THE 3rd APPPC WORKSHOP ON PLANT HEALTH SURVEILLANCE INFORMATION MANAGEMENT SYSTEM
28 MAY- 1 JUN 2018
SHANGHAI, CHINA

OLEH:

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PEGAWAI PERTANIAN G44

BAHAGIAN BIOSEKURITI TUMBUHAN NEGERI PERLIS

LATAR BELAKANG KURSUS

Tajuk:

The 3rd APPPC Workshop On Plant Health Surveillance Information Management System

Jangkamasa kursus:

5 hari (28 Mei – 1 Jun 2018)

Tempat :

Cypress Hotel Jin Jiang, Hong Qiao Road, Changning District, Shanghai

Penyertaan:

36 orang peserta dari 18 buah negara

LATAR BELAKANG KURSUS

- **Pembiayaan dan Penganjuran:**
  - **Kementerian Pertanian, China**
  - **FAO (Food and Agriculture Organization of United Nations)**
- **Telah dijalankan pada setiap tahun bermula tahun 2016 dan akan berakhir pada 2021**
- **Penceramah:**
  - **Chris Dale & Nick Housego (Assistant Director)**
  - **DAWR (Department of Agriculture and Water Resources, Australia)**

APPPC Surveillance Implementation Work Plan 2016-2021

1. Plant Health Surveillance Systems Management (2016)
2. Surveillance Planning, Coordination and Delivery (2017)
3. Surveillance Information Management Systems (2018)
4. Surveillance Statistical Analysis, Mapping and Intelligence (2019)
5. Surveillance Communication, Reporting and Response (2020)
6. Plant Health Surveillance Pest-Free Area Surveillance (2021)

