



# ASEAN IPM KNOWLEDGE NETWORK

## STATUS REPORT

As of 30 June 2008

### BACKGROUND

ASEAN IPM Knowledge Network or ASEAN IPM is a Philippine initiative for regional cooperation in sustainable development within the ASEAN region. It was approved during the 19<sup>th</sup> meeting of the ASEAN Ministers on Agriculture and Forestry (AMAF) held at Bangkok, Thailand in September 1997. It is envisioned to help government (GO) and non-government (NGO) organizations improve the effectiveness of program implementation by making knowledge sharing easy among national IPM programs in the ASEAN region. To do this, ASEAN IPM established an electronic, Internet-like Knowledge Management Facility that ensures IPM knowledge to be available at the point of need by program implementers and policy-makers.

ASEAN IPM operates in three sub-phases. In 1998, Sub-Phase I undertook the establishment and operation of the Regional Center in the Philippines as well as the Country Hubs in Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. The Philippine Government, as a country initiative, provided initial funds for the Network's operation with counterpart support commitments from member-countries in terms of provision for IT facilities and technical manpower.

In 2003, the Philippines experienced a transitory setback towards the implementation of Sub-Phases II and III due to the Network's inability to secure supplemental contributions and donors. Sub-Phase II involves the establishment and operation of Country Hubs in Brunei Darussalam, Cambodia, Lao PDR, Myanmar, and Singapore. Sub-Phase III covers the Network's full implementation, through continuous building of IPM knowledge bases and knowledge sharing activities, across all the ASEAN member-countries. However, the Philippine Government, through the Department of Agriculture (DA), renewed its initiative on ASEAN IPM Knowledge Network, specifically the operation of Sub-Phases II and III, with the end in view of promoting sustainable agriculture within the ASEAN region. This renewed initiative was reported to and confirmed by the 27<sup>th</sup> SOM-AMAF Meeting held in September 2005 at Tagaytay City, Philippines.

## **STATUS OF ASEAN IPM**

The ASEAN IPM Knowledge Network is tasked with three main functions, namely: (1) knowledge management, (2) program development support, and (3) program clientele services. *Knowledge management* is the consolidation and transformation of available IPM information to create appropriate knowledge capital for use by national IPM programs in the region. *Program development support* involves the packaging of knowledge capital for use in major IPM components such as training, program management, policy and advocacy, and project evaluation. *Program clientele services* concern the assistance provided by the Network with regard to the access and use of stored IPM information and knowledge databases.

### **Knowledge Management Activities:**

#### **Enhancing the ASEAN IPM Regional Center Information and Knowledge Databases**

##### *1. Management of the Center's IT Hardware, Software, and Networking Facilities*

The ASEAN IPM Knowledge Network is hooked up to an upgraded Server with Fedora Core 3 or Windows Server 2003 Operating System at the Philippine Department of Agriculture's Information Technology Center for Agriculture and Forestry (DA-ITCAF). The server uses the latest versions (6.5 or 7.0) of Lotus Domino Enterprise Server software to provide electronic mail services, database and web application services, electronic discussions, and access control. Currently, the ASEAN IPM Regional Center has re-configured its electronic network in Wide Area Network (WAN) within the ASEAN region taking advantage of the Internet as the Network's backbone.

Likewise, the IT hardware of ASEAN IPM Regional Center at the National Agribusiness Corporation (NABCOR) has been upgraded to accommodate the revitalized build-up of information and knowledge databases and networking activities. The Center acquired 5 new units of IBM Thinkcenter A51 (Intel Pentium4 630 3.0 GHZ with HT Technology, 2X256 MB Memory, 80 GB HDD, CDRW Multi-burner Combo Drive, 3.5 FDD, Win XP Pro with 15" LCD TFT Monitor) as terminals for storage and efficient data generation and processing. These upgrades meet the minimum requirements for Lotus Domino 7.0 Server software. The set-ups of the ASEAN IPM Knowledge Network Configuration and ASEAN IPM Regional Center's Knowledge Management Facility are shown in *Figures 1* and *2*, respectively.

To enhance hard copies accumulation, systematic filling, and retrieval of encoded documents, the following hardware were likewise acquired by the ASEAN IPM Regional Center for its Physical Library, namely: (a) two [2] new laser printers (e.g., HP Laser Jet 1022n and Cannon Image Class MF3112), and (b) seven [7] units of multi-decked steel filling cabinets.

