical fertilizers and pesticides.</p> <p>2-2 Carry out On-the-Job-Trainings (OJT) and/or training in the Philippines for the laboratory staff to analyze chemical fertilizers and pesticides.</p> <p>2-3 Analyze the quality of samples for chemical fertilizers and pesticides collected in pilot area (results are shared through awareness raising activities under Output4)</p> <p>2-4 Develop manuals for:</p> <ol style="list-style-type: none"> 1) Analyses of Chemical fertilizers (N, P, K and some other elements) 2) Analyses of Pesticides (some prioritized active ingredients) 3) Operation and maintenance of laboratory equipment <p>3-1 Review the present administrative documents and regulations for chemical fertilizers and pesticides.</p> <p>3-2 Exchange views on regulations related to Standard Requirement for registration and post-registration of chemical fertilizers and pesticides with relevant departments in MAFF and other key stakeholders.</p> <p>3-3 Provide recommendations for the new Regulation through the collaborative efforts with relevant authorities including other donors.</p> <p>4-1 Develop materials for public awareness raising such as pamphlet, posters, and audio visual media.</p> <p>4-2 Develop materials for retailers on proper selection and use of chemical fertilizers and pesticides.</p> <p>4-3 Conduct awareness raising activities for public.</p> <p>4-4 Conduct awareness raising activities for retailers. (Activities include collaboration with FAO through sharing materials developed under 4-2.)</p>	<p>Inputs</p> <p>1. Cambodian side</p> <ol style="list-style-type: none"> 1) Counterpart personnel (C/Ps): thirty two(32) staff. <ul style="list-style-type: none"> - Co-project managers: from DAL and GDA - Ten (10) DAL staff and twenty (20) GDA staff Assistants of co-project manager, 4 members 2) Office space (DAL and GDA) and facilities (in kind) 3) Local expenses – cost for electricity, water, and other available miscellaneous <p>2. Japanese side</p> <ol style="list-style-type: none"> 1) Dispatch of Experts <ul style="list-style-type: none"> - Cost for the Philippines short-term experts - Japanese long-term experts: (1) one chief advisor and (2) one expert on baseline survey and awareness raising/coordinator 2) Provision of equipment/facilities 3) Cost for Trainings in the 3rd countries including the Philippines 4) Project activity cost <p>3. Philippines side</p> <ol style="list-style-type: none"> 1) Nomination of short-term experts <ul style="list-style-type: none"> - Short-term experts in the fields of chemical fertilizers analyses, pesticide formulation analyses, and administration work of chemical fertilizers and pesticides. 2) Trainings in the Philippines

Preconditions

1. There are no major changes in personnel and human resources for laboratory management.
2. The existing equipment/facilities is properly functioning.

Annex 6 List of Modifications in PDM

Version 1: 30 January 2009	Version 2: 30 April 2010	Reason of Modifications
<p>Target Group <u>Direct beneficiary</u> DAL and GDA staff within MAFF</p> <p><u>Indirect beneficiary</u> Traders* dealing with chemical fertilizers and pesticides, and farmers using those chemicals in the pilot area(s) in Cambodia (*Traders include importers, distributors and retailers)</p>	<p>Target Group <u>Beneficiary</u> (1) DAL and GDA staff of the MAFF (2) PDA staff of the MAFF in the pilot area (3) Retailers dealing with chemical fertilizers and pesticides in pilot area (4) Farmers using the chemical fertilizers and pesticides in pilot area</p>	<p>(1) There is no need to divide the beneficiary into two groups. (2) PDA staff in the pilot area plays an important direct role to deliver services to retailers and farmers. (3) Farmers heavily rely on retailers for their selection and usage of chemical fertilizers and pesticides. Thus it is more effective and efficient to focus on the retailers than importers and distributors.</p>
<p>Super Goal Food safety for domestic consumption and export promotion is improved.</p>	<p>Super Goal Deleted</p>	<p>The Super Goal set in the initial PDM "Food safety for domestic consumption and export promotion is improved." can be deleted, since the Project does not directly cover Sanitary and Phytosanitary (SPS) issues which is essential component to secure food safety.</p>
<p>Indicators Agricultural products as food are safe and the quality is ensured.</p>	<p>Indicators Deleted</p>	<p>No Super Goal</p>

Version 1: 30 January 2009	Version 2: 30 April 2010	Reason of Modifications
<p>Overall Goal Quality of chemical fertilizers and pesticides in domestic market is improved and proper usage of the materials by farmers nationwide is expanded.</p> <p>Indicators</p> <ol style="list-style-type: none"> 1. The share (%) of registered chemical fertilizers is increased by X % per annum in Cambodia. 2. The share (%) of registered pesticides is increased by X % per annum in Cambodia. 3. The share (%) of chemical fertilizers and pesticides in market labeled in Khmer language is increased in Cambodia. 4. The income from registration and service charge is increased. 	<p>Overall Goal Proper usage and quality control of chemical fertilizers and pesticides is enhanced in Kandal and neighboring provinces.</p> <p>Indicators</p> <ol style="list-style-type: none"> (1) Distribution of registered chemical fertilizers and pesticides with Khmer label are increased. (2) No retailers sell banned pesticides. 	<p>This change is based on the modifications of the Project Purpose.</p> <p>Indicators are modified to properly elaborate improved Overall Goal.</p>

Version 1: 30 January 2009	Version 2: 30 April 2010	Reason of Modifications
<p>Project Purpose Mechanism for quality control of chemical fertilizers and pesticides is strengthened.</p>	<p>Project Purpose Proper usage and quality control of chemical fertilizers and pesticides is enhanced in pilot area.</p>	<p>The current situation at the field level shows significant number of illegal trades and very few registered products at markets, which discouraged traders to get their products registered. Based on this fact, the team anticipates that the share of registered chemical fertilizers and pesticides may remain low regardless the increase in the number of the registered products.</p> <p>The lack of Khmer-labeled products and misuse expose farmers and society to the risk in human health, environmental degradation and low agricultural productivity.</p> <p>The Project and mid-term review team chanced upon an opportunity for possible collaboration with FAO project for some project activities such as regulation and inspection.</p> <p>Thus, following are concluded;</p> <p>(1) Necessity of prioritizing activities in the field on the usage of chemical fertilizers and pesticides based on observation of the field.</p> <p>(2) Mechanism to ensure the quality control nationwide requires external conditions such as approval and enforcement of law and relevant regulations.</p>

<p>Indicators</p> <ol style="list-style-type: none"> The share (%) of registered chemical fertilizers is increased by X % per annum in the pilot area(s). The share (%) of registered pesticides is increased by X % per annum in the pilot area(s). Number of analytical works done for inspections is increased. The share (%) of chemical fertilizers and pesticides in market labeled in Khmer language is increased in the pilot area(s). 	<p>Indicators</p> <ol style="list-style-type: none"> Two thirds of licensed retailers in pilot area utilize the following materials provided by the project on their sales in order to secure proper selection and usage of chemical fertilizers and pesticides; <ol style="list-style-type: none"> Khmer labels on pesticides Reference materials on proper selection and usage of chemical fertilizers and pesticides. Number of licensed retailers who do not sell banned pesticides is doubled in pilot area. 	<p>Increase of the shares of the registered chemical fertilizers and pesticides does not properly reflect the enhancement of proper usage and quality control.</p>
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Version 1: 30 January 2009	Version 2: 30 April 2010	Reason of Modifications
<p>Activities of Output 2</p> <ol style="list-style-type: none"> Set up of laboratories for analyses of chemical fertilizers and pesticides. Carry out trainings in the 3rd country and/or On-the-Job-Trainings (OJT) for the laboratory staff to analyze chemical fertilizers and pesticides. Develop manuals for analyses of: <ol style="list-style-type: none"> Chemical fertilizers (N, P, K and some other elements) Pesticides (some prioritized active ingredients) <p>Indicators of Output 2</p> <ol style="list-style-type: none"> All the necessary equipment/facilities are properly installed. X of laboratory staff analyze Nitrogen, Phosphorus, Potassium (N, P, K) and some other elements. X of laboratory staff analyze pesticides 	<p>Activities of Output 2</p> <ol style="list-style-type: none"> Set up of laboratories for analyses of chemical fertilizers and pesticides. Carry out On-the-Job-Trainings (OJT) and/or training in the Philippines for the laboratory staff to analyze chemical fertilizers and pesticides. Analyze the quality of samples for chemical fertilizers and pesticides collected in pilot area (results are shared through awareness raising activities under Output4) Develop manuals for: <ol style="list-style-type: none"> Analyses of Chemical fertilizers (N, P, K and some other elements) Analyses of Pesticides (some prioritized active ingredients) Operation and maintenance of laboratory equipment <p>Indicators of Output 2</p>	<ol style="list-style-type: none"> To reflect the improvement of organizational capability as a whole, analytical capability building of the laboratories and development of manuals and reports have been added in the activities and indicators. To ensure the proper linkage between laboratory works and field level activities through sampling and analysis, activities and indicators are added accordingly. Prioritized active ingredients identified in the baseline survey result are used as indicators.

<p>formulation for some prioritized active ingredients.</p>	<p>2-1 Laboratory equipment/ facilities are properly set up and functioning. 2-2 Fertilizer laboratory in the DAL and the GDA can analyze N, P, K and other elements (Fe, Mn, Zn, Cu, Ca, Mg). 2-3 Pesticide laboratory can analyze at least 60% of 24 prioritized active ingredients. 2-4 Manuals for analyses of N, P, K and other elements (Fe, Mn, Zn, Cu, Ca, Mg) for chemical fertilizers and at least 60% of 24 prioritized active ingredients for pesticides are developed. 2-5 Manuals for operation and maintenance for laboratory equipment are developed. 2-6 Analytical reports of samples collected by inspectors from licensed retailers are developed (to be shared among stakeholders).</p>	
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Version 1: 30 January 2009	Version 2: 30 April 2010	Reason of Modifications
<p>Output 3 Quality Standards for chemical fertilizers and pesticides are approved by MAFF and disseminated.</p>	<p>Output 3 Development of Regulation related to Standard Requirement for registration and post-registration of chemical fertilizers and pesticides is facilitated with the expectation of having the 1st draft.</p>	<p>(1) To streamline the expression and clearly reflect wide range and nature of support of Outputs 3,4 and 5 which cover development of regulation for registration and post registration.</p>
<p>Output 4 Capacity for administration works related to Registration and Licensing is improved.</p>		<p>(2) To harmonize the project activities with FAO activities in Kandal province.</p>
<p>Output 5 Capacity for Post-registration works is improved in the pilot area(s)</p>		

<p>Activities</p> <p>3-1 Collect related information on quality standards for each chemical fertilizers and pesticides.</p> <p>3-2 Prepare draft Quality Standards for chemical fertilizers and pesticides.</p> <p>3-3 Hold consultation within MAFF and relevant stakeholders to discuss suitable draft Quality Standards for chemical fertilizers and pesticides in Cambodia.</p> <p>3-4 Officially adopt Quality Standards for chemical fertilizers and pesticides.</p> <p>3-5 Carry out activities for disseminating the Quality Standards to MAFF officials and traders.</p>	<p>Activities</p> <p>3-1 Review the present administrative documents and regulations for chemical fertilizers and pesticides.</p> <p>3-2 Exchange views on regulations related to Standard Requirement for registration and post-registration of chemical fertilizers and pesticides with relevant departments in MAFF and other key stakeholders.</p> <p>3-3 Provide recommendations for the new Regulation through the collaborative efforts with relevant authorities including other donors.</p>	<p>Previous activities and indicators involve external factors beyond control of the project such as approval and adoption of Quality Standards and regulation by MAFF.</p> <p>Strict enforcement of inspection activities can not be conducted before the adoption of regulation. Thus, in this Output, previous indicators stated are deemed inappropriate.</p> <p>However, Project remains committed to contribute in the process of development by providing policy options which complements the current initiatives of DAL to draft the regulation.</p>
<p>4-1 Review the present administrative procedures for Registration and Licensing of chemical fertilizers and pesticides and the present regulations for service charge.</p> <p>4-2 Clarify potentials for further improvement in the administrative works for Registration and Licensing.</p> <p>4-3 Conduct series of testing for improving the administrative works to know the effectiveness.</p> <p>4-4 Take necessary procedures to institutionalize the new procedures based on the suggestions obtained through the testing.</p> <p>5-1 Carry out OJT for the inspectors for proper inspection.</p> <p>5-2 Clarify potentials for further improvement in the administrative works</p>	<p>Indicators</p> <p>3-1 Policy option(s) related to registration and post-registration of chemical fertilizers and pesticides is provided.</p>	

for inspection.