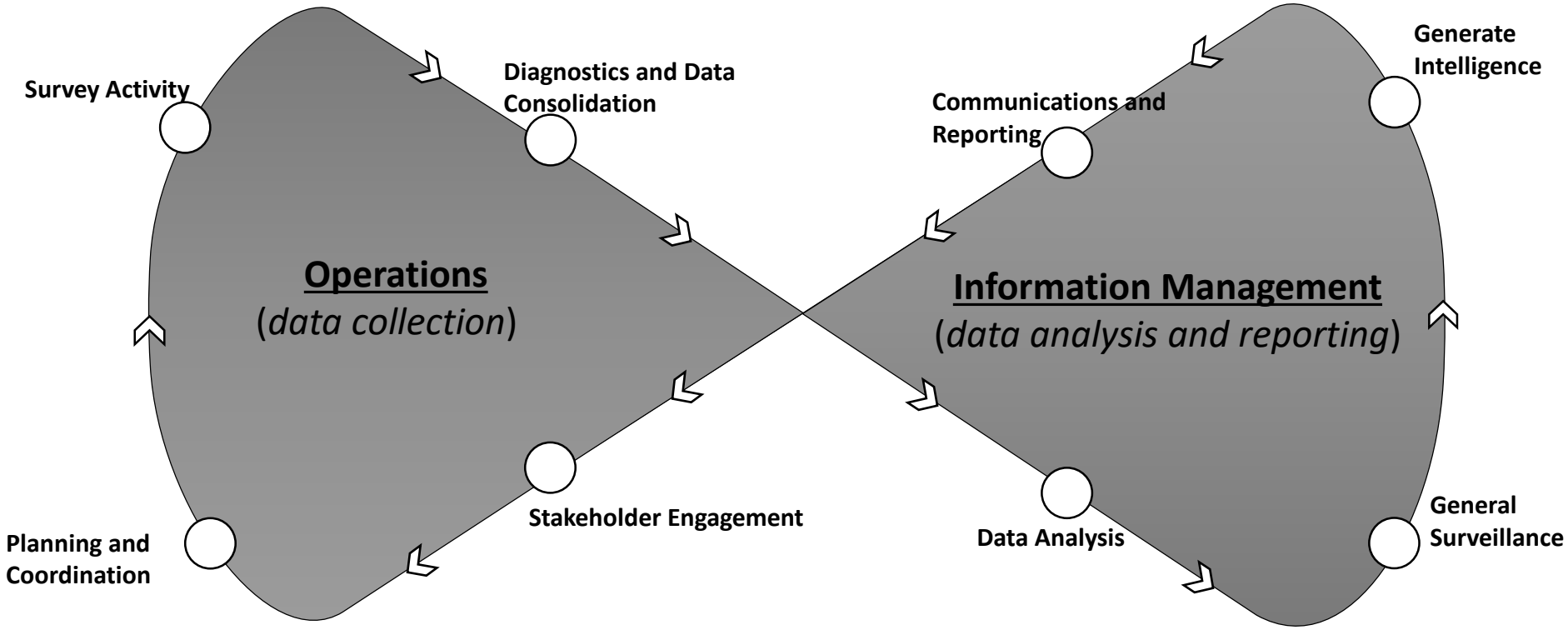
BENGKEL SISTEM PENGURUSAN MAKLUMAT PENGAWASAN APPPC

Hari 1	Hari ke-2	Hari ke-3	Hari ke-4	Hari ke-5
Pengenalan Kepada Sistem Pengurusan Maklumat Pengawasan	Rekabentuk data pengawasan , Perancangan, Penyatuan dan Penyampaian	Lawatan Ladang	Penyatuan data pengawasan, Pengurusan dan Komunikasi	Pengurusan Status Pengawasan Perosak dan Pelaporan

Sistem Pengurusan Maklumat Pengawasan NPPO

- Mengenalpasti risiko biosekuriti kebangsaan dan serantau
- Sokongan tuntutan status perosak dalam negara
- Membangunkan senarai perosak untuk memastikan tindakan fitosanitari dan memaklumkan analisa risiko makhluk perosak
- Tindakan pembasmian dan langkah kawalan
- Memenuhi keperluan pelaporan antarabangsa (ISPM 17 – Laporan Perosak)

Sistem Pengurusan Maklumat Pengawasan

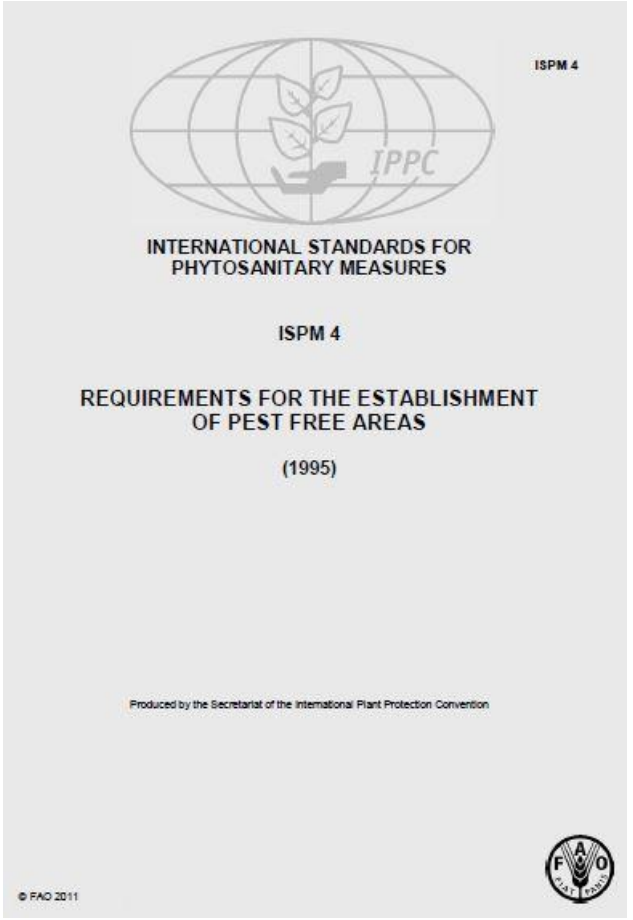


International Standards For Phytosanitary Measures (ISPM) yang terlibat:

- ISPM 4 – Requirements For The Establishment Of Pest Free Area (1995)
- ISPM 6 – Guidelines For Surveillance (1997)
- ISPM 8 – Determination of Pest Status In An Area (1998)
- ISPM 17 – Pest Reporting (2002)

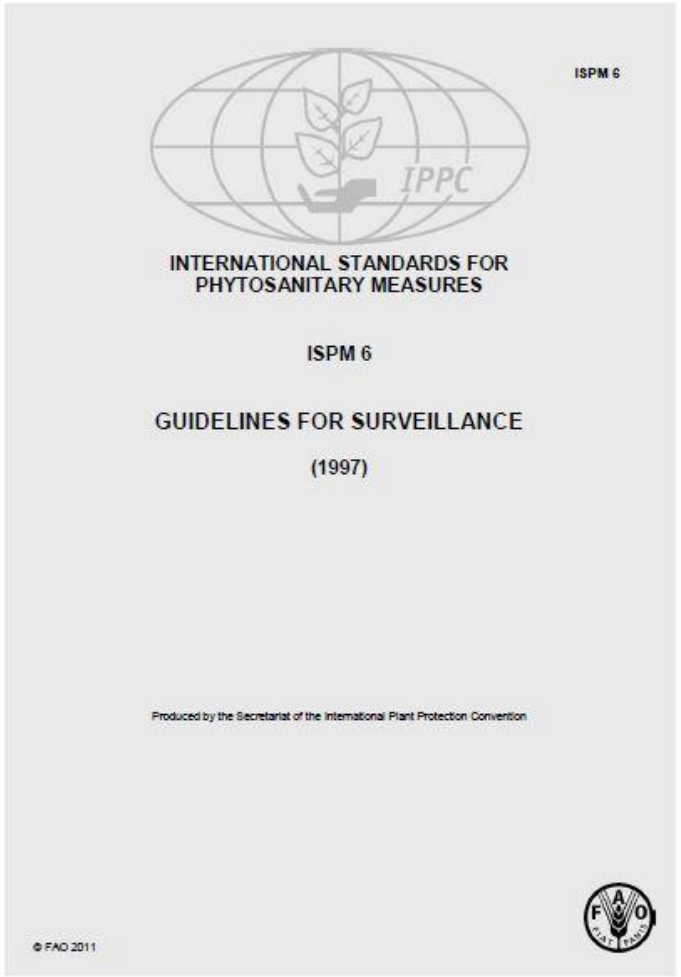
ISPM 4 – REQUIREMENTS FOR THE ESTABLISHMENT OF PEST FREE AREAS (1995)

- Describes the requirements for the establishment and use of pest free areas (PFA's).
- A pest free area is an area in which a specific pest (SALB) does not occur as demonstrated by scientific evidence.
- Pest Free areas may include an entire country, an uninfested part of a country in which a limited infestation area is present, or an uninfested part of a country situated within a generally infested area.
- Surveillance activities focus on systems to establish freedom and check to verify freedom has been maintained.
- Surveillance activities – delimiting, detection and monitoring
- Technical details of surveillance or survey and monitoring systems used to support claims of pest absence.
- Pest free areas status is based on verification from specific surveys.



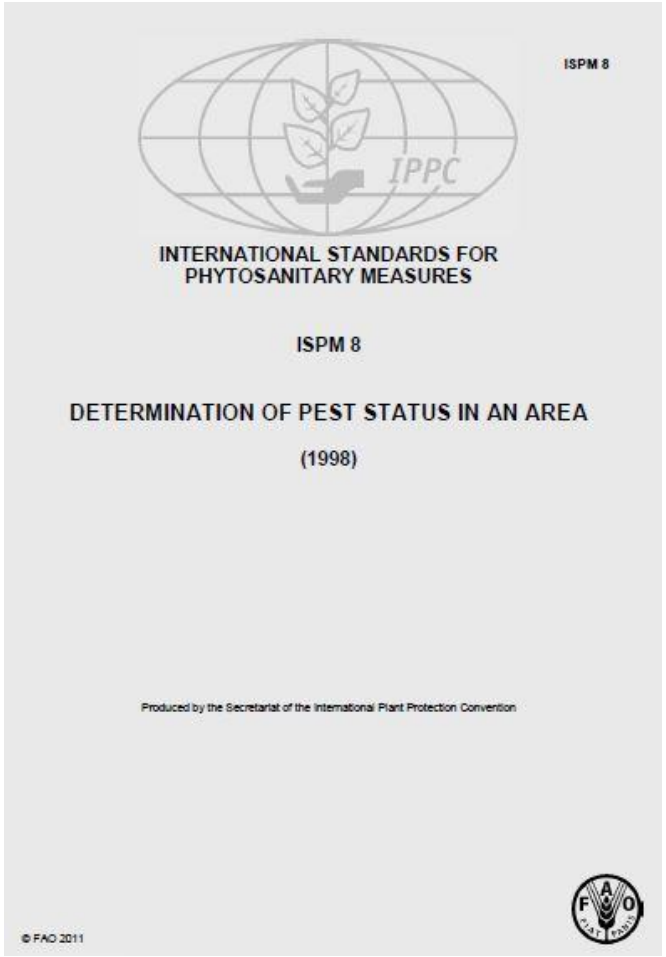
ISPM 6 – GUIDELINES FOR SURVEILLANCE (1997)

- Describes the components of survey and monitoring systems for the purpose of pest detection and the supply of information for use in pest risk analyses, the establishment of pest free areas and, where appropriate, the preparation of pest lists.
- Provides guidelines for the collection, storage and retrieval of surveillance data and information
- Guidelines on specific surveillance activities (detection, delimiting or monitoring) including targeted and random sampling
- Provides guidance on good surveillance practices
- Provides guidance on surveillance record keeping and minimum data requirements to meet international reporting obligations.
- Provides guidance on transparency and validation of surveillance
- Provides guidance on the reporting of surveillance information to other organisations such as RPPO's and FAO



ISPM 8 – DETERMINATION OF PEST STATUS IN AN AREA (1998)

- Describes the content of a pest record and the use of pest records and other information in the determination of pest status in an area
- Provides guidance on pest record requirements (minimum data standards, verification and reference standards)
- Provides guidance n the determination of pest status;
  - Presence of the pest
  - Absence of the pest
  - Transience of the pest
- Provides guidance on the determination of pest status
- Provides guidance on the reliability of the pest record, diagnostics and determination
- Provides guidance on recommended reporting practices the event of pest detection in accordance with international reporting requirements.



ISPM 17 – PEST REPORTING (2002)

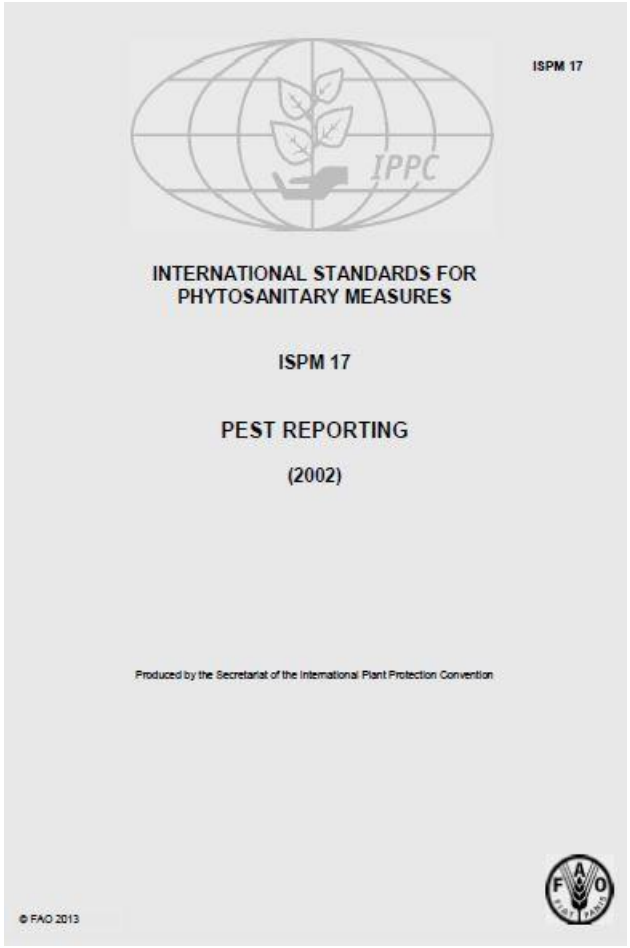
- Describes the responsibilities of and requirements for contracting parties in reporting the occurrence, outbreak and spread of pests in an area for which they are responsible.

- Provides guidance on pest reporting information (identity of the pest, location, pest status, and nature of the immediate or potential danger).

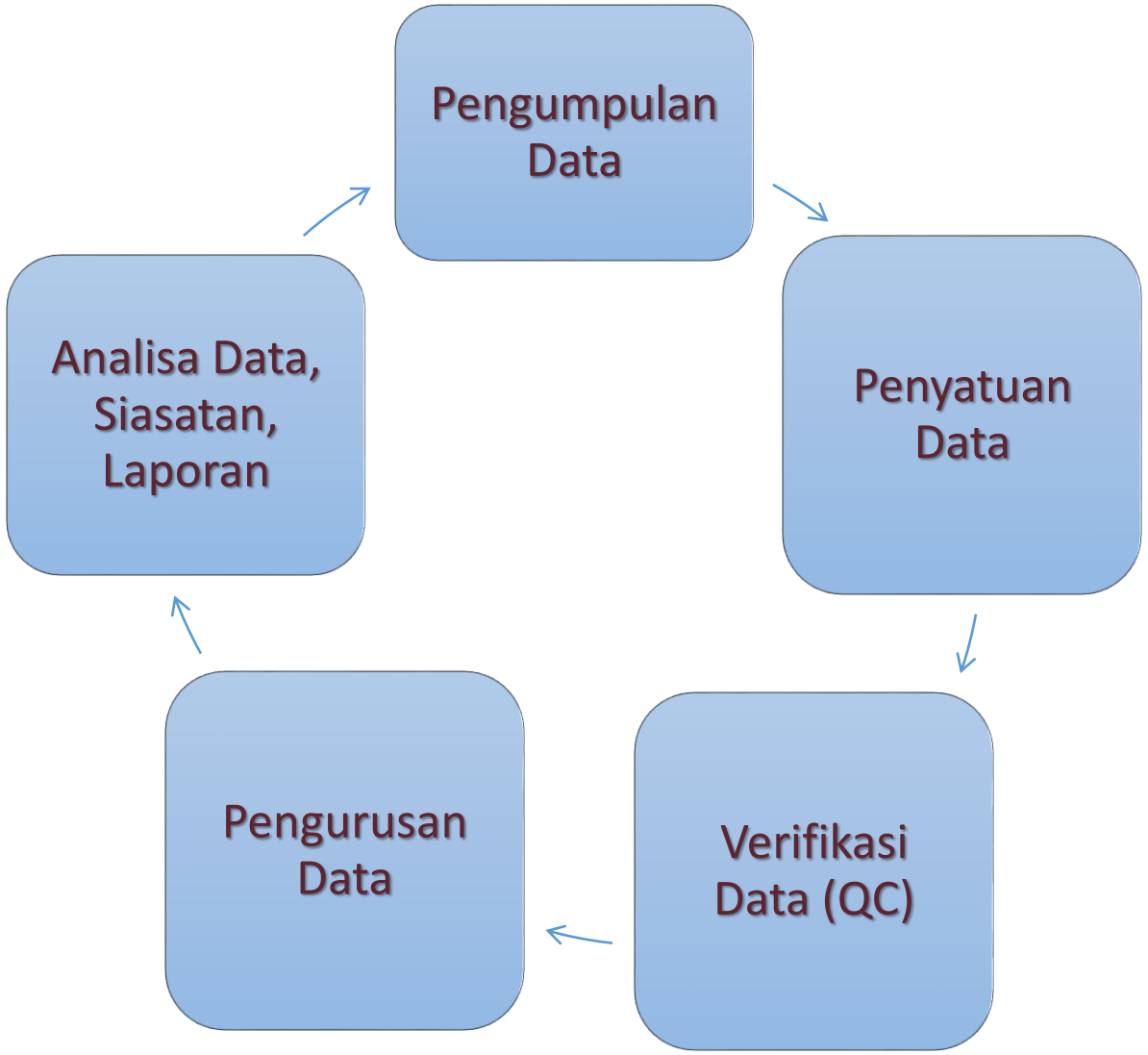
- Provides guidance on NPPO reporting obligations of immediate or potential danger.