## *2. Regular Updating and Re-designing of the ASEAN IPM Web Page*

Since its re-activation in May 2006, the ASEAN IPM Web Page has been maintained by DA-ITCAF, where the Regional Center at NABCOR is connected through a direct leased line or Virtual Private Network (VPN), as shown in *Figure 3*. The Web Page contains two types of information: (1) general information on the ASEAN IPM Knowledge Network, which can be accessed by the general public; and (2) proprietary information on the ASEAN IPM Information and Knowledge Databases, which can be accessed only by the Country Hubs.

The format and design of the Web Page is continually improved and simplified in order to accelerate uploading time, hence making it more accessible to the Country Hubs and the general public. Recently, additional features were incorporated into the web page and its technical contents were regularly updated to keep various stakeholders abreast on latest development as regards IPM and related concerns within the region.

Through the Web Page, the Country Hubs can now participate in electronic mailboxes to send and receive e-mail messages. The Country Hubs can also link with the ASEAN IPM index page to showcase their latest IPM activities. These services, however, will require password authentication to be granted access. Inquiries about the Network can also be made through the Web Page by filling up a feedback form.

## *3. Building up of the ASEAN IPM Information and Knowledge Databases Contents*

When the Network momentarily ceased operation in October 2003, about 6,500 documents have already been gathered and encoded in the ASEAN IPM Regional Center's Information Database consistent with set standards. Out of these, over 2,800 have been screened, reviewed, synthesized, and encoded into the Knowledge Database. As of June 2008, over 9,000 documents have been indexed into the Information Database, of which more than 3,500

documents have been synthesized and stored into the Knowledge Database, ready for validation by an ASEAN IPM Panel of Experts. During the first two quarters of CY 2008, indexing, synthesizing, and encoding of documents into our databases slowed down a bit due to contract termination of a Project Analyst and a Project Specialist as a result of inadequate project funds. However, renewed indexing, synthesizing, and encoding of documents into our databases will be aggressively pursued during the last two quarters of CY 2008 as additional funds become available. About eighty percent (80%) of the knowledge database contents are concerns related to IPM technology development while the remaining twenty percent (20%) are on training methodology and curriculum development, program management and implementation, policy development and advocacy, as well as on project preparation and evaluation.

#### *4. Updating the ASEAN IPM Thesaurus and Manual of ASEAN IPM Network Operating Guidelines and Knowledge Management Policies*

The *ASEAN IPM Thesaurus and Manual of ASEAN IPM Network Operating Guidelines and Knowledge Management Policies* were reviewed, revised, and ratified by the participants, from nine (9) Country Hubs (except Singapore), to the ASEAN IPM Regional Management and Technical Workshop held on 30 May to 01 June 2006 at Cebu City, Philippines. As of June 2008 the thesaurus has accumulated over 3,500 knowledge descriptors, which has been devised and regularly updated to facilitate the classification of documents for the information databases within the network. Similarly, the accumulation of knowledge descriptors for our thesaurus during the first two quarters of CY 2008 was momentarily set aside until a Project Analyst and a Project Specialist are rehired. On the other hand, new propositions consistent with the standards set by ASEAN IPM are substantially incorporated into the network operating guidelines and knowledge management policies, which were developed to ensure the consistency, integrity, quality, relevance, and appropriateness of the Network's IPM information and knowledge databases.

### **Program Development Support Activities:**

#### *1. Training Management and Implementation*

Since its re-location from SEARCA to NABCOR in January 2006, the ASEAN IPM Regional Center renewed its collaboration with the Philippine National IPM Program (KASAKALIKASAN) in training management and implementation of IPM for emerging pest problems. For CY 2008, Project Specialists of the Center provided

technical assistance to Philippine Department of Agriculture's Regional Field Units (DA-RFUs), concerned Local Government Units (LGUs), and KASAKALIKASAN in planning, curriculum design, and actual implementation of the following:

- (a) *One-week Mindanao-wide Reinforcement Training Course on Integrated Pest Management for Rice Stem Borer (RTC-IPM-RSB)* from 05-09 May 2008 at Carmen, Agusan Norte. The main objectives of the course are: (a) to ensure a more effective GMA-Rice Program implementation; and (b) for participants to acquire enhanced knowledge, attitude and practice on IPM for RSB as essential component of future FFS and PTD activities, particularly in RSB infested areas of Mindanao.

Among others, the training course participants were able to achieve the following outputs: (a) enhanced knowledge, attitude and practice [KAP] on organizing, managing and facilitating FFS for GMA-Rice areas affected with RSB and other constraints; (b) list of management options for GMA-Rice areas affected with RSB and other constraints related to efficient fertilizer use; (c) developed discovery-based exercises for management of RSB; (d) list of special topics and discovery-based exercises for management of RSB and for efficient fertilizer use; and (e) regional and provincial action plans for management of RSB and efficient fertilizer use.

- (b) *One-week Luzon-wide Reinforcement Training Course on Integrated Pest Management for Corn Planthopper (RTC-IPM-CPH)* from 12-16 May 2008 at Cabanatuan City, Nueva Ecija. The main objectives of the course are: (a) to ensure a more effective GMA-Corn Program implementation; and (b) for participants to acquire enhanced knowledge, attitude and practice on IPM for CPH as essential component of future FFS and PTD activities, particularly in CPH infested areas of Luzon.

At the end of the course, the participants were able to accomplish the following outputs: (a) enhanced knowledge, attitude and practice [KAP] on organizing, managing and facilitating FFS for GMA-Corn areas affected with RSB and other constraints; (b) list of management options for GMA-Corn areas affected with RSB and other constraints related to efficient fertilizer use; (c) developed discovery-based exercises for management of RSB; (d) list of special topics and discovery-based exercises for management of RSB and for efficient fertilizer use; and (e) regional and provincial action plans for management of RSB and efficient fertilizer use, among others.

- (c) *One-week Luzon-wide Reinforcement Training Course on Integrated Pest Management for Rice Black Bug (RTC-IPM-RBB)* from 19-23 May 2008 at Baler, Aurora. The main objectives of the course are: (a) to ensure a more effective GMA-Rice Program implementation; and (b) for participants to acquire enhanced knowledge, attitude and practice on IPM for RBB as essential component of future FFS and PTD activities, particularly in RBB infested areas of Luzon.

The training course participants were able to generate the following outputs: (a) enhanced knowledge, attitude and practice [KAP] on organizing, managing and facilitating FFS for GMA-Rice areas affected with RBB and other constraints; (b) list of management options for GMA-Rice areas affected with RBB and other constraints related to efficient fertilizer use; (c) developed discovery-based exercises for management of RBB; (d) list of special topics and discovery-based exercises for management of RSB and for efficient fertilizer use; and (e) regional and provincial action plans for management of RBB and efficient fertilizer use.

In collaboration with various government (GO) and non-government (NGO) organizations as well as with international and national research, development, and extension (RD&E) organizations, ASEAN IPM provides technical expertise and support in capacity and capability building for local IPM program implementations, particularly in coconut-based farming system, corn production, and social reforestation. In this regards, several activities are in progress since December 2007, namely:

- (a) A season-long 'Training of Trainers (TOT) Course for Facilitators of Farmer Field Schools (FFS) on Integrated Pest Management in Corn Production' is being implemented in collaboration with Kadtuntaya Foundation, Incorporated or KFI [a non-government organization], Local Government Support Program to ARRM or LGSPA [a project funded by the Canadian International Development Agency or CIDA], Department of Agriculture and Fisheries of Autonomous Region of Muslim Mindanao or DAF-ARMM, Local Government Units or LGUs of North Upi, Shariff Kabunsuan, and KASAKALIKASAN. A crucial attribute of the pilot TOT-FFS curriculum is the introduction of the village-type *Trichogramma* Mass-rearing Facility (TMF) set-ups for effective and environment-friendly corn borer management in the TOS-FFS learning fields. The course highlights also recent environment-friendly management approaches for weed management to avoid the use of Round-up Ready (RR) corn

hybrid [a genetically modified organism or GMO], which has become a major production constraint of farmers growing corn in Shariff Kabunsuan. Consisting of two phases, Phase I involved the conduct of a ten-day intensive 'Reinforcement Training Course [RTC] for Farmer Field School Facilitators of Integrated Pest Management in Corn Production on 08-19 March 2008. Phase II consisted of season-long 'Farmer Field Schools [FFSs] for Integrated Pest Management in Corn Production', which were facilitated by DAF-ARMM trained corn specialists from 29 March 2008 to 27 July 2008 in two [2] Sitios of Barangay Tinungkaan and three [3] Sitios of Barangay Mirab, North Upi, Shariff Kabunsuan.

- (b) A season-long 'Training of Facilitators [TOF] Course and five [5] Farmer Field Schools [FFSs] for Integrated Production and Pest Management in Coconut-based Production System' are being pilot-tested, using the experiences on other crops by many national IPM programs of ASEAN Country Hubs, in partnership with Task Force Mapalad [an NGO], Philippine Coconut Authority [PCA], Department of Agriculture's Regional Field Unit 11 [DA-RFU 11], Crop Protection Division of the Bureau of Plant Industry [CPD-BPI], KASAKALIKASAN, and concerned Local Government Units [LGU] in five [5] major coconut-based banana and cacao growing municipalities of Davao Oriental. Phase I, which was held last December 2007 at Mati City, Davao Oriental, involved the conduct of a ten-day intensive 'Reinforcement Training Course [RTC] for Farmer Field School Facilitators of Integrated Pest Management in Coconut-based Production System. Phase II, which will be conducted in September 2008, consists of season-long 'Farmer Field Schools [FFSs] for Integrated Pest Management in Coconut-based Banana and Cacao Production', will be facilitated by trained IPM specialists from PCA, DA-RFU 11, CPD-BPI, LGU-Davao Oriental, and KASAKALIKASAN.

## 2. Curriculum Development Activities

The ASEAN IPM Regional Center continues to develop, compile, co-edit, and/or co-publish monographs, training manuals, handbooks, and field guides in collaboration with various stakeholders to enhance the implementation of national IPM programs in ASEAN region. To date, the following publications are continually distributed, field-validated, and/or used as reference materials in various training forums within the ASEAN region:

- (a) *Empowering Farmers: The Philippine National Integrated Pest Management Program* (1<sup>st</sup> and 2<sup>nd</sup> Editions). The monograph

- highlights successes of KASAKALIKASAN as a human resource development program of the Philippine Department of Agriculture in collaboration with local government units and non-government organizations. Edited by ASEAN IPM Project Specialists, the monograph is used as a reference material for program management by IPM stakeholders in the Philippines and other ASEAN member-countries.
- (b) *Handbook on Non-formal Education and Team Building Exercises for IPM*. The handbook is used as guide by training facilitators in season-long IPM Training of Specialists (TOS) and Farmer Field Schools (FFS) courses by the Philippine and other ASEAN National IPM Programs. The book is co-published by ASEAN IPM and the Philippine National IPM Program.
  - (c) *Field Guide of Discovery-based Exercises for Mango IPM*. The field guide is designed for use of FFS in Mango IPM. The book is co-published by ASEAN IPM and the Philippine and Thailand National IPM Programs. The book is used as guide by training facilitators in season-long TOT and FFS courses for IPM in mango by the Philippine and other ASEAN National IPM Programs.
  - (d) *Field Guide of Discovery-based Exercises for Corn Production*. The book is a compilation of supplemental discovery-based exercises used as facilitators' guide by the Philippine and other ASEAN National IPM Programs, since its publication in 2001 to date, for FFS covering topics on corn production including IPM, integrated soil management (ISM), and post harvest management (PHM). The publication is a joint collaboration with the National Corn (Ginintuang Masaganang Ani) and IPM (KASAKALIKASAN) Programs of the Philippine Department of Agriculture. Additional copies were distributed to Country Hub participants of the ASEAN IPM Regional Management and Technical Workshop held on 30 May to 01 June 2006 at Cebu City, Philippines.
  - (e) *Field Guide of Discovery-based Exercises for Vegetable IPM Volume II*. The book is a compilation of supplemental discovery-based exercises used as facilitators' guide by the Philippine and other ASEAN National IPM Programs for FFS covering topics on crop production and IPM in crucifers, legumes, cucurbits, and solanaceous vegetables. The publication is a collaborative undertaking with the Philippine National IPM Program and the

Cordillera Highland Agricultural Resources Management (CHARM) Project, an undertaking funded by Asian Development Bank (ADB).

- (f) *Handbook on Participatory Technology Development Exercises for Vegetable IPM*. The handbook is used as training facilitators' guide by the Philippine and other ASEAN National IPM Programs for vegetable farmers conducting participatory technology development (PTD) or participatory action research (PAR) activities. The publication is also a joint collaboration with the Philippine National IPM Program and the ADB-funded CHARM Project. Additional copies were distributed to Country Hub participants of the ASEAN IPM Regional Management and Technical Workshop held on 30 May to 01 June 2006 at Cebu City, Philippines.

Since January 2006, ASEAN IPM Regional Center resumed activities for the completion and publication of several training manuals, handbooks, leaflets, and field guides. For CY 2008, the following publications are in progress:

- (a) *Manual of Integrated Production and Pest Management for Processing Tomatoes*. The manual is based on the proceedings of the Workshop on Integrated Production and Pest Management for Processing Tomatoes held at Laoag City, Philippines in July 2005 and experiences learned during a Study Tour on Integrated Production and Pest Management on Tomato Leaf Curl Virus and Whitefly Management for Processing Tomato in the USA and Mexico in July-August 2007. The book, scheduled for publication on the third quarter of CY 2008, highlights best practices in processing tomato production in the Philippines, Southeast Asia, USA, Mexico, and other processing tomato producing countries. The publication is a collaborative endeavor of ASEAN IPM, Philippine National IPM Program, University of the Philippines Los Baños' National Crop Protection Center (UPLB-NCPC), Northern Foods Corporation (NFC), FAO Vegetable IPM Programme for Asia, and Campbell Foods Corporation of U.S.A.
- (b) *Leaflet on Tomato Leaf Curl Virus and Whitefly Management*. The leaflet is based on recent experiences learned by scientists from the University of the Philippines Los Baños College of Agriculture's Crop Protection Cluster (UPLBCA-CPC) and by

participants of a Study Tour on Integrated Production and Pest Management on Tomato Leaf Curl Virus and Whitefly Management for Processing Tomato in the USA and Mexico in July-August 2007. The leaflet, scheduled for publication on the third quarter of CY 2008, highlights best practices in the management of tomato leaf curl virus (ToLCV) and whitefly management in the Philippines, Southeast Asia, USA, Mexico, and other processing tomato producing countries. The publication is a collaborative endeavor of ASEAN IPM, Philippine National IPM Program, UPLBCA-CPC, Northern Foods Corporation (NFC), FAO Vegetable IPM Programme for Asia, and Campbell Foods Corporation of U.S.A.

- (c) *Field Guide of Discovery-based Exercises for Organic Vegetable Production*. The field guide, scheduled for final drafting on the last quarter of CY 2008, is designed for use by training facilitators in the conduct of FFS for organic vegetable production. The book is based on the proceedings of a Workshop on Designing Farmer Field School Curriculum on IPM for Organic Vegetable Farming held at PCARRD, Los Baños, Laguna on April 2008. Appropriate exercises from the *Field Guide of Discovery-based Exercises for Vegetable IPM Volume II*, were likewise adapted in this book. This publication is a collaborative activity of ASEAN IPM, Philippine National IPM Program, Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development Council (PCARRD), selected Local Government Units (LGUs), Department of Agriculture's Regional Field Units (DA-RFUs), and Food and Agriculture Organization Vegetable IPM Programme for Asia (FAO Vegetable IPM).

### **Program Clientele Activities:**

1. *Conduct of Three-day Workshop on Designing Farmer Field School (FFS) Curriculum on IPM for Organic Vegetable Farming*

The workshop, which was held at PCARRD, Los Baños, Laguna on 28-30 April 2008, reviewed the technological developments in organic vegetable farming and documented the best practices and experiences from FFS farmers and facilitators of organic vegetable farming. Proceedings of this workshop are being used in developing a *Field Guide of Discovery-based Exercises for Organic Vegetable Production*, which will be published as reference materials of IPM facilitators for conducting FFS on organic vegetable

farming in the Philippines and other ASEAN member-countries. This activity was a joint undertaking among the ASEAN IPM, Philippine National IPM Program, Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development Council (PCARRD), selected Local Government Units (LGUs), Department of Agriculture's Regional Field Units (DA-RFUs), and Food and Agriculture Organization Vegetable IPM Programme for Asia (FAO Vegetable IPM).

2. *Conduct of Three-day Workshop on Designing Farmer Field School (FFS) Curriculum on IPM for Vegetable-based Social Reforestation*

The workshop, which was held at Tarlac College of Agriculture (TCA), Camiling, Tarlac on 17-19 June 2008, developed an FFS curriculum on IPM for vegetable-based social reforestation, which will be used by DENR-JICA Project for Enhancement of Community-Based Forest Management Program (CBFMP) to pilot-test social reforestation activities in Region 3, through the FFS approach. This activity was a joint undertaking among the ASEAN IPM, Philippine National IPM Program, Department of Environment and Natural Resources (DENR), Japan International Cooperation Agency (JICA), selected Local Government Units (LGUs) of Tarlac, and Department of Agriculture's Regional Field Unit 3 (DA-RFU 3) and Regional Crop Protection Center 3 (DA-RCPC 3).

## **FUTURE PLAN OF ACTIVITIES**

1. *Continuous building of the ASEAN IPM Information and Knowledge Databases*

Newer versions of IT hardware and software are constantly secured for knowledge networking activities, both at DA-ITCAF and NABCOR, for the Network. In this regard, the ASEAN IPM Regional Center is now able to continue acquiring new materials more vigorously on IPM and related concerns from local and international organizations or institutions for its databases. It is able likewise to accelerate screening, reviewing, synthesizing, and encoding activities for selected materials into the Network's Knowledge Database. However, with the current technical staff level, the Regional Center is projected to gather and encode only about 500 new documents to its Information Database as well as screen, review, synthesize, and encode over 250 of these new documents into its Knowledge Database for the succeeding quarters of CY 2008.

Nevertheless, as a result of the ASEAN IPM Regional Management and Technical Workshop conducted on 30 May to 01 June 2006 at Cebu City, Philippines, the Country Hub participants have committed to facilitate setting up of their own IT facilities and thus, contribute in the knowledge management activities of the ASEAN IPM Knowledge Network by starting to build-up their own information and knowledge databases. In this regard, every Country Hub is expected to gather and encode at least 100 locally-sourced documents containing best IPM practices into their respective Information Databases. Modestly, it is projected that some 1,000 new documents will be added into the ASEAN IPM Regional Center Information Database by the end of CY 2008 for use by respective ASEAN IPM Country Hubs. However, due to language barrier and inadequate technical staff, each Country Hub may not be able yet to screen, review, synthesize, and encode these documents into their respective Knowledge Databases during this year.

Likewise, the Regional Center is collaborating with the South Korean National IPM Program for the conduct of a Technical Workshop on Information and Knowledge Databases Management in July 2008 at DA-ITCAF, Quezon City, Philippines. This activity will allow an expanded knowledge sharing activities among ASEAN IPM Country Hubs and the National IPM Programs of other Asian countries.

## 2. *Knowledge Utilization Activities*

Beginning on the first quarter of CY 2008, the ASEAN IPM Regional Center is sustaining its renewed collaboration with the National IPM Program of Cambodia in the compilation and co-publication of a handbook on IPM best experiences and practices from National IPM Programs of ASEAN member-countries. Initially, best practices on addressing HIV/AIDS problem, rice-fish culture, livestock production, maternal care, child nutrition and participatory school children education using the FFS approach from the Cambodian, Vietnamese and the Philippine National IPM Programs are being collected and compiled for the handbook.

The Center is also initiating collaborative endeavor with National IPM Programs in the ASEAN region (e.g., Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Thailand, and Vietnam) to compile, co-edit, and co-publish a manual of their best experiences as regards their management of coconut leaf beetle (*Brontispa longissima*) infestation, which is an emerging pest problem of coconut and other palm species in the ASEAN and Asia-Pacific regions.

Beginning on the third quarter of CY 2008, the ASEAN IPM Regional Center and KASAKALIKASAN will spearhead the pilot-testing of FFS activities on: (a) organic vegetable farming in collaboration with FAO Vegetable IPM Programme for Asia, PCARRD, selected DA-RFUs and LGUs; and (b) vegetable-based social reforestation in collaboration with JICA, DENR, DA-RFU 3 and selected LGUs of Tarlac.

### *3. Systems Upgrade of ASEAN IPM Country Hubs*

Concomitant with systems upgrading undertaken at the Regional Center, parallel systems upgrading of Country Hubs' networking facilities will be performed as soon as these Hubs have situated appropriate personnel and upgraded their IT hardware, a common consensus among the participants during the ASEAN IPM Regional Management and Technical Workshop held on 30 May to 01 June 2006 at Cebu City, Philippines. The Lotus Domino Application Server software will be updated from version 5.0.9a to version 6.0 or 7.0 in Sub-Phase I Country Hubs and installed with version 6.0 or 7.0 in Sub-Phase II Country Hubs by the Regional Center. Correspondingly, Country Hubs' Lotus Notes Client application programs will be likewise updated from version 5.0.9a to version 6.0 or 7.0 or installed with version 6.0 or 7.0, as the case maybe.

### *4. On-site Follow-up of Information and Knowledge Management Activities of Sub-Phases I and II Country Hubs*

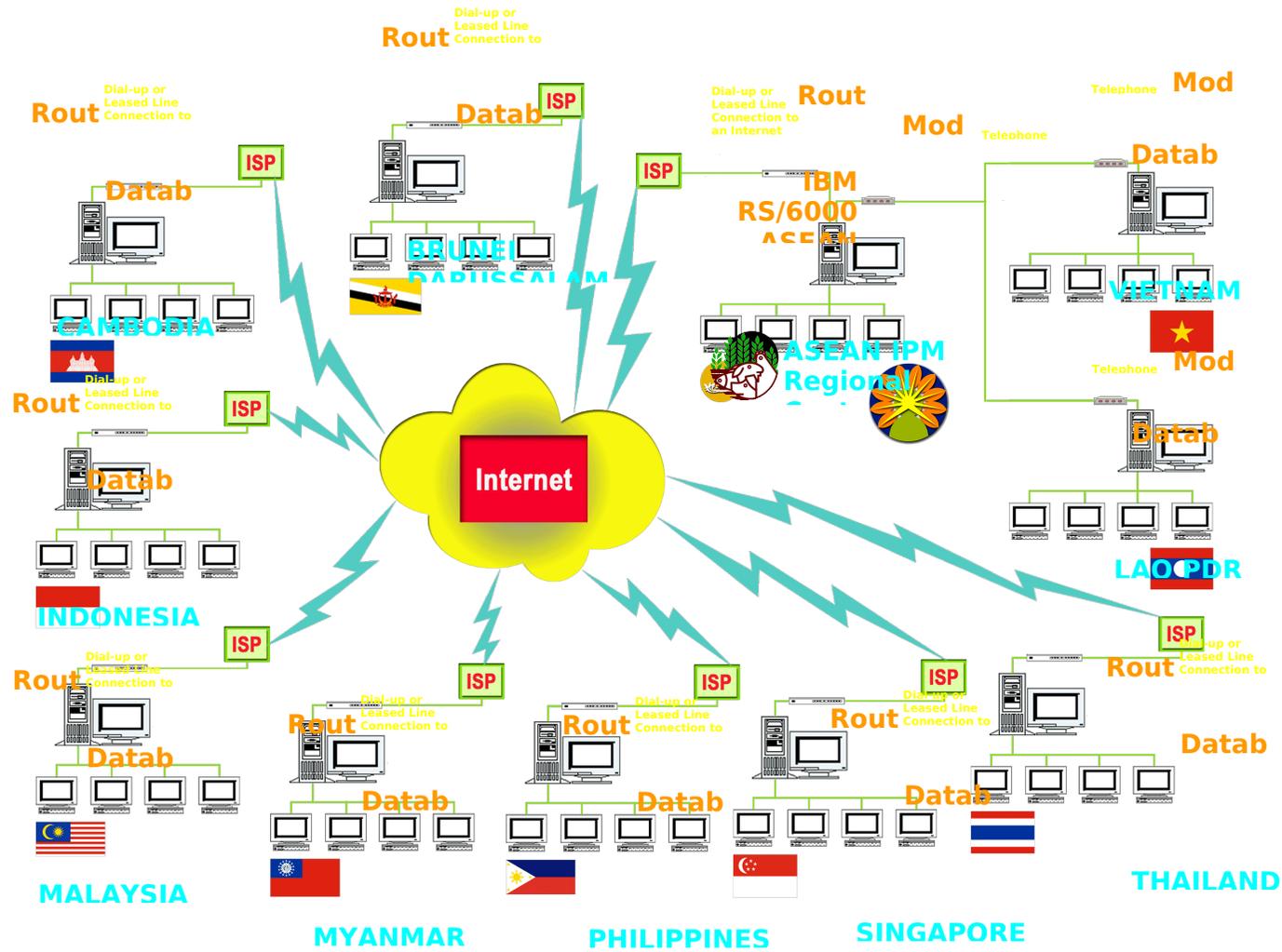
Follow-up activities of Sub-Phases I and II Country Hubs will be undertaken to: (a) reset-up or set-up their knowledge management facility; (b) re-launch or initiate as well as enhance their electronic operations; and (c) strengthen their information and knowledge management operations. If funds will be available beginning on the third quarter of CY 2008, teams consisting of IT and technical specialists from the Regional Center will conduct on-site visit of Sub-Phases I and II Country Hubs and train Country Hub personnel on knowledge management requisites as well as on information and knowledge management operations. In-country training expenses will be provided by the Country Hubs. The Regional Center will shoulder all other travel-related expenses of its IT and technical training staff.

### *5. Conduct of the ASEAN IPM Panel of Technical Experts Workshop*

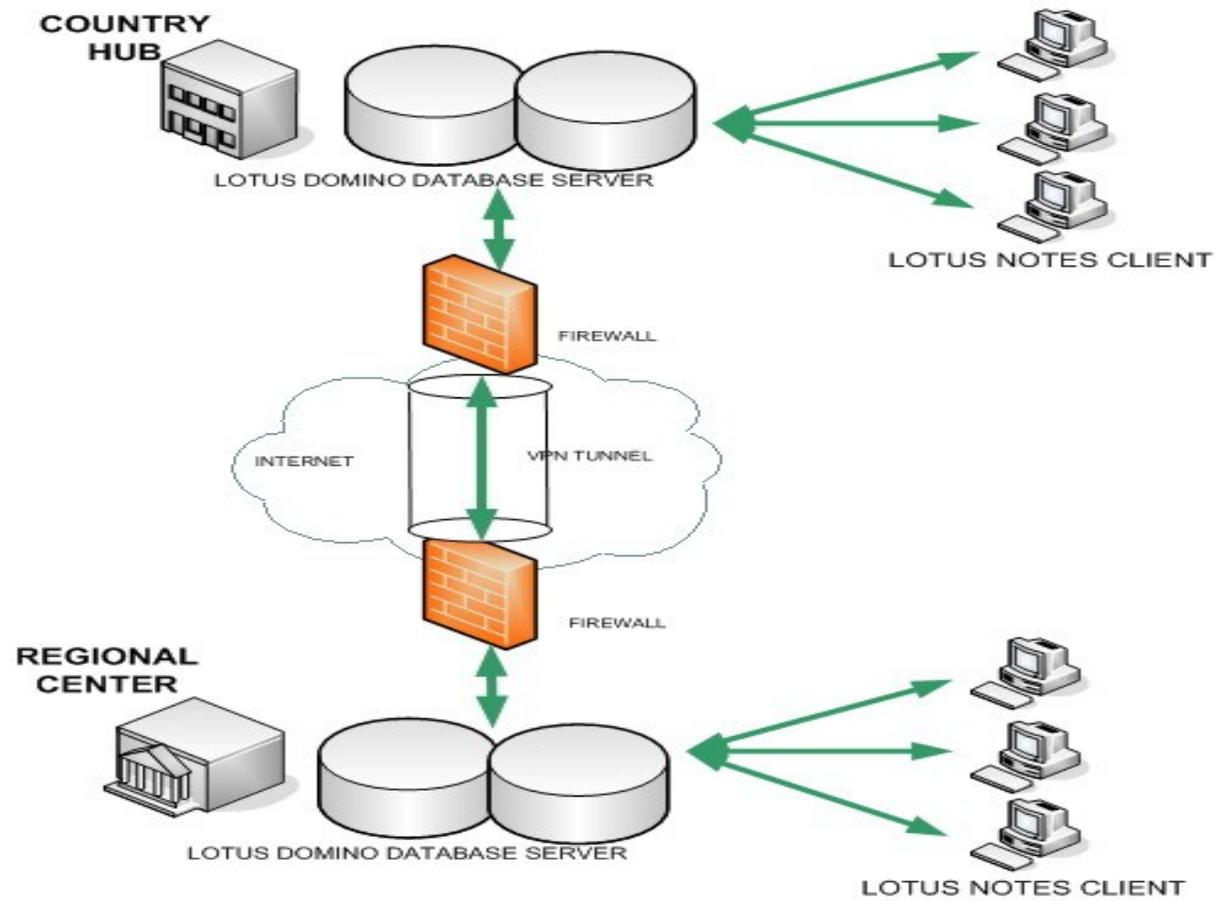
The ASEAN IPM Regional Center plans to hold the Panel of Experts Workshop at Bangkok, Thailand in the last quarter of CY 2008, again subject to availability of funds. The Panel is envisioned to review

and evaluate the content and quality of the Network's information and knowledge databases. The Workshop will identify the roles and responsibilities of the Technical Panel of Experts and formulate a clearing process for adoption.

**FIGURE 1. ASEAN IPM KNOWLEDGE NETWORK CONFIGURATION**



**FIGURE 2. ASEAN IPM KNOWLEDGE MANAGEMENT FACILITY**



**FIGURE 3. ASEAN IPM KNOWLEDGE NETWORK WEB PAGE**