5-3 Conduct series of testing of inspections based on the Quality Standards and the skills and knowledge obtained through the OJT in the pilot area(s).

5-4 Take necessary procedures to institutionalize the new procedures based on the suggestions obtained through the testing.

5-5 Develop a manual for inspection and monitoring, including methods of sampling.

Indicators

3-1 Quality Standards for chemical fertilizers and pesticides are approved by MAFF in the middle of the Project.

3-2 Quality Standards for chemical fertilizers and pesticides are disseminated to PDA (Agronomy Office and PALO) staff, and traders in the pilot area(s) before the end of the Project.

4-1 Regulation for service charge is officially adopted.

4-2 The registration and licensing procedures are simplified.

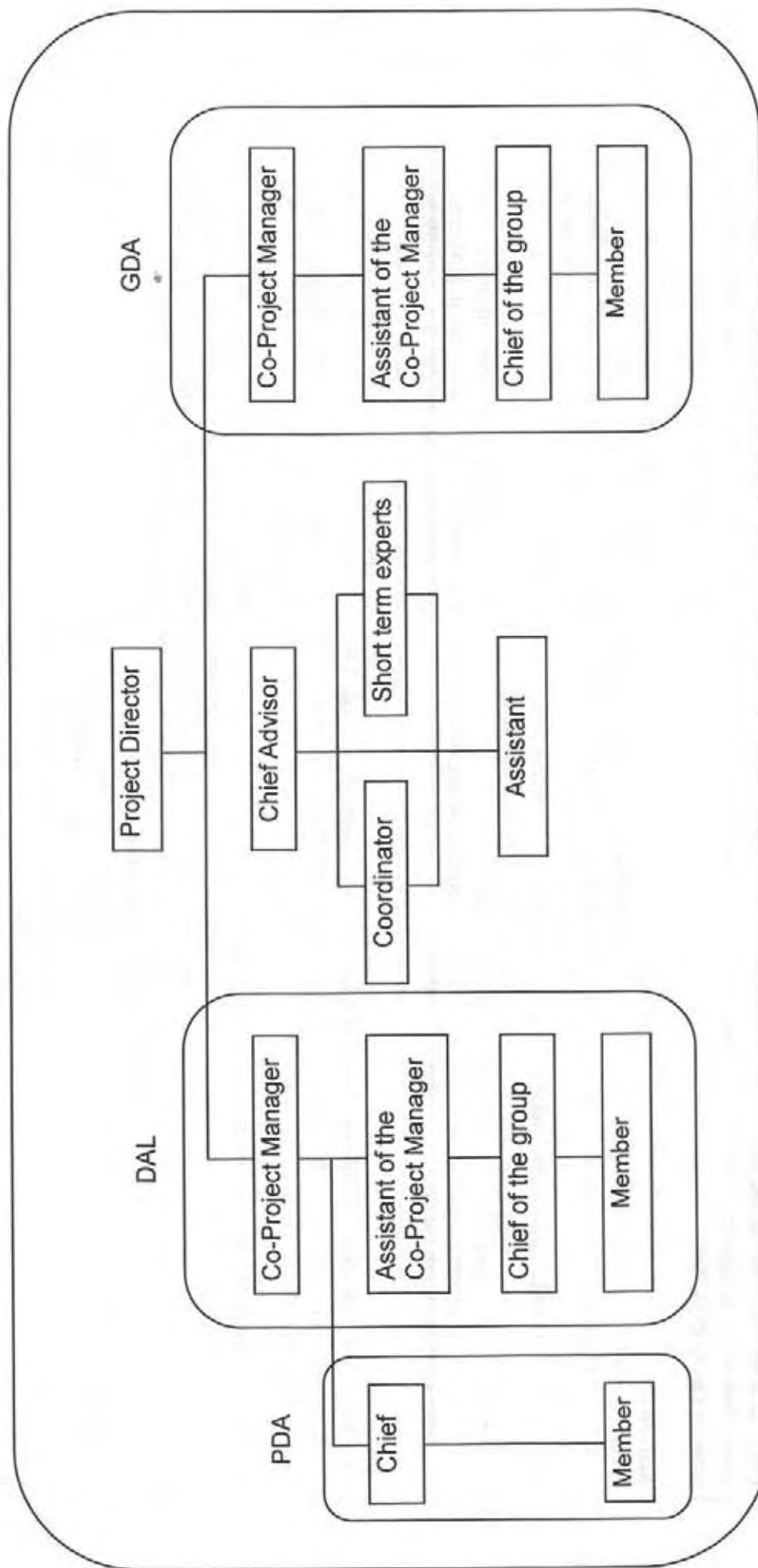
5-1 Inspectors are capable to inspect and monitor traders in the pilot area(s).

5-2 Inspectors are capable to conduct sampling following the procedures written in the manual.

5-3 Post-registration procedures are simplified.

Version 1: 30 January 2009	Version 2: 30 April 2010	Reason of Modifications
<p>Output 6 Public awareness is raised on the quality and appropriate usage of chemical fertilizers and pesticides in the pilot area(s).</p> <p>Activities 6-1 Develop kits for public awareness raising, e.g. TV advertisement, pamphlet, posters, and the like. 6-2 Conduct public awareness raising activities on the quality of chemical fertilizers and pesticides with the developed materials/programs for TV and/or radio in the pilot area(s).</p> <p>Indicators 6-1 Registered chemical fertilizers and pesticides are increased in specific market(s) in the pilot area(s). 6-2 Farmers who use registered chemical fertilizers and pesticides are increased in the pilot area(s).</p>	<p>Output 4 Awareness is raised on proper usage and quality of chemical fertilizers and pesticides.</p> <p>Activities 4-1 Develop materials for public awareness raising such as pamphlet, posters, and audio visual media. 4-2 Develop materials for retailers on proper selection and use of chemical fertilizers and pesticides. 4-3 Conduct awareness raising activities for public. 4-4 Conduct awareness raising activities for retailers. (Activities include collaboration with FAO through sharing materials developed under 4-2.)</p> <p>Indicators 4-1 At least each type of materials; pamphlet, posters, and audio visual media is developed and disseminated for public awareness activities. 4-2 Khmer labels and reference materials on selection and usage of pesticides are distributed to all of the licensed retailers in pilot area. Reference materials on selection and usage of chemical fertilizers are distributed to all of the licensed retailers in pilot area.</p>	<p>The word "public" is deleted, because the awareness works target not only farmers but government staff and retailers as well.</p> <p>The current situation at the field level shows significant number of illegal trades and very few registered products at markets, which discouraged traders to get their products registered.</p> <p>Based on this fact, the team anticipates that the share of registered chemical fertilizers and pesticides may remain low regardless the increase in the number of the registered products.</p> <p>Therefore, there is a need to put more emphasis on activities in the field on the usage of chemical fertilizers and pesticides based on observation of the field. Accordingly, the previous indicators referring to the number of registered products are deemed inappropriate.</p>

Annex 7 Project Organization Chart



Annex 8 List of Cambodian Counterparts

(1) Director and Co-managers of the Project :

No.	Name	Position in the MAFF	Position in the Project
1	H.E. San Vanty	Under secretary of state	Project director
2	Mr. So Khon Rithykun	Deputy direct-general, GDA	Co-project manager
3	Mr. Ouk Syphan	Director, DAL	Co-project manager
4	Mr. Hean Vanhan	Deputy direct-general, GDA	Assistant of co-project manager stationed in the project
5	Mrs. Oung Vannary	Chief , NAL	Assistant of co-project manager in charge of the operation group
6	Mr. Phum Ra	Deputy Director, DAL	Assistant of co-project manager stationed in the project
7	Mr. Chea Chanveasna	Deputy Director, DAL	Assistant of co-project manager in charge of the operation group

(2) Project Operation Group of the DAL :

No.	Name	Position in the MAFF	Position in the Project
1	Mr. Sok Sarou	Vice Chief, BAMS	Chief of the group of legislative procedure and inspection
2	Mr. Be Seakmeng	Vice Chief, BAMS	Chief of the laboratory Group
3	Mr. Sieng Sinn	Vice Chief, Legislation and Law Extension Office	Member of the group of legislative procedure and inspection
No.	Name	Position in the MAFF	Position in the Project
4	Mr. Heng Bora	Vice Chief, Administration Office	Member of the group of legislative procedure and inspection
5	Mr. Yang Sokheng	Vice Chief, Legislation and Law Extension Office	Member of the group of legislative procedure and inspection
6	Mr. Kong Sarin	Vice Chief, Litigation and Investigation Office	Member of the laboratory group
7	Mr. Ros Pan	Staff, BAMS	Member of the laboratory group
8	Mr. Pen Chea	Staff, BAMS	Member of the laboratory group

(3) Project Operation Group of the GDA :

No.	Name	Position in the MAFF	Position in the Project
1	Mr. Pheav Chintheng	Vice Chief, NAL	Chief of the group of the National Laboratory of Agriculture
2	Mr. Hong Puthea	Vice Chief, NAL	Member
3	Mr. Hong Sieng	Vice Chief, NAL	Member
4	Mr. Phon Sothea	Vice Chief, NAL	Member

5	Mr. Koe Vy	Staff, NAL	Member
6	Mrs. Koe Sothary	Staff, NAL	Member
7	Mr. Chea Vutha	Staff, NAL	Member
8	Mrs. Am Meta	Staff, NAL	Member
9	Mr. Lorn Socheata	Staff, NAL	Member
10	Mr. Meas Poev	Staff, NAL	Member
11	Mrs. Lim Piyana	Staff, NAL	Member
12	Mrs. Ty Sotheary	Staff, NAL	Member
13	Mrs. Huor Kimsieng	Staff, NAL	Member
14	Mrs. Chhon La	Staff, NAL	Member
15	Mr. Tean Sithon	Staff, NAL	Member
16	Mr. Vorn Sign	Staff, NAL	Member
17	Miss. Srey Sorphea	Staff, NAL	Member
18	Miss. Pheng Ravy	Staff, NAL	Member

(4) Operation Group of Target Provinces: Kandal Province:

No.	Name	Position in the MAFF	Position in the Project
1	Mr. Buntuon Simona	Director, PDA Kandal	Chief
2	Mr. San Voern	Vice Chief, Legislation Office	Member

Annex 9 Dispatch of Experts

Name	Type	Area	Duration	2009			2010	
				4-6	7-9	10-12	1-3	4-6
Dr. Kazuhiko Yagi	long	Chief advisor	4/1/2010-3/31/2012					↕
Mr. Toshinori Hamaguchi	long	Project management including baseline surveys and awareness raising activities	4/27/2009-4/26/2011	↕				↕
Dr. Wilma N. Oboemae	short	Fertilizer quality standard analysis	4/21/2009-5/1/2009	↕				
Ms. Maria Lourdes De Mata	short	Pesticide formulation analysis	4/21/2009-5/1/2009	↕				
Ms. Edna Lynn C. Floresca	short	Analysis of chemical fertilizers	(1) 8/2/2009-12/24/2009 (2) 2/14/2010-7/13/2010		↕	↕		↕
Ms. Ma. Esperanza De Guzman Uy	short	Pesticide formulation analysis	(1) 8/2/2009-12/24/2009 (2) 2/14/2010-7/13/2010		↕	↕		↕
Prof. Frank C. Comejo	short	Review of administrative work related to registration and licensing of chemical fertilizers and pesticides as well as adoption of quality standards for chemical fertilizers and pesticides	10/15/2009-12/15/2009			↕		

Annex 10 Local Activity Cost for the Project 2009

(US\$)

General Cost	18,114.80
Airfare	433
Travel Cost (except air fair)	3,734.15
Allowance, Rewards	5,757.89
Conference Expenses	57.5
Contract	0
Total	28,097.34

Annex 11-1 Provision of Technical Equipment (for DAL)

Laboratory of Chemical Fertilizers in the DAL

No	Date of Arrival	Name of Equipment	Maker	Description	Model	R/P	QTY	Price US\$		Place of Storage	Frequency of USE	Condition	Remarks
								Unit	Total				
Lot A: Equipment													
1	04/Mar/2010	Blower assembly	Perkin Elmer/UK	Blower Assy		PCS	2	1515.00	3030.00	DAL	A	A	
2	04/Mar/2010	Exhaust hood	Perkin Elmer/UK	No		PCS	2	598.00	1196.00	DAL	A	A	
3	04/Mar/2010	pH meter	JKA/Germany	pH Minmeter, Coesit with : 827 pH Lab Meter including Primatrode, Combined pH Glass electrode with NTC Temperature sensor		Set	1	1099.00	1099.00	DAL	C	A	
4	15/Mar/2010	Flat plate	JKA/Germany	C-MAG HS10		Set	2	1012.00	2024.00	DAL	A	A	
5	04/Mar/2010	Laboratory cart	Design Alternative/ Thailand	Trolleys		Unit	1	1986.00	1986.00	DAL	A	A	
6	04/Mar/2010	Flexible tube	Perkin Elmer/UK	OD 4 Inches for Hood		PCS	2	324.00	648.00	DAL	A	A	
7	15/Mar/2010	Vortex mixer	Scientific Industries/USA	Vortex-gene 2 mixer		Unit	1	643.00	643.00	DAL	A	A	
								Sub Total A	10626.00				
Lot B: Spareparts													
1	04/Mar/2010	Single Element Hollow Cathode Lamps for Mn, (AAS spars part)	Perkin Elmer/UK	Mn Lumina HCl, HCl Lamp for AAAnalyst200		PCS	1	751.00	751.00	DAL	B	A	
2	04/Mar/2010	Single Element Hollow Cathode Lamps for Ca, (AAS spars part)	Perkin Elmer/UK	Ca Lumina HCl, HCl Lamp for AAAnalyst200		PCS	1	751.00	751.00	DAL	B	A	
3	04/Mar/2010	Nebulizer Assembly	Perkin Elmer/UK	AA 200/400 Nebulizer kit		PCS	2	578.00	1156.00	DAL	A	A	
4	04/Mar/2010	Flash back arrestor	Alpha (Cenco)/USA	Flash back arrestor for Acetylene gas line, bronze		PCS	1	180.00	180.00	DAL	A	A	
								Sub Total B	2838.00				
Lot C: Lab. Apparatus/Glasswares													
1	05/Mar/2010	Mortar and Pestle	Wagtech/CE	Porcelain, diameter 160mm		EA	1	25.92	25.92	DAL	A	A	
2	15/Mar/2010	Stirring rod	BSP/Thailand	Stirring rod, glass 12 inches in length		PCS	10	5.00	50.00	DAL	A	A	
3	04/Mar/2010	Tongs	Usbeck/Germany	Tongs, Strainless steel, 30cm length		PCS	2	60.00	120.00	DAL	A	A	
4	15/Mar/2010	Weighting Boat	Kartell/Germany	Weighting Boat, square shapes, 78.5x78.5 x 23, 100ml/pkg of		PKg	1	274.00	274.00	DAL	A	A	
5	15/Mar/2010	Pipette bulb	Kartell/Germany	Pipetter filler with adapter three glasses ball valve		PCS	2	69.00	138.00	DAL	A	A	
6	05/Mar/2010	Laboratory goggles	Wagtech/CE	Laboratory Safey Goggles Soft PVC frame with adjustable headl		EA	5	41.46	207.30	DAL	A	A	
								Sub Total C	815.22				

Lot D: Chemicals & Consumables												
1	15/Mar/2010	Bromocresol green	Merck/Germany	BROMOCRESOL GREEN INDICATOR ACS. REAG.PH EUR, 25g	Btl	1	667.00	667.00	DAL	C	A	
2	15/Mar/2010	Copper sulfate tetrahydrate	Merck/Germany	COPPER(II) SULFATE PENTAHYDRATE GR FOR ANALYSIS ACS.	Btl	1	119.00	119.00	DAL	A	A	
3	15/Mar/2010	Filter Paper	Albet/Spain	Filter paper, slow, dia. 150mm, box of 100	Box	3	43.00	129.00	DAL	A	A	
4	15/Mar/2010	Lanthanum oxide	Merck/Germany	LANTHANUM(III) OXIDE LAB, 100g	Btl	0.5	242.00	121.00	DAL	B	A	
5	15/Mar/2010	Potassium sulfate	Merck/Germany	POTASSIUM SULFATE GR FOR ANALYSIS ACS, ISO, REAG, PH EUR, 1Kg	Btl	1	142.00	142.00	DAL	A	A	
6	15/Mar/2010	Salicylic Acid	Merck/Germany	SALICYLIC ACID EXTRA PURE PH EUR, BP USP, 1Kg	Btl	0.5	265.00	132.50	DAL	B	A	
7	15/Mar/2010	Selenium or selenium dioxide	Merck/Germany	SELENIUM DIOXIDE (SUBLIMED) FOR SYNTHESIS, 50g	Btl	1	120.00	120.00	DAL	B	A	
8	15/Mar/2010	Sodium Thiosulfate Pentahydrate	Merck/Germany	SODIUM THIOSULFATE PENTAHYDRATE GR FOR ANALYSIS ACS, ISO, REAG, PH EUR, 500g	Btl	1	88.00	88.00	DAL	A	A	
9	15/Mar/2010	Spillage Absorption granules	Merck/Germany	CHEMIZORB GRANULES ABSORBENT FOR SPILLED LIQUIDS.	Btl	1	121.00	121.00	DAL	C	A	
10	15/Mar/2010	Standard solutions, 1000 ppm: Mn	Merck/Germany	MANGANESE STANDARD SOLUTION TRACEABLE TO SRM FROM NIST MN/NO32 IN HNO3 0.5 MOL/L 1000MG/L MN CERIPUR, 100ml	Btl	5	62.00	310.00	DAL	B	A	
								1949.50				
Sub Total D								16228.72				
Total												

Annex 11-2 Provision of Technical Equipment (for GDA fertilizer laboratory)

Laboratory of Chemical Fertilizers in the GDA

No	Date of Arrival	Description				QTY	Price US\$		Place of Storage	Frequency of USE	Condition	Remarks
		Name of Equipment	Maker	Model	R/P		Unit	Total				
Lot A: Equipment												
1	29/Sep/2009	Distillation Unit in the Kjeldahl distribution set-up for total Nitrogen (N)	Selecta/CE	Steam distillation unit Kjeldahl "Pro-Nitro M"	L	1	7866.00	7866.00	GDA cf	A		
2	29/Sep/2009	Water recirculation vacuum unit in the Kjeldahl distribution set-up for total Nitrogen (N)	Selecta/CE	Water recirculation vacuum unit in the Kjeldahl distribution set-up for total Nitrogen (N)	L	1	1935.38	1935.38	GDA cf	A		
3	28/Sep/2009	Air compressor for flame photometer	Wagtech/CE	Corning 410	L	1	3521.96	3521.96	GDA cf	A		
4	04/Mar/2010	Blower assembly	Perkin Elmer/UK	Blower Assy	PCS	1	1515.00	1515.00	GDA cf	A		
5	04/Mar/2010	Analytical Balance	Sartorius/Germany	Analytical Balance-Extend series Model : ED2245	Unit	1	2575.00	2575.00	GDA cf	A		
6	04/Mar/2010	Exhaust hood	Perkin Elmer/UK	No	PCS	1	598.00	598.00	GDA cf	A		
7	04/Mar/2010	Flexible tube	Perkin Elmer/UK	OD 4 inches for Hood	PCS	1	324.00	324.00	GDA cf	A		
8	15/Mar/2010	Vortex mixer	Scientific Industries/USA	Vortex-genie 2 mixer	Unit	1	843.00	843.00	GDA cf	A		
9	13/Mar/2010	Sonibber unit	Selecta/CE	No	EA	1	1897.82	1897.82	GDA cf	A		
Sub Total A								20876.16				
Lot B: Lab. Apparatus/Glasswares												
1	05/Mar/2010	Weighing Boat	Wagtech/CE	Weighing Boat, standard, square, small weight	PK	1	150.00	150.00	GDA cf	A		
2	05/Mar/2010	Vol Flask	Duran/Germany	Class A, MBL 25ml	PCS	25	51.00	1275.00	GDA cf	A		
3	05/Mar/2010	Buret	Brand/Germany	Buret to ISO 385 PTFe, Stopcock, Soda-lime glass with straight bore, 50ml	EA	1	51.74	51.74	GDA cf	A		
4	05/Mar/2010	Mortar and Pestle	Wagtech/CE	Porcelain, diameter 160mm	EA	1	25.92	25.92	GDA cf	A		
5	15/Mar/2010	Beaker, glass	Duran/Germany	Beaker, glass, 50ml	PCS	10	3.00	30.00	GDA cf	C		
6	15/Mar/2010	Stirring rod	BSP/Thailand	Stirring rod, glass 12 inches in length	PCS	10	5.00	50.00	GDA cf	A		
7	15/Mar/2010	Graduated Cylinder	Brand/Germany	Cylinder tall form, Class B, 500ml	PCS	2	50.00	100.00	GDA cf	A		
8	15/Mar/2010	Graduated Pipette	Brand/Germany	Class B, 1ml	PCS	10	14.00	140.00	GDA cf	A		
9	15/Mar/2010	Graduated Pipette	Brand/Germany	Class B, 10ml	PCS	10	14.00	140.00	GDA cf	A		
10	15/Mar/2010	Erlenmeyer flask	Duran/Germany	N/Neck 500ml	PCS	30	10.00	300.00	GDA cf	A		
11	04/Mar/2010	Tongs	Usbeck/Germany	Tongs, Stainless steel, 30cm length	PCS	2	60.00	120.00	GDA cf	A		
12	15/Mar/2010	Pipetta bulb	Kartell/Italy	Pipette filler with adapter three glass ball valve	PCS	3	69.00	207.00	GDA cf	A		
Sub Total B								2589.86				
Lot C: Chemicals & Consumables												
1	23/Sep/2009	Methyl red indicator	Merck/Germany	Methyl red (C.I.13020) indicator ACS	L	1	82.00	82.00	GDA cf	C		
2	23/Sep/2009	Magnesium Oxide (MgO)	Merck/Germany	Magnesium oxide (max.0.001% SO4) GR ACS, 100g/btl	L	1	303.00	303.00	GDA cf	C		
3	15/Mar/2010	Ammonium molybdate tetrahydrate	Merck/Germany	AMMONIUM HEPTAMOLYBDATE TETRAHYDRATE GR FOR ANALYSIS 100g	Btl	1	350.00	350.00	GDA cf	A		
4	15/Mar/2010	Ammonium monovanadate	Merck/Germany	AMMONIUM MONOVANADATE GR FOR ANALYSIS REAG.PH EUR, 250g	Btl	1	323.00	323.00	GDA cf	A		
5	15/Mar/2010	Boric acid	Merck/Germany	BORIC ACID GR FOR ANALYSIS ACS, ISO, REAG. PH, 500g	Btl	1	186.00	186.00	GDA cf	A		
6	15/Mar/2010	Bromocresol green	Merck/Germany	BROMOCRESOL GREEN INDICATOR ACS, REAG. PH EUR, 25g	Btl	1	667.00	667.00	GDA cf	C		
7	15/Mar/2010	Buffer solution pH 4	Merck/Germany	BUFFER SOLUTION, TRACEABLE TO SRM FROM NIST AND PTB PH 4.00 (20 GRAD	Btl	1	102.00	102.00	GDA cf	C		
8	15/Mar/2010	Buffer solution pH 7	Merck/Germany	BUFFER SOLUTION, TRACEABLE TO SRM FROM NIST AND PTB PH 7.00 (20 GRAD	Btl	1	102.00	102.00	GDA cf	C		
9	15/Mar/2010	Copper sulfate tetrahydrate	Merck/Germany	COPPER(II) SULFATE PENTAHYDRATE GR FOR ANALYSIS ACS, ISO, REAG. PH EUR,	Btl	1	119.00	119.00	GDA cf	A		
10	15/Mar/2010	Ethanol 96%	Merck/Germany	ETHANOL 96% SUITABLE FOR USE AS EXCIPIENT EMRPOVE EXP PHEUR, BP,	Btl	1	80.00	80.00	GDA cf	C		
11	15/Mar/2010	Filter Paper	Albet/Spain	Filter paper, slow, dia, 150mm, box of 100	Box	3	43.00	129.00	GDA cf	A		
12	04/Mar/2010	Hydrochloric Acid 37%	Merck/Germany	HYDROCHLORIC ACID FUMIN 37% GR FOR ANALYSIS ACS, ISO, REAG. PH EUR, 2.5L	Btl	3	125.00	375.00	GDA cf	A		
13	15/Mar/2010	Lanthanum oxide	Merck/Germany	LANTHANUM(III) OXIDE LAB, 100g	Btl	0.5	242.00	121.00	GDA cf	B		
14	04/Mar/2010	Nitric Acid	Sigma-Aldrich/Germany	Nitric acid 65% GR ISO, 2.5L	Btl	1	207.00	207.00	GDA cf	A		
15	15/Mar/2010	Potassium dihydrogen phosphate	Merck/Germany	POTASSIUM DIHYDROGEN PHOSPHATE GR	Btl	2	110.00	220.00	GDA cf	A		
16	15/Mar/2010	Potassium sulfate	Merck/Germany	POTASSIUM SULFATE GR FOR ANALYSIS ACS, ISO, REAG. PH EUR, 1Kg	Btl	1	142.00	142.00	GDA cf	A		
17	15/Mar/2010	Salicylic Acid	Merck/Germany	SALICYLIC ACID EXTRA PURE PH EUR, BP	Btl	0.5	265.00	132.50	GDA cf	B		
18	15/Mar/2010	Selenium or selenium dioxide	Merck/Germany	SELENIUM DIOXIDE (SUBLIMED) FOR SYNTHESIS, 50g	Btl	1	120.00	120.00	GDA cf	B		
19	15/Mar/2010	Sodium hydroxide	Merck/Germany	SODIUM HYDROXIDE PELLETS GR FOR ANALYSIS ISO, 1Kg	B	5	59.00	295.00	GDA cf	A		
20	15/Mar/2010	Sodium Thiosulfate Pentahydrate	Merck/Germany	SODIUM THIOSULFATE PENTAHYDRATE GR FOR ANALYSIS ACS, ISO, REAG.PH EUR, 500g	Btl	1	88.00	88.00	GDA cf	A		
21	15/Mar/2010	Spillage Absorption granules	Merck/Germany	CHEMIZORB GRANULES ABSORBENT FOR	I	1	121.00	121.00	GDA cf	C		
22	15/Mar/2010	Standard solutions, 1000 ppm: K	Merck/Germany	POTASSIUM STANDARD SOLUTION TRACEABLE TO SRM FROM NIST KNO3 IN HNO3 0.5 MOL/L 1000 MG/L NA CERTIPUR, 100ML	Btl	5	62.00	310.00	GDA cf	A		
23	15/Mar/2010	Standard solutions, 1000 ppm: Na	Merck/Germany	SODIUM STANDARD SOLUTION TRACEABLE TO SRM FROM NIST KNO3 IN HNO3 0.5 MOL/L 1000 MG/L NA CERTIPUR, 100ML	Btl	5	62.00	310.00	GDA cf	A		
24	04/Mar/2010	Sulfuric Acid	Merck/Germany	SULFURIC ACIDE 95-97% GR FOR ANALYSIS ISO, 2.5L	Btl	5	94.71	473.55	GDA cf	A		
Sub Total C								5368.05				
Total								28633.87				

Annex 11-3 Provision of Technical Equipment (for GDA pesticide laboratory)

Laboratory of Pesticides in the GDA

No	Date of Arrival	Description			QTY	Price US\$	
		Name of Equipment	Maker	Model		R/P	Unit
Lot A: Equipment							
1	15/Mar/2010	Ultrasonic Bath	Branson/USA	B3510E-MTH include Cover	Set	1	1885.00
2	15/Mar/2010	Heating Mantle	Lab Heat/Germany	KH-ME for round-bottom flask 250ml	PCS	1	692.00
3	04/Mar/2010	Analytical Balance	Sartorius/Germany	Analytical Balance-Extend series Model: ED224S	Unit	1	2575.00
4	15/Mar/2010	Water still	Wagtech/CE	Water Still, Merit, W4000	EA	1	2775.86
5	15/Mar/2010	Centrifuge Machine	Hettich/Germany	Bench top centrifuge, model: EBA20	Unit	1	1324.00
6	15/Mar/2010	Draining Rack	Kartell/Italy	Draining Rack, PS, 72 Pegs	PCS	3	137.00
7	04/Mar/2010	pH meter	Metrohm/Switzerland	pH Mmeter, consist with: 827 pH Lab Meter including Primatrode, Combined pH Glass electrode with NTC Temperature sensor	Set	1	1099.00
8	15/Mar/2010	Laboratory oven	Memmert/Germany	Oven Electronic PID Temperature controller With Integral auto-diagnostic system	Unit	1	2414.00
Sub Total A							
Lot B: Spareparts							
1	05/Mar/2010	GC Column	Thermo Fisher/CE	Trace TR-1GC Column: 0.32mm x 0.25 μm x 30m	EA	2	1446.00
2	26/Mar/2010	SAX column for HPLC	No	SAX Column, 10μm, 240 x 4.6mm	EA	1	0.00
Sub Total B							
Lot C: Lab. Apparatus/Glasswares							
1	28/Sep/2009	Syringe Type Filter Holder	Wagtech/CE	Membrane Holder, syringe filter type stainless steel, 13mm, luer lock	L	6	282.53
2	28/Sep/2009	Glass Syringe	Wagtech/CE	Glass syringe, glass tip, luer type 20ml	L	6	17.41
3	05/Mar/2010	Solvent Filtration Apparatus	Wagtech/CE	Solvent clarification kit: Funnel Vacuum Base	EA	1	1442.57
4	15/Mar/2010	Gas Wash Bottle with Bottle heads	Lenz/Germany	Gas Washbottles to d Dreohsed without filter disc, with hose nozzle, 250ml	PCS	4	55.00
5	15/Mar/2010	Round bottom flask 2 necks	BSP/Thailand	Round bottom flask 2 necks, 250ml	PCS	6	32.00
6	15/Mar/2010	Round bottom flask	BSP/Thailand	Round bottom flask, 250ml	PCS	6	20.00
7	15/Mar/2010	Condenser, Liebig	BSP/Thailand	Liebig condenser, eff length 200mm, 345mm, overall length, socket and cone 24/29	PCS	2	53.00
8	15/Mar/2010	Density bottle	Brand/Germany	Density bottle 25ml, Cal. W/Thermo	PCS	2	190.00
9	15/Mar/2010	Vol Flask	Duran/Germany	Flask Volumetric, PE, Stopper, 5ml	PCS	12	11.00
10	15/Mar/2010	Vol Flask	Duran/Germany	Flask Volumetric, PE, Stopper, 10ml	PCS	20	11.00
11	16/Mar/2010	Vol Flask	Duran/Germany	Flask Volumetric, PE, Stopper, 10ml	PCS	4	11.00
12	05/Mar/2010	Vol Flask	Wagtech/CE	Glass A, MBL 25ml	PCS	25	51.00
13	15/Mar/2010	Spatula, micro	Usbeck/Germany	Micro Spatula Spoon Stainless 150mm. Width of spoon 5mm	PCS	6	7.00
14	15/Mar/2010	Spatula, spoon end	Usbeck/Germany	Spatula Spoon Stainless Steel Flat Spoon 150mm. Width of spoon 29mm	PCS	10	13.00
Sub Total C							
13175.86							
2892.00							

15	15/Mar/2010	Spatula, palette knife	Brand/Germany	Spatula Stainless Steel, Blade length 150mm.	PCS	3	27.00	81.00
16	15/Mar/2010	Pipet, Volumetric	Brand/Germany	Class A, 0.5ml	PCS	6	7.00	42.00
17	15/Mar/2010	Pipet, Volumetric	Brand/Germany	Class A, 1ml	PCS	6	7.00	42.00
18	15/Mar/2010	Pipet, Volumetric	Brand/Germany	Class A, 2ml	PCS	12	18.00	216.00
19	15/Mar/2010	Pipet, Volumetric	Brand/Germany	Class A, 3ml	PCS	12	20.00	240.00
20	05/Mar/2010	Buret	Wagtech/CE	Buret to ISO 385 PTFE, Stopcock, Soda-lime glass with straight bore, 25ml	EA	2	54.90	109.80
21	05/Mar/2010	Buret	Wagtech/CE	Buret to ISO 385 PTFE, Stopcock, Soda-lime glass with straight bore, 50ml	EA	2	51.74	103.48
22	05/Mar/2010	Mortar and Pestle	Wagtech/CE	Porcelain, diameter 160mm	EA	2	25.92	51.84
23	15/Mar/2010	Stirring rod	BSP/Thailand	Stirring rod, glass 12 inches in length	PCS	10	5.00	50.00
24	15/Mar/2010	Erlenmeyer flask with cover	Duran/Germany	W/Screw Cap 250ml	PCS	6	76.00	456.00
25	15/Mar/2010	Erlenmeyer flask with cover	Duran/Germany	W/Screw Cap 500ml	PCS	6	84.00	504.00
Sub Total C								7999.33

Lot D: Chemicals & Consumables

1	23/Sep/2009	Membrane Filter	Whatman/UK	Membrane filter, 0.45 um, 13mm, Nylon, 100/pk	L	10	130.00	1300.00
2	23/Sep/2009	Membrane Filter	Whatman/UK	Membrane filter, 0.45 um, 47mm, Nylon, 100/pk	L	10	178.00	1780.00
3	15/Mar/2010	Acetic Acid, glacial	Merck/Germany	ACETIC ACID (GLACIAL) 100% ANHYDROUS GR FOR ANALYSIS ACS, ISO, REAG.PH, 1L	Btl	2	109.00	218.00
4	15/Mar/2010	Acetonitrile, HPLC	Merck/Germany	ACETONITRILE ISOCRATIC GRADE FOR LIQUID CHROMATOGRAPHY LICHTROSOLV, 1L	Btl	36	83.00	2988.00
5	04/Mar/2010	Alpha-cypermethrin (Pesticide Standard)	Sigma-Aldrich/Germany	Alpha-cypermethrin 0.1g	Btl	1	167.00	167.00
6	15/Mar/2010	Ammonia Solution 25%	Merck/Germany	AMMONIA SOLUTION 25% GR FOR ANALYSIS, 1L	Btl	2	99.00	198.00
7	04/Mar/2010	Arsenic Trioxide	Sigma-Aldrich/Germany	Arsenic (III) Oxide puriss ACS 99.95-100%, 100g	Btl	5	356.00	1780.00
8	04/Mar/2010	Azoxystrobin (Pesticide Standard)	Sigma-Aldrich/Germany	Azoxystrobin 0.1g	Btl	1	243.00	243.00
9	15/Mar/2010	Buffer solution pH 2	Merck/Germany	BUFFER SOLUTION, TRACEABLE TO SRM FROM NIST AND PTB PH 2.00 (20 GRAD C) CERTIPUR, 1L	Btl	1	210.00	210.00
10	15/Mar/2010	Buffer solution pH 4	Merck/Germany	BUFFER SOLUTION, TRACEABLE TO SRM FROM NIST AND PTB PH 4.00 (20 GRAD C) CERTIPUR, 1L	Btl	1	102.00	102.00
11	15/Mar/2010	Buffer solution pH 7	Merck/Germany	BUFFER SOLUTION, TRACEABLE TO SRM FROM NIST AND PTB PH 7.00 (20 GRAD C) CERTIPUR, 1L	Btl	1	102.00	102.00
12	04/Mar/2010	Carbaryl (Pesticide Standard)	Sigma-Aldrich/Germany	Carbaryl, 0.25g	Btl	1	135.00	135.00
13	04/Mar/2010	Carbendazim (Pesticide Standard)	Sigma-Aldrich/Germany	Carbendazim, 0.25g	Btl	1	113.00	113.00
14	04/Mar/2010	Cypermethrin (Pesticide Standard)	Sigma-Aldrich/Germany	Cypermethrin, 0.1g	Btl	1	126.00	126.00
15	15/Mar/2010	Ethanol 96%	Merck/Germany	ETHANOL 96% SUITABLE FOR USE AS EXCIPIENT EMRPOVE EXP PHEUR, BP, 1L	Btl	2	80.00	160.00
16	04/Mar/2010	Fenobucarb (Pesticide Standard)	Sigma-Aldrich/Germany	Fenobucarb, 0.25g	Btl	1	113.00	113.00
17	04/Mar/2010	Fenvalerate (Pesticide Standard)	Sigma-Aldrich/Germany	Fenvalerate, 0.25g	Btl	1	147.00	147.00

18	15/Mar/2010	Formaldehyde, 37-38%	Merck/Germany	FORMALDEHYDE SOLUTION MIN. 37% GR FOR ANALYSIS STABILIZED WITH ABOUT 10% METHANOL ACS, REAG. PH EUR, 1L	Btl	2	125.00	250.00
19	04/Mar/2010	Hydrochloric Acid 37%	Merck/Germany	HYDROCHLORIC ACID FUMIN 37% GR FOR ANALYSIS ACS, ISO, REAG. PH EUR, 1L	Btl	1	125.00	125.00
20	04/Mar/2010	Imidacloprid (Pesticide Standard)	Sigma-Aldrich/Germany	Imidacloprid, 0.1g	Btl	1	135.00	135.00
21	15/Mar/2010	Iodine, Resublimed	Merck/Germany	IODINE SUBLIMATES GR FOR ANALYSIS ACS ISO, REAG. PH EUR, 500g	Btl	1	515.00	515.00
22	04/Mar/2010	Lead Acetate Trihydrate	Sigma-Aldrich/Germany	Lead(II) Acetate Trihydrate ACS ISO Ph. EUR, 99.5-102.0%, 250g	Btl	6	108.00	648.00
23	04/Mar/2010	Mancozeb (Pesticide Standard)	Sigma-Aldrich/Germany	Mancozeb, 0.25g	Btl	1	72.00	72.00
24	04/Mar/2010	Matalaxy (Pesticide Standard)	Sigma-Aldrich/Germany	Matalaxy, 0.1g	Btl	1	101.00	101.00
25	15/Mar/2010	Methanol, HPLC	Merck/Germany	METHANOL FOR LIQUID CHROMATOGRAPHY LICHROSOLV, 1L	Btl	24	30.00	720.00
26	15/Mar/2010	Ortho-Phosphoric Acid	Merck/Germany	ORTHO-PHOSPHORIC ACID 85% GR FOR ANALYSIS ACS, ISO, REAG. PH EUR, 1L	Btl	2	165.00	330.00
27	15/Mar/2010	Potassium Hydroxide pellets	Merck/Germany	POTASSIUM HYDROXIDE PELLETS GR FOR ANALYSIS, 500g	Btl	2	112.00	224.00
28	15/Mar/2010	Potassium Iodide	Merck/Germany	POTASSIUM IODIDE GR FOR ANALYSIS ISO, REAG. PH EUR, 250g	Btl	2	212.00	424.00
29	15/Mar/2010	Potassium Iodate	Merck/Germany	POTASSIUM IODIDE GR FOR ANALYSIS ACS, ISO, REAG. PH EUR, 500g	Btl	1	382.00	382.00
30	15/Mar/2010	Potassium Thiocyanate	Merck/Germany	POTASSIUM THIOCYANATE GR FOR ANALYSIS ACS, ISO, REAG. PH EUR, 1Kg	Btl	1	300.00	300.00
31	04/Mar/2010	Pretilachlor (Pesticide Standard)	Sigma-Aldrich/Germany	Pretilachlor, 0.25g	Btl	1	218.00	218.00
32	04/Mar/2010	Propiconazole (Pesticide Standard)	Sigma-Aldrich/Germany	Propiconazol, 0.25g	Btl	1	189.00	189.00
33	15/Mar/2010	Sodium Carbonate	Merck/Germany	SODIUM CARBONATE ANHYDROUS GR FOR ANALYSIS ISO, 500g	Btl	1	185.00	185.00
34	15/Mar/2010	Sodium Sulfit	Merck/Germany	SODIUM SULFITE ANHYDROUS GR FOR ANALYSIS REAG.PH EUR, 500g	Btl	1	192.00	192.00
35	15/Mar/2010	Sodium Thiosulfate Pentahydrate	Merck/Germany	SODIUM THIOSULFATE PENTAHYDRATE GR FOR ANALYSIS ACS, ISO, REAG.PH EUR, 500g	Btl	1	88.00	88.00
36	04/Mar/2010	Difenoconazole (Past Standard)	Sigma-Aldrich/Germany	Difenoconazole, 0.25g	Btl	1	197.00	197.00
37	04/Mar/2010	Acetone	Merck/Germany	ACETONE GR FOR ANALYSIS ACS, ISO, REAG.PH EUR, 2.5L	Btl	5	7.00	35.00
38	15/Mar/2010	Staroh(soluble)	Merck/Germany	STARCH SOLUBLE GR FOR ANALYSIS ISO, 250g	Btl	2	163.00	326.00
39	04/Mar/2010	Sulfuric Acid	Merck/Germany	SULFURIC ACIDE 95-97% GR FOR ANALYSIS ISO, 2.5L	Btl	1	94.71	94.71
40	04/Mar/2010	Thiametoxam (Pesticide Standard)	Sigma-Aldrich/Germany	Thiametoxam, 0.1g	Btl	1	218.00	218.00
41	04/Mar/2010	Tricyclazole (Pesticide Standard)	Sigma-Aldrich/Germany	Tricyclazole, 0.1g	Btl	1	264.00	264.00
42	15/Mar/2010	Tri-Sodium Citrate	Merck/Germany	TRI-SODIUM CITRATE DIHYDRATE GR FOR ANALYSIS ACS, ISO, REAG.PH EUR, 500g	Btl	2	139.00	278.00
43	04/Mar/2010	Glyphosate	Fluka/Germany	Glyphosate, 0.25g	Btl	1	89.00	89.00
44	16/Mar/2010	Abamectin	Fluka/Germany	Abamectin, 0.1g	Btl	1	260.00	260.00
Sub Total D							16741.71	40808.90
Total								

Project Design Matrix (PDM)

Project Title: Capacity Building for the Quality Standard Control of Agricultural Materials (Chemical Fertilizers and Pesticides)

Project Period: 01 March 2009 to 31 March 2012 (3 years & 1 month)

Pilot Area: Kandal Province (Kien Svay, Koh Thom district)

Target Group: Beneficiary

(1) DAL and GDA staff of the MAFF

(2) PDA staff of the MAFF in the pilot area

(3) Retailers dealing with chemical fertilizers and pesticides in pilot area

(4) Farmers using the chemical fertilizers and pesticides in pilot area

Implementing organization: DAL & GDA

Version 2: 30 April 2010

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTION
<p>Overall Goal (w/in 5-10 years after the project)</p> <p>Proper usage and quality control of chemical fertilizers and pesticides is enhanced in Kandal and neighboring provinces.</p>	<p>1. Distribution of registered chemical fertilizers and pesticides with Khmer label are increased.</p> <p>2. No retailers sell banned pesticides.</p>	<p>- Survey and interview</p>	
<p>Project Purpose</p> <p>Proper usage and quality control of chemical fertilizers and pesticides is enhanced in pilot area.</p>	<p>1. Two thirds of licensed retailers in pilot area utilize the following materials provided by the project on their sales in order to secure proper selection and usage of chemical fertilizers and pesticides;</p> <p>(1) Khmer labels on pesticides</p> <p>(2) Reference materials on proper selection and usage of chemical fertilizers and pesticides.</p> <p>2. Number of licensed retailers who do not sell banned pesticides is doubled in pilot area.</p>	<p>1. Report of baseline survey</p> <p>2. Survey and interview</p>	<p>- MAFF keeps laboratories functioning.</p> <p>- Law is enforced against the illegal trade and sales of chemical fertilizers and pesticides.</p> <p>- The awareness and capacity of retailers dealing with chemical fertilizers and pesticides is continuously raised.</p> <p>- Capacity of MAFF staff is further and continuously improved.</p>

<p>Outputs</p> <ol style="list-style-type: none"> 1 Baseline data for the Project is developed. 2 Capability of laboratories is improved in terms of analyses of chemical fertilizers and pesticides. 3 Development of Regulation related to Standard Requirement³ for registration and post-registration of chemical fertilizers and pesticides is facilitated with the expectation of having the 1st draft. 4 Awareness is raised on proper usage and quality of chemical fertilizers and pesticides. 	<ol style="list-style-type: none"> 1-1 Baseline data on registered chemical fertilizers in the pilot area (s) is in hand. 1-2 Baseline data on registered pesticides in the pilot area (s) is in hand. 1-3 Baseline data on labeling in Khmer in the pilot area (s) is in hand. 2-1 Laboratory equipment/ facilities are properly set up and functioning. 2-2 Fertilizer laboratory in the DAL and the GDA can analyze N, P, K and other elements (Fe, Mn, Zn, Cu, Ca, Mg). 2-3 Pesticide laboratory can analyze at least 60% of 24 prioritized active ingredients. 2-4 Manuals for analyses of N, P, K and other elements (Fe, Mn, Zn, Cu, Ca, Mg) for chemical fertilizers and at least 60% of 24 prioritized active ingredients for pesticides are developed. 2-5 Manuals for operation and maintenance for laboratory equipment are developed. 2-6 Analytical reports of samples collected by inspectors from licensed retailers are developed (to be shared among stakeholders). 3-1 Policy option (s) related to Standard Requirement for registration and post-registration of chemical fertilizers and pesticides is provided. 4-1 At least each type of materials; pamphlet, posters, and audio visual media is developed and disseminated for public awareness activities. 4-2 Khmer labels and reference materials on selection and usage of pesticides are distributed to all of the licensed retailers in pilot area. 4-3 Reference materials on selection and usage of chemical fertilizers are distributed to all of the licensed retailers in pilot area. 	<ol style="list-style-type: none"> 1. Report of baseline survey <ol style="list-style-type: none"> 2.1 Laboratory inventory 2.2 Manuals 2.3 Records of laboratory works 3.1 Project activity reports 4.1 Awareness raising materials 4.2 Reports of survey and interview 	
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³ Standard Requirement is defined as “all the requirements covering technical specifications and procedures for registration and post-registration of chemical fertilizers and pesticides.”

<p>Activities</p> <p>1-1 Select pilot area based on the criteria</p> <p>1-2 Prepare questionnaire.</p> <p>1-3 Conduct interviews with traders.</p> <p>1-4 Develop baseline data report.</p> <p>2-1 Set up of laboratories for analyses of chemical fertilizers and pesticides.</p> <p>2-2 Carry out On-the-Job-Trainings (OJT) and/or training in the Philippines for the laboratory staff to analyze chemical fertilizers and pesticides.</p> <p>2-3 Analyze the quality of samples for chemical fertilizers and pesticides collected in pilot area (results are shared through awareness raising activities under Output4)</p> <p>2-4 Develop manuals for:</p> <ol style="list-style-type: none"> 1) Analyses of Chemical fertilizers (N, P, K and some other elements) 2) Analyses of Pesticides (some prioritized active ingredients) 3) Operation and maintenance of laboratory equipment <p>3-1 Review the present administrative documents and regulations for chemical fertilizers and pesticides.</p> <p>3-2 Exchange views on regulations related to Standard Requirement for registration and post-registration of chemical fertilizers and pesticides with relevant departments in MAFF and other key stakeholders.</p> <p>3-3 Provide recommendations for the new Regulation through the collaborative efforts with relevant authorities including other donors.</p> <p>4-1 Develop materials for public awareness raising such as pamphlet, posters, and audio visual media.</p> <p>4-2 Develop materials for retailers on proper selection and use of chemical fertilizers and pesticides.</p> <p>4-3 Conduct awareness raising activities for public.</p> <p>4-4 Conduct awareness raising activities for retailers. (Activities include collaboration with FAO through sharing materials developed under 4-2.)</p>	<p>Inputs</p> <p>1. Cambodian side</p> <ol style="list-style-type: none"> 1) Counterpart personnel (C/Ps) : thirty two (32) staff: <ul style="list-style-type: none"> - Co-project managers: from DAL and GDA - Ten (10) DAL staff and twenty (20) GDA staff Assistants of co-project manager, 4 members 2) Office space (DAL and GDA) and facilities (in kind) 3) Local expenses – cost for electricity, water, and other available miscellaneous <p>2. Japanese side</p> <ol style="list-style-type: none"> 1) Dispatch of Experts <ul style="list-style-type: none"> - Cost for the Philippines short-term experts - Japanese long-term experts: (1) one chief advisor and (2) one expert on baseline survey and awareness raising/coordinator 2) Provision of equipment/facilities 3) Cost for Trainings in the 3rd countries including the Philippines 4) Project activity cost <p>3. Philippines side</p> <ol style="list-style-type: none"> 1) Nomination of short-term experts <ul style="list-style-type: none"> - Short-term experts in the fields of chemical fertilizers analyses, pesticide formulation analyses, and administration work of chemical fertilizers and pesticides. 2) Trainings in the Philippines 	<p>Preconditions</p> <ol style="list-style-type: none"> 1. There are no major changes in personnel and human resources for laboratory management. 2. The existing equipment/facilities is properly functioning.
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プロジェクト・デザイン・マトリックス (PDM) 仮訳

プロジェクト名: カンボジア王国「農業資材(化学肥料及び農薬)品質管理能力向上計画
 プロジェクト期間: 2009年3月1日から2012年3月31日まで(3年間と1カ月)
 パイロット地域: カンダール州 (Kien Svay 郡及び Koh Thom 郡)
 ターゲットグループ: 裨益者
 (1) MAFF 農業法規局 (DAL) 及び農業総局 (GDA) の職員
 (2) パイロット地域の MAFF 州農業局 (PDA) の職員
 (3) パイロット地域で化学肥料及び農薬を扱っている小売店
 (4) パイロット地域で化学肥料及び農薬を使用している農民
 実施機関: 農業法規局 (DAL) 及び農業総局 (GDA)

バージョン 2: 2010年4月30日

プロジェクトの要約	指標	指標の入手段	外部条件
<p>上位目標 (プロジェクト終了後、おおむね 5 年後に達成が見込まれる目標)</p> <p>カンダール州とその近隣州において、化学肥料及び農薬の適切な使用と品質管理が促進される。</p> <p>プロジェクト目標</p> <p>パイロット地域において、化学肥料及び農薬の適切な使用と品質管理が促進される。</p>	<p>1. クメール語ラベルが添付された、登録されている化学肥料と農薬の流通が増加する。 2. 小売店が禁止された農薬を販売していない。</p> <p>1. 化学肥料と農薬の適切な選択と使用を確保するため、パイロット地域の登録小売店の3分の2が、プロジェクトによって提供された下記の道具を販売に使用する。 (1) 農薬のクメール語ラベル (2) 化学肥料と農薬の適切な選択と使用のための参考資料 2. パイロット地域で、禁止された農薬を売っていない登録小売店の数が倍増する。</p> <p>1-1 パイロット地域における登録済み化学肥料に関するベースライン・データがある。 1-2 パイロット地域における登録済み農薬に関するベースライン・データがある。 1-3 パイロット地域におけるクメール語表記のラベルに関するベースライン・データがある。</p>	<p>- 実態調査とインタビュー</p> <p>1. ベースライン調査報告書 2. 実態調査とインタビュー</p>	<p>- MAFF がラボの機能を継続する。 - 化学肥料及び農薬の不法取引に対し、法による取り締まりが実行される。 - 化学肥料及び農薬の取り扱い業者の意識と能力が継続的に向上する。 - MAFF スタッフの能力向上が継続的になされる。</p>
<p>成果</p> <p>1. プロジェクトのためのベースライン・データが蓄積される。 2. 化学肥料及び農薬の分析に関するラボの能力が向上する。</p>	<p>1. ベースライン調査報告書 2.1 実験室機材・設備の記録 2.2 マニュアル 2.3 実験室の活動実施記録 3.1 プロジェクトの活動記</p>		

<p>3. 化学肥料及び農薬の登録及び登録後業務基準⁴の規則初稿の策定が促進される。</p> <p>4. 化学肥料及び農薬の適切な使用と品質に関する意識が向上する。</p>	<p>2-7 実験室の機材・設備が適切に設置され、機能している。</p> <p>2-8 DAL 及び GDA における肥料のためのラボが、窒素、リン、カリウム及びその他微量元素（鉄、マンガン、亜鉛、銅、カルシウム、マグネシウム）を分析できる。</p> <p>2-9 農薬のための実験室が 24 の優先度の高い有効成分のうち、少なくとも 60% を分析することができる。</p> <p>2-10 化学肥料の窒素、リン、カリウム及びその他微量元素（鉄、マンガン、亜鉛、銅、カルシウム、マグネシウム）及び、少なくとも 24 の優先度の高い農薬の有効成分のうちの 60% を分析するためのマニュアルが作成される。</p> <p>2-11 実験室の機材の使用及び維持管理のためのマニュアルが作成される。</p> <p>2-12 登録小売店からインスペクターによって採取したサンプルの分析レポートが作成される（その後、関係者の間で共有される）。</p> <p>3-3 化学肥料及び農薬の登録及び登録後業務のための業務基準に関係した政策の選択肢が提供される。</p> <p>4-3 一般の意識向上活動のために、パンフレット、ポスター及び視聴覚メディアの、それぞれのタイプで、少なくとも 1 つずつの道具を作成し、普及させる。</p> <p>4-4 パイロット地域のすべての登録小売店に、農薬の選択と使用のためのクメール語ラベルと参考資料が配布される。</p> <p>4-5 パイロット地域のすべての登録小売店に、化学肥料の選択と使用のための参考資料が配布される。</p>	<p>録</p> <p>4.1 意識向上のための道具</p> <p>4.2 実態調査とインタビューの一の記録</p>	
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⁴ 業務基準とは「化学肥料及び農薬の登録及び登録後業務のための、技術標準及び行政手続きに必要なすべての要件」と定義する。

<p>活動</p> <p>1-1 選定基準に基づき、パイロット地域を選定する。</p> <p>1-2 質問票を作成する。</p> <p>1-3 取り扱い業者を対象とした聞き取り調査を行う。</p> <p>1-4 ベースライン・データに関する報告書を作成する。</p> <p>2-1 化学肥料及び農薬分析実験室をセットアップする。</p> <p>2-2 化学肥料及び農薬分析技術に関し、実験室スタッフのオン・ザ・ジョブ・トレーニング (OJT) / フイリピンにおける第三国研修を実施する。</p> <p>2-3 マニュアルを作成する：</p> <p>1) 化学肥料の分析 (窒素、リン、カリウム及びその他の微量要素)</p> <p>2) 農薬の分析 (優先度の高い幾つかの有効成分)</p> <p>3) 実験室の機材の使用及び維持管理</p> <p>3-1 化学肥料及び農薬に関する現在の行政業務書類と規則のレビューを行う。</p> <p>3-2 化学肥料及び農薬の登録及び登録後業務基準に関する規則について、関係する MAFF 部局及びその他重要な関係者との意見交換を行う。</p> <p>3-3 他ドナーを含む関係機関と協力して、新たな規則のために提言を行う。</p> <p>4-1 パンフレット、ポスター及び視覚メディアなどの意識向上のための道具を作成する。</p> <p>4-2 化学肥料と農薬の適切な選択と使用に関する、登録小売店のための道具を作成する。</p> <p>4-3 一般のための意識向上活動を実施する。</p> <p>4-4 小売店のための意識向上活動を実施する (この活動には、4-2 において作成された道具の共有を通じての FAO との協力を含む)。</p>	<p>投入</p> <p>1. カンボジア側</p> <p>1) カウンターパートの配置：32名</p> <p>- 共同プロジェクト・マネジャー：DAL と GDA から1名ずつ</p> <p>- DAL 職員10名、GDA 職員20名</p> <p>2) プロジェクト事務所 (DAL と GDA) 及びオフィス機器等 (物品による供与)</p> <p>3) ローカル・コスト：電気代、水道代、その他供与が可能な雑費</p> <p>2. 日本側</p> <p>1) 専門家の派遣</p> <p>- フイリピン人短期専門家派遣費用</p> <p>- 日本人長期専門家：(1) チーフアドバイザー1名、(2) 「ベースライン調査・意識向上/調整」専門家1名</p> <p>2) 機材供与</p> <p>3) フイリピンを含む第三国研修費用</p> <p>4) プロジェクト活動費</p> <p>3. フイリピン側</p> <p>1) 短期専門家の候補者選定</p> <p>- 短期専門家 (化学肥料分析、農薬分析、化学肥料及び農薬に関する行政業務)</p> <p>2) フイリピンにおける研修</p>	
		<p>前提条件</p> <p>1. フボの運営にかかわる人材に大幅な変更がない。</p> <p>2. 既存の機材・設備が適切に機能する。</p>

5. 評価グリッド

評価項目	評価設問		判断基準・方法	必要なデータ	情報源	データ収集方法
	大項目	小項目				
妥当性	カンボジアの開発計画との整合性	国家開発計画	農業政策に関する変更はあるか	<ul style="list-style-type: none"> 国家開発計画における農業の位置づけとその内容 	MAFF	現在の開発計画文書のレビュー
		MAFFの政策	関係する農業政策に変更はあるか	<ul style="list-style-type: none"> 農業政策 肥料及び農薬に関する法律及び規則 	MAFF 派遣専門家	政策・法律文書のレビュー インタビュー
	ターゲッティンググループの選択は妥当であったか	MAFFの組織の機能と現状	GDA、DAL及びPDA(PALO)の機能と現状はプロジェクトの計画による想定どおりか	<ul style="list-style-type: none"> MAFFの規定 プロジェクトの活動計画による想定 MAFF及び専門家による見解と意見 実験室の状況 	事前評価 プロジェクト作成文書 プロジェクトの会議報告 実験室への訪問	文書のレビュー インタビュー サイト訪問
		肥料・農薬販売店と農民	販売店と農民の状況は計画による想定どおりか	<ul style="list-style-type: none"> 販売店の役割とその置かれた状況 農民による肥料と農薬の使用状況 プロジェクトの活動計画による想定 MAFF及び専門家による見解と意見 	サイト訪問 事前評価 プロジェクト作成文書 ベラスライン・サーベイ報告書	フィードバック インタビュー 文書のレビュー
日本の援助政策との整合性	パイロット地域	パイロット地域としての適正 新たなパイロットサイトの可能性の検討	パイロット地域としての適正 新たなパイロットサイトの可能性の検討	<ul style="list-style-type: none"> パイロット地域として、肥料と農薬の管理の状況をみるための地域の特性と規模 	日本政府の最新の援助政策	文書のレビュー
		日本政府の援助方針	プロジェクトのスーパーゴール、上位目標、目標との検討	<ul style="list-style-type: none"> 日本政府の援助の重点課題 		
日本の技術の比較優位性	肥料・農薬の品質管理	JICAの援助方針	農業分野の援助のJICAの協力のなかでの重要性	<ul style="list-style-type: none"> JICAの国別援助実施計画 	JICAによる国別援助実施計画に関する文書	文書のレビュー
		類似プロジェクトの存在の有無	プロジェクトのJICAのプログラム協力のなかでの位置づけ	<ul style="list-style-type: none"> JICAのカンボジア向け援助プログラム JICAによる肥料・農薬の品質管理のためのプロジェクトの経験 	他国でのJICAによる肥料・農薬の品質管理に関するプロジェクト文書	文書のレビュー

評価項目	評価設定		判断基準・方法	必要なデータ	情報源	データ収集方法
	大項目	小項目				
有効性	成果の達成度	1. プロジェクトのためのベースライン・データが蓄積される。 2. 化学肥料及び農薬の分析に関するラボの能力が向上する。 3. 化学肥料及び農薬の品質基準がMAFFの認可を受け、普及される。 4. 登録及び認可に関する行政業務能力が向上する。 5. パイロット地域において、登録後業務に関する能力が向上する。 6. パイロット地域において、化学肥料及び農薬の品質と適切な使用方法に関する意識が向上する。	プロジェクトの投入、活動によって成果は計画どおりに生み出されているか	<ul style="list-style-type: none"> 中間レビュー実施時における、各成果の達成状況 	プロジェクトによる報告書 プロジェクトの会議報告 プロジェクト専門家 MAFF職員 フィールドサーパーバイ	資料レビュー インタビュー サイト訪問
	成果の達成を阻害する要因	FPAによる協力の状況 その他の阻害要因	FPAによる協力の不足は成果の達成にどのように影響するか 成果の達成への影響	<ul style="list-style-type: none"> 今後のプロジェクト期間中のFPAによる協力の見通し 成果4.と5.について研修の実施を2010年に予定 MAFFスタッフの意見 派遣専門家見解 調査団による助言 	プロジェクト作成文書 MAFFスタッフ 派遣専門家 FPA プロジェクト作成文書 MAFFスタッフ 派遣専門家 調査団による観察	文書のレビュー インタビュー フィールドサーパーバイ
	プロジェクト目標達成の見通し	化学肥料及び農薬の品質管理メカニズムが強化される。 指標の検討	プロジェクト活動の実施と成果の状況を勘案して、プロジェクト目標達成の見込みはあるか 指標はプロジェクト目標の達成度を測るために適しているか プロジェクト目標に修正を加える必要性はあるか	<ul style="list-style-type: none"> MAFFスタッフの見解 派遣専門家見解 調査団による見解 	プロジェクト作成文書 MAFFスタッフ 派遣専門家 調査団による観察	文書のレビュー インタビュー フィールドサーパーバイ

<p>プロジェクトを達成するために現在計画されている成果で十分か</p>	<p>新たな成果を加える必要があるか</p>	<p>実験室のマネジメント能力が不足しているか その他必要とされる成果、活動、投入</p>	<ul style="list-style-type: none"> MAFF スタッフの意見 派遣専門家見解 MAFF スタッフの意見 派遣専門家見解 調査団による助言 	<p>プロジェクト作成文書 MAFF スタッフ 派遣専門家</p>	<p>文書のレビュー インタビュアー</p>
<p>プロジェクトの達成を阻害する要因</p>	<p>FPA による協力の状況</p>	<p>FPA による協力の不足はプロジェクト目標達成の達成にどのように影響するか</p>	<ul style="list-style-type: none"> プロジェクト期間中の今後の FPA による協力の見通しとその有効性 予定されている化学肥料と農薬の登録、認可、及びインスベクションに係る研修 上記の代替案としての4回の技術交換 	<p>プロジェクト作成文書 MAFF スタッフ 派遣専門家 FPA</p>	<p>文書のレビュー インタビュアー</p>
<p>プロジェクトを達成するために現在計画されている成果で十分か</p>	<p>化学肥料及び農薬の販売業者、卸売業者、輸入業者、製造業者による違法な活動に対する取り締まり強化への困難性</p>	<p>違法な活動が与えるプロジェクト目標達成への影響</p>	<ul style="list-style-type: none"> パイロット地域における化学肥料及び農薬の販売業者、卸売業者、輸入業者、製造業者による違法な活動の状況 	<p>プロジェクト作成文書 MAFF スタッフ 派遣専門家 調査団による観察</p>	<p>文書のレビュー インタビュアー フィールドサーパーバイ</p>
<p>プロジェクトを達成するために現在計画されている成果で十分か</p>	<p>成果からプロジェクト目標に至るまでの外部条件</p>	<p>化学肥料と農薬の密輸 その他の外部条件の発生</p>	<ul style="list-style-type: none"> プロジェクト目標の指標に与える影響の意義 Camcontrol、商務省その他関係機関による密輸に対する取り締まり プロジェクト目標の達成に与える影響 	<p>プロジェクト作成文書 MAFF スタッフ 派遣専門家 調査団による観察</p>	<p>文書のレビュー インタビュアー フィールドサーパーバイ</p>

評価項目	評価設問		判断基準・方法	必要なデータ	情報源	データ収集方法
	大項目	小項目				
効率性	達成された成果からみて、投入の質・量・タイムリネスは適切か	<ol style="list-style-type: none"> プロジェクトのためのベースライン・データが蓄積される。 化学肥料及び農薬の分析に関するラボの能力が向上する。 化学肥料及び農薬の品質基準が MAFF の認可を受け、普及される。 登録及び認可に関する行政業務能力が向上する。 パイロット地域において、登録後業務に関する能力が向上する。 パイロット地域において、化学肥料及び農薬の品質と適切な使用方法に関する意識が向上する。 	実績と目標との比較	<ul style="list-style-type: none"> 専門家の派遣実績 専門家の能力に対する評価 専門家の業務実績 カンボジアにおける OJT の実施実績 BSWM 及び BPI による OJT 研修内容 専門家及びカウンターパートによる意見 機材の供与実績 機材供与の時期 供与機材の利用状況 専門家及びカウンターパートによる意見 * HPLC の購入依頼 * ドラフトチャンバーの修繕 フリビピンにおける研修の実績 カウンターパートの配置状況 カウンターパートのプロジェクトへの参加状況 専門家及びカウンターパートによる意見 実験室の建物の状況 専門家勤務の事務室の状況 MAFF によるプロジェクト活動への予算支出 プロジェクトによるこれまでの支出 	<p>実績表 月例報告 専門家による業務実施報告書 MAFF カウンターパート 専門家</p> <p>実績表 第3回目の機材調達の申請 月例報告 MAFF カウンターパート 専門家 実験室の訪問</p> <p>実績表 月例報告 専門家</p> <p>カウンターパートの名簿 月例報告 MAFF カウンターパート 専門家</p> <p>月例報告 MAFF カウンターパート 専門家 実験室の訪問 専門家事務室の訪問</p> <p>実績表 MAFF 職員 専門家</p>	資料レビュ インタビュ

効 率 性	効率性に影響を与える要因	プロジェクトの効率性を阻害する要因	FPA による協力の遅延	<ul style="list-style-type: none"> プロジェクト期間中の今後の FPA による協力の見直しとその有効性 GDA と DAL との協力関係 中央組織 (GDA と DAL) と PAD との協力関係 Crop Life Asia などの協力可能性のある NGO についての情報 その活動手法と実績 品質管理メカニズムの強化の可能性 FAO によるプロジェクトの成果 2、3 及び 5 に関連した協力 2. 化学肥料及び農薬の分析に関するラボの能力が向上する。 3. 化学肥料及び農薬の品質基準が MAFF の認可を受け、普及される。 5. パイロット地域において、登録後業務に関する能力が向上する。 FAO による DAL の農薬その他の農業資材マネジメントに係る法律支援 他ドナーによる肥料・農薬管理に関する協力事例 	プロジェクト作成文書 MAFF スタッフ 派遣専門家	文書のレビュー インタビュアー
		プロジェクト活動実施における新たなパートナー機関との協力の可能性	MAFF 内の組織間の調整の問題	<ul style="list-style-type: none"> プロジェクト活動の有効で効率的な実施 品質管理メカニズムの強化の可能性 	プロジェクト作成文書 MAFF スタッフ 派遣専門家	文書のレビュー インタビュアー
		他ドナーによる関連した協力活動	プロジェクトへの有益な成果	<ul style="list-style-type: none"> FAO によるプロジェクトの成果 2、3 及び 5 に関連した協力 2. 化学肥料及び農薬の分析に関するラボの能力が向上する。 3. 化学肥料及び農薬の品質基準が MAFF の認可を受け、普及される。 5. パイロット地域において、登録後業務に関する能力が向上する。 FAO による DAL の農薬その他の農業資材マネジメントに係る法律支援 他ドナーによる肥料・農薬管理に関する協力事例 	NGO の活動に係る書類 NGO の職員または専門家	資料レビュー インタビュアー
			協力のための活動手法の検討		FAO の職員または専門家	資料レビュー インタビュアー
				関連資料 他ドナーの職員または専門家	資料レビュー インタビュアー	

評価項目	評価設問		判断基準・方法	必要なデータ	情報源	データ収集方法	
	大項目	小項目					
インパクト	上位目標の達成見込み	指標の検討	指標は上位目標の達成度を測るために適しているか 上位目標に修正を加える必要性はあるか	<ul style="list-style-type: none"> MAFF スタッフの意見 派遣専門家見解 調査団による助言 	プロジェクト作成文書 MAFF スタッフ 派遣専門家 調査団による観察	文書レビュー インタビュー フィールドサ ーベイ	
		現状を考慮しての外部条件の検討	実験室の機能維持のための財政的な持続可能性 化学肥料及び農薬の不法取引に対する法的取り締まり強化の可能性 取り扱い業者の意識と能力の向上 MAFF 職員の能力向上 その他の外部条件	<ul style="list-style-type: none"> 農業省スタッフの意見 派遣専門家見解 調査団による助言 	プロジェクト作成文書 農業省スタッフ 派遣専門家 調査団による観察	文書レビュー インタビュー フィールドサ ーベイ	
自立発展性	政策的自立発展性	現在有効な関係の法律及び規則	援助が終了したあとの、MAFF による政策的な継続 DAL による農薬と他の農業資材マネジメントに係る法律の準備状況	<ul style="list-style-type: none"> 肥料及び農薬の品質管理に係る副令及び省令 Sub decree No. 69 of 1998, Circular No.345 of 2002 DAL による新たな法案 	MAFF MAFF	文書レビュー インタビュー	
		GDA、DAL 及び PDA (PALO) の組織能力	プロジェクト終了後の GDA、DAL 及び PDA (PALO) の更なる組織能力強化の可能性	<ul style="list-style-type: none"> 組織の活動、能力向上のための予算と人的資源の配分 給与水準 他のドナーによる協力の継続 インスペクション実施のための財源の確保の可能性 	プロジェクト作成文書 MAFF スタッフ 派遣専門家 調査団による観察	文書のレビュー インタビュー フィールドサ ーベイ	
		プロジェクトのオーナーシップは存在するか	プロジェクトによって支援された組織の機能の継続				
		財政的な自立発展性	実験室の機能の維持 インスペクション実施				
技術的な自立発展性	実験室内での技術移転の継続	化学肥料及び農薬の分析	化学肥料及び農薬のインスペクション	<ul style="list-style-type: none"> MAFF スタッフによる、実験室での OJT 実施の可能性 メール語技術マニュアルの作成 	月例報告 MAFF カウンターパート 専門家 実験室の訪問	資料レビュー インタビュー サイト訪問	
		機材の維持管理	試薬及び消耗品の継続的購入 プロジェクト終了後も修理、部品の購入が可能か	<ul style="list-style-type: none"> GC、HPLC、AAS 			

April 19th, 2010

Mid-term Review Team
Capacity Building for the Quality Standard
Control of Agricultural Materials

QUESTIONNAIRE

1. Government Policy on the Quality Control of Agricultural Materials

- Are there any changes in the current government policies on the issues of the quality control of agricultural materials?
- Please give us information on current developments on the issues, if any.

Since the beginning of the Project in 2009, there has not been any major change in related agricultural policies nor in development plans of MAFF on the issues of the quality control of agricultural materials. (H.E. San Vanty, Under Secretary)

A draft law on the management of agricultural materials is finished. The law proposes to establish two new organizations, a National Pesticides Board as a national institution and a Pesticides Expert Group inside of MAFF. Since the draft law needs policy coordination with other related government agencies, it is currently under consideration on the inter-ministerial level. After the end of this coordination process, the law needs to be approved by the Parliaments.

(Mr. Ouk Syphan, Director of DAL)

2. Project Implementation Body

- Does the project need to include other implementation body such as Department of Plant Protection, Sanitary and Phytosanitary of GDA, in order to enhance the Project's achievement?

Basically, it will be beneficial to include a new implementation body into the Project, if it improves the project activities. But it would be better to be cautious, considering the necessity of coordination among the different implementation bodies in execution of the Project activities. In case the Project includes a new implementation body, a clear definition of roles will be necessary in order to avoid possible coordination problems among different implementation bodies.

(H.E. San Vanty, Under Secretary)

3. Training in the Philippines

- Please give your opinion on training in the Philippines.

Please make clear the concepts and the ideas for the training in the Philippines. Capable staffs of MAFF will be chosen to be sent to the training. MAFF needs to adjust the working schedule of those staffs to participate in the training.

(H.E. San Vanty, Under Secretary)

Since the situation is different between Cambodia and the Philippines, the administrative procedures may need to differ accordingly among the two countries. GDA is interested in more

technical aspects rather than procedures, in the Philippines.

(Mr. So Khan Rithykun, Deputy Director-General of GDA)

4. Collaboration and Demarcation with Other Projects

- How do you see the possibilities of collaboration with other donors' project such as those of FAO and ADB?

There are activities of donors that cross over each other. Those projects are expected to complement each other to produce synergetic effects, avoiding duplication in their project activities. Please discuss the issues on coordination with FAO and ADB, so that the projects produce better achievement in their activities.

(H.E. San Vanty, Under Secretary)

Agricultural Sector Development Program Loan by ADB is supporting DAL, including laboratory equipment and improvement on the inspection system, however the assistance finishes in the end of June 2010. FAO provides training with inspectors of PDA and traders of pesticides, for which 6 training courses were executed in 2009. FAO also intends to assist DAL in preparing a draft law on pesticides.

(Mr. So Khan Rithykun, Deputy Director-General of GDA)

5. Definition of Quality Standard

- Please define "Quality Standard".
- What kind of activities the Project can conduct in the remaining period?

Mr. Ouk Syphan is in charge of this issue. Please ask him on this issue.

(H.E. San Vanty, Under Secretary)

Quality standard include both technical specifications and administrative procedures. It is defined as standard requirements, which include all the requirements covering technical specifications and procedures for registration and post-registration of chemical fertilizers and pesticides. Therefore, Output 3, 4 and 5, which refer to quality standards, administrative works related to registration and licensing, and post-registration works respectively can be grouped in one new Output. DAL is currently preparing drafts of regulations for chemical fertilizers and pesticides.

However, it is still not yet decided how to include technical specifications into those regulations. A regulation for the inspection system has not been finished either. The Project can support DAL by providing useful information for the preparation of draft regulations. In addition, translation of foreign information and drafted regulations will be also very helpful. At present DAL does not expect the Project to conduct field activities in the pilot area for the support of Output 3, 4 and 5, having increased necessity for information support at the Central level.

(Mr. Ouk Syphan, Director of DAL)

6. Laboratory Works

- How are the current activities in the laboratories?
- Are the activities on track to achieve the Project Purpose?
- Please explain about the necessity of the requested equipments.

Regarding the laboratory equipment and facilities supplied by ADB, the Project has properly set

up and made them functioning. The Project has also supplied technical equipment to both GDA and DAL laboratories in September 2009 and March 2010. Spare parts, laboratory apparatus, glass wares, chemicals, reagents and pesticides analytical standards were also provided. The Project has put great efforts in making best use of the equipment and facilities, owing to the contribution from the Filipino experts.

OJT has been given to staff of GDA and DAL laboratories on chemical fertilizers analyses and pesticide formulation analyses from August to December 2009 by two experts from the Department of Agriculture of the Philippines. The Project has been undertaking another OJT from February to July 2010. The trainings have covered the following contents:

- (1) Principle of chemical analysis and basic use of equipment.
- (2) Analysis of 12 active ingredients of pesticides for the 4 laboratory staffs of NAL of GDA, using Gas Chromatograph (GC) .
- (3) Analysis of main nutrients (phosphorus and potassium) and micronutrients (Fe, Mn, Zn, Cu, Ca, Mg) of chemical fertilizers for 10 laboratory staff of GDA and DAL.

Operation and maintenance manuals on laboratory equipment are being translated into Khmer by laboratory staff in consultation with the experts. Development of manuals for analysis of chemical fertilizers and pesticides has been initiated.

The HPLC unit that NAL possesses is out of order and can not be used for analysis works. The Project is utilizing the HPLC unit only for training purpose to learn the operation of the machine. In order to complete 24 prioritized active ingredients, timely procurement of HPLC and analytical standards are required. Training on Nitrogen analysis, which also requires additional equipment, will be executed in the remaining period of the project.

(Interview to the Laboratory staffs of BAMSH and NAL, Ms. Edna Lynn C. Floresca of BSWM, Ms. Ma. Esperanza De Guzman Uy of BPI, Mr. Kazuhiko Yagi and Mr. Toshinori Hamaguchi)

7. Pilot Project Site

- Does the Project need additional project pilot sites?

We should take the limited remaining time of the Project period into consideration. It is not recommended to reduce the portion of activities at the central level in order to increase number of pilot project sites.

(H.E. San Vanty, Under Secretary)

8. Public awareness raising works

- What kind of awareness raising activities the project conducts in the remaining period?

Awareness raising activities should focus traders and farmers rather than the public in general. There already exist some materials for awareness raising works, developed by other donors. The Project can utilize those materials and improve them for its activities. (Mr. Ouk Syphan, Director of DAL)

9. Illegal inflow of agricultural materials

- What is the current MAFF's position on the border control of illegal inflow of agricultural materials?

The leading agencies on the issue of the illegal trades are Cambodia Import–Export inspection

and Fraud Suppression Department (CAMCONTROL) under the supervision of the Ministry of Commerce and General Department of Customs and Excise which belongs to the Ministry of Economy and Finance. MAFF plays only a supportive role on the control over the smuggling, although inspection of fertilizers and pesticides becomes a difficult task because of illegal inflow. Improved collaboration among different agencies and information sharing may contribute to reduce the problem, higher level of policy coordination within the Cambodian government may be required. It is not an issue that should be treated with this Project.

(H.E. San Vanty, Under Secretary)

The draft law prepared by DAL for the management of agricultural materials includes an article related to empowering MAFF staffs in the inspection at the border control. MAFF may have authority to send staffs to the border for inspection works. Samples can be sent to the laboratory for the check of the quality of chemical fertilizers and pesticides.

(Mr. Ouk Syphan, Director of DAL)