- Provides guidance to NPPO's on the reporting of changed status, absence or correction of earlier reports

- Provides detailed guidance on the;
  - content and timings of pest reporting
  - timing of the formal dissemination of pest reports
  - the mechanism of reporting and destination of reports
  - principles of good reporting practices
  - surveillance reporting confidentiality and transparency
  - pest report supporting documentation (for verification purposes)

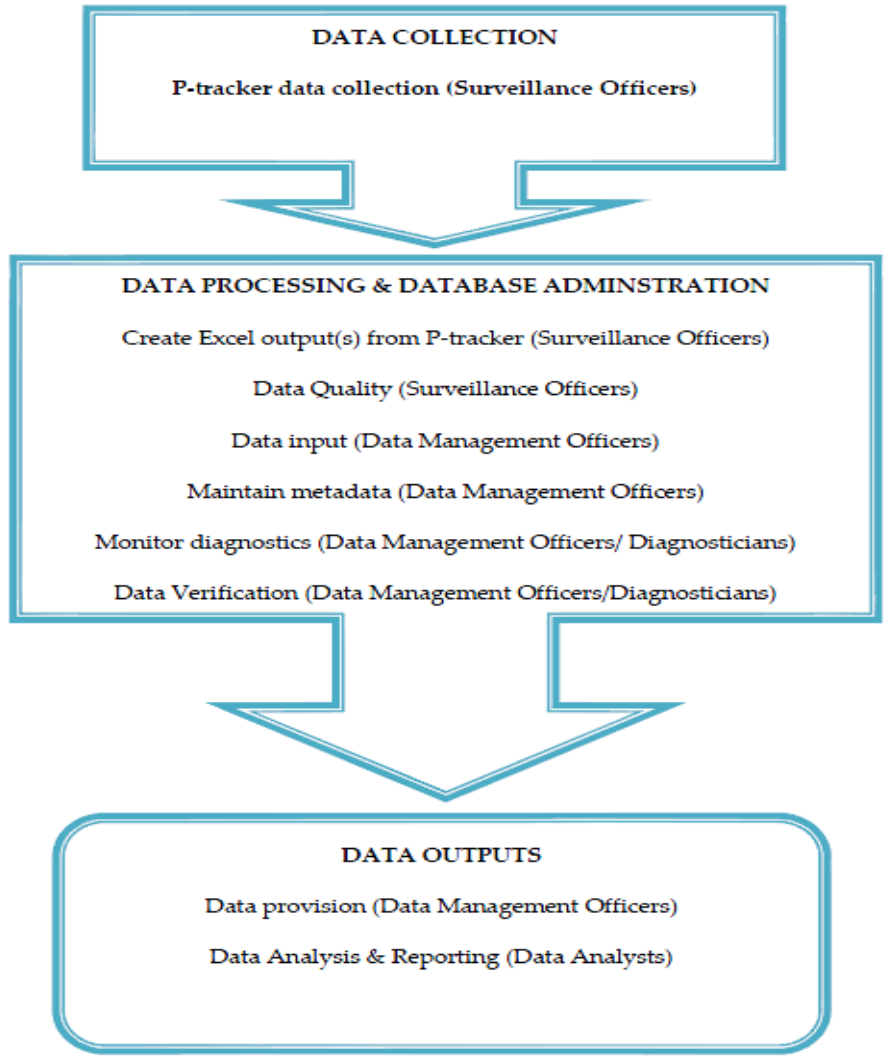


Proses Sistem Pengurusan Maklumat Pengawasan



Surveillance Information Management System (SIMS)

- Data and surveillance policy
- Data standards
- Data processing & storage procedures
- Roles and responsibilities (data providers, data owners)
- Data storage and retrieval (databases)
- Data quality procedures (e.g., quality assurance, quality control)
- Data management and analysis
- Data reporting (Nationally and Internationally)

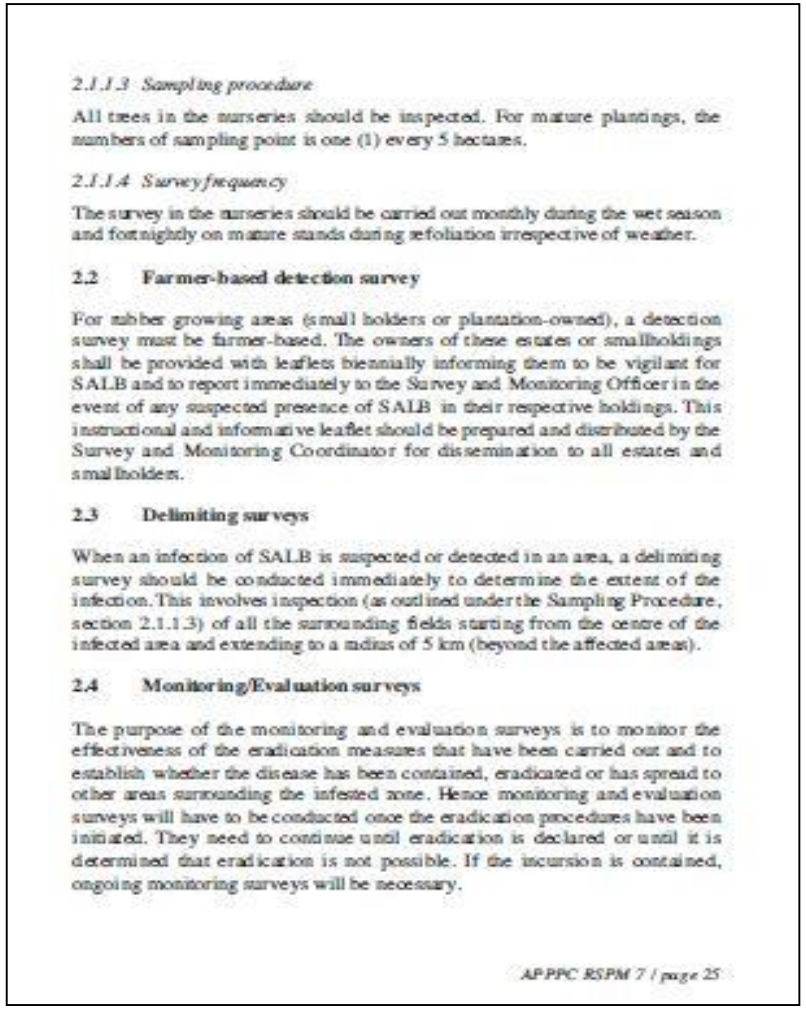


Surveillance Information and Data Policy

- ***Should defines strategic long-term goals and provides guiding principles for data management within a surveillance system and programme***

ISPM6: 1.3 Use of information

- To support NPPO declarations of pest freedom
- To aid early detection of new pests
- For reporting to other organizations such as RPPOs and FAO
- In the compilation of host and commodity pest lists and distribution records.



2.1.1.3 Sampling procedure

All trees in the nurseries should be inspected. For mature plantings, the numbers of sampling point is one (1) every 5 hectares.

2.1.1.4 Survey frequency

The survey in the nurseries should be carried out monthly during the wet season and fortnightly on mature stands during refoliation irrespective of weather.

2.2 Farmer-based detection survey

For rubber growing areas (small holders or plantation-owned), a detection survey must be farmer-based. The owners of these estates or smallholdings shall be provided with leaflets biennