



# **IDENTIFICATION OF CAPACITY BUILDING NEEDS IN ASEANET FOR THE MANAGEMENT OF INVASIVE ALIEN SPECIES**

**By**

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# ESTABLISHMENT OF ASEANET



- **February 1994: Feasibility study in Thailand, Indonesia, Malaysia, Singapore and Philippines**
- **April 1994: Report presented to the 5th Meeting of ASOEN in Brunei Darussalam**
- **August 1996: ASEANET Formulation Workshop held in Kuala Lumpur, Malaysia**
- **September 1998: Officially endorsed by ASOEN in Singapore**
- **ASEANET operational in May 1999**



# ASEANET's MISSION

- Capacity-building in taxonomy and related sciences to enable ASEAN nations to manage its mega-biodiversity for sustainable development to fulfill national obligations under the CBD, and
- To prepare member economies for compliance to SPS rules under the WTO Agreement.



# WORK PROGRAMMES

1. *Development of information and communication services*
2. *Human resource development*
3. *Rehabilitation of collections and records*
4. *Development/adoption of new technologies*



# **INITIAL FUNDING FOR TWO YEARS (1999-2001)**

**SUPPORTED BY BioNET INTERNATIONAL**

- **£ 25,000 per year for NECI activities**
- **£ 15,000 per year for BioNET Fellowship**
- **£ 5,000 per year for Information Support Services for the Network**

# ASEANET MEMBER COUNTRIES





# MAJOR OPTIONS FOR DEALING WITH IAS

- PREVENTION
- EARLY DETECTION
- ERADICATION
- CONTROL



# **PREVENTION OF INTRODUCTION IS THE FIRST AND MOST COST- EFFECTIVE OPTION**

- 1) Interception based on regulations**
- 2) Treatment of contaminated materials**
- 3) Prohibition of particular commodities  
in accordance with international  
regulations**
- 4) Implement import risk assessment  
for introduction of non-indigenous  
species**





# **ASEANET- AFFA NEEDS ASSESSMENT SURVEYS OBJECTIVES**

- 1. To compile information related to the status of institutional capacities and practices in taxonomy and identification of pests, including collection management, data handling, information management, infrastructure and human resources**



# OBJECTIVES

- 2. To assess the existing level of diagnostic and taxonomic expertise available to support pest collections and the areas of critical need**
- 2. To determine the needs of ASEAN countries to achieve realistic self-reliance as envisage for an operational regional network in taxonomy**



# NATIONAL/REGIONAL INSTITUTIONS VISITED

	<u>Arth.</u>	<u>Pl.Path.</u>
Brunei Darussalam	4	2
Indonesia	10	8
Laos	-	2
Malaysia	12	8
Myanmar	4	-
Philippines	8	6
Singapore	5	2
Thailand	11	10
Vietnam	4	6



# **ASEANET- CABI PLANT HEALTH SURVEY OBJECTIVES**

**To compile information related to NPPO  
in each country of the ASEAN:**

- **Human Resources**
- **Facilities (buildings and equipment)**
- **Documented Procedures**
- **Priorities for Technical Assistance**



## **CATEGORIES OF QUESTIONNAIRE**

- Background Information
- Phytosanitary Legislation
- Diagnostic Capabilities for Imported Commodities and Surveillance
- Pest Risk Analysis
- Surveillance
- Exotic Pest Response
- Inspection System
- Export Certification
- Technical Assistance Priorities



## NO. OF ENTRY/EXIT POINTS AND INSPECTORS INVOLVED IN THE DIFFERENT ASEAN COUNTRIES

COUNTRY	AIRPORTS		SEAPORTS		LANDBORDER POSTS	
	Points	Person	Points	Person	Points	Person
	Brunei	1	6	2	5	3
Indonesia	42	180	85	305	4	15
Laos	3	0	0	0	16	15
Malaysia	12	91	22	97	14	99
Myanmar	2	25	3	1	6	16
Singapore	1	4	1	4	2	4
Philippines	-	>100	-	>100	-	>80
Thailand	7	21	8	23	20	27
Vietnam	3	9	8	?	40	110



# PHYTOSANITARY LEGISLATION

	No. of Countries
Availability of NPPO in the country	9
NPPO comply with IPPC	5
Responsibility of NPPO:	
a. PC issuance	9
b. Ensuring the PC in conformity with IPPC	9
c. Pest surveillance	9
d. Inspection of plant and plant products	9
e. <u>Disinfection to meet phyto-sanitary requirem.</u>	8
f. Conducting PRA	9
g. <u>R&amp;D in Plant Protection</u>	6
h. Submitting info on NPPO to IPPC	9
i. Determining import protocols	9
j. Approving/registering PEQ	9
k. <u>Power to search and seizure</u>	7
l. Declaration form for importer	9



# DIAGNOSTIC CAPABILITIES IN THE ASEAN COUNTRIES

HUMAN RESOURCES	Total in 9 countries
1. Fruitfly specialists	
At NPPO	25-30
Outside NPPO	24
2. Diptera specialists	
At NPPO	6
Outside NPPO	19
3. Lepidoptera specialists	
At NPPO	5
Outside NPPO	30
4. Coleoptera specialists	
At NPPO	8
Outside NPPO	25





## 5. Hemiptera specialists

At NPPO 3

Outside NPPO 19

## 6. Stored product specialists

At NPPO 70

Outside NPPO 36

## 7. Thysanoptera specialists

At NPPO 2

Outside NPPO 17

## 8. Arachnida specialists

At NPPO 2

Outside NPPO 17

## 9. Mollusc specialists

At NPPO 3

Outside NPPO 23



<b>10. General entomologists</b>	
At NPPO	143
Outside NPPO	>106
<b>11. Fungal pathology specialists</b>	
At NPPO	29
Outside NPPO	>55
<b>12. Bacteriology specialists</b>	
At NPPO	12
Outside NPPO	43
<b>13. Plant virology specialists</b>	
At NPPO	11
Outside NPPO	33
<b>14. General pathology specialists</b>	
At NPPO	120
Outside NPPO	>80



## 15. Nematologists

At NPPO

14

Outside NPPO

>23

## 16. Weed scientists

At NPPO

23

Outside NPPO

>25



# DIAGNOSTIC CAPABILITIES IN THE ASEAN COUNTRIES

## AVAILABILITY OF DOCUMENTED PROCEDURES

1. For identification of arthropod pests 6
2. For identification of fungi and bacteria 6
3. For identification of nematodes 6
4. For identification of viruses and virus-like organisms 6
5. For identification of weeds 6
6. For conducting research on rapid diagnostic techniques (RPT) and detection 4
7. Institutions outside NPPO conducting research on RPT and detection 7



## PEST RISK ANALYSIS IN THE ASEAN COUNTRIES

Availability of National PRA standard	7
Is this consistent with International PRA?	5
Availability of formal PRA Group	3
Human Resources for PRA	
1. Entomologists	7
2. Mycologists/bacteriologists	7
3. Virologists	4
4. Nematologists	5
5. Weed scientists	5
Staff trained on international standard PRA5 (11)	
Software tools on PRA	6



## PEST SURVEILLANCE CAPABILITIES IN THE ASEAN COUNTRIES

1. Availability of National Databases of Plant Pests Records 7
2. Official surveys of crops for pests 7
3. Staff trained in surveillance 6
4. Availability of full time regional managers for surveillance 5
5. Availability of computer/I T staff for surveillance 7
6. Basic equipment for surveillance 9



## EXOTIC PEST RESPONSE CAPABILITIES IN THE ASEAN COUNTRIES

1. Availability of national standard/guidelines for responding to exotic pests introduction 6
2. Conformity with International Standard 5
3. Availability of management team for coordination of activities 4
4. Availability of qualified staff to assess the feasibility of eradication programme 7
5. Availability national manager/coordinator for exotic pests response 7



# INSPECTION SYSTEM AT POINTS OF ENTRY AND EXIT

## DOCUMENTED PROCEDURES FOR INSPECTING REGULATED ARTICLES

- |                                 |   |
|---------------------------------|---|
| 1. Passengers and their baggage | 5 |
| 2. Air cargo                    | 5 |
| 3. Sea-mail                     | 5 |
| 4. Mail                         | 5 |
| 5. Land cargo (trucks and cars) | 5 |





# INSPECTION SYSTEM AT POINTS OF ENTRY AND EXIT

## DOCUMENTED SYSTEMS FOR RECORDING

1. Place of inspection	9
2. Date of inspection	9
3. Name of inspector	9
4. Commodity type inspected	9
5. Origin and carrier	9
6. Pest detected	9
7. Treatment carried out	9
8. Release/disposal	9



# INSPECTION SYSTEM AT POINTS OF ENTRY AND EXIT

## ADVANCED EQUIPMENT FOR INSPECTION AT ENTRY POINTS

- |  |   |
|--|---|
| 1. X-ray machine   | 1 |
| 2. Fluoroscope   | 2 |
| 3. Incubators  | 4 |
| 4. Computerized data recording and retrieval   | 4 |
| 5. System for informing trading partners of any non-compliance immediately after detection | 5 |



# TECHNICAL ASSISTANT PRIORITIES IN THE ASEAN COUNTRIES

PHYTOSANITARY LEGISLATION	26
DIAGNOSTIC CAPABILITIES	
a) Human resources	43 2)
b) Buildings	28
c) Equipment	33
PEST RISK ANALYSIS	
a) Human resources	45 1)
b) Buildings	31
c) Equipment	36
SURVEILLANCE	
a) Human resources	40 4)
b) Buildings	27
c) Equipment	34



## TECHNICAL ASSISTANT PRIORITIES IN THE ASEAN COUNTRIES

### EXOTIC PEST RESPONSE

a) Human resources	41 3)
b) Buildings	28
c) Equipment	34

### INSPECTION SYSTEM

a) Human resources	41 3)
b) Buildings	28
c) Equipment	32



# RECOMMENDATIONS

1. There is a need to strengthen and define **institutional responsibilities** for developing and maintaining disease herbaria and pest collections including IAS;
2. There is a need to **increase the number** of trained plant health professionals in relevant agencies/institutions, especially in the following areas:
  - a) identification, diagnostic and early detection of pests including invasive species,
  - b) surveillance, monitoring and risk analysis,
  - c) database management related to specimens



# RECOMMENDATIONS

3. There is a need for a regional network of plant health professionals to assist them to identify pest of quarantine importance and IAS;
4. There is a need to improve infrastructure and support to ensure the maintenance of existing disease herbaria and pest collections (including IAS) as well as to rehabilitate them to acceptable international standards to support risk analyses;
5. There is a need to generate comprehensive data on local pests or improve 'passport' data on existing specimens to meet the International Plant Protection Convention (IPPC) standard (ISPM No.8) for a pest record;



# RECOMMENDATIONS

6. There is a need to improve and sustain information systems for data on specimens held in the herbaria and collections;
7. There is a need to improve understanding among some senior managers of the importance of IAS in biodiversity conservation issues.



*Needs Assessment*







# ONGOING ASEANET INITIATIVES ON IAS

1. With DOA, co-organising a national workshop on IAS in Malaysia (8-9 October 2003).
2. With CABI -SEARC, conducting survey on "The Management of IAS in SE Asia".
3. Establishment of "ASEAN Invasive Species Information Network" (proposal)
4. As Technical Secretariat of ASEAN Plant Health Cooperation Network



# ASEAN Plant Health Co-operation Network

- endorsed by ASEAN Ministers on Agriculture & Forestry (AMAF) in August 2003
- to harmonize and co-ordinate regional capacity-building in quarantine & plant health
- technical support by ASEANET
- act as gateway to regional development assistance related to quarantine & plant health
- serve as regional information hub on relevant areas



**Thank you**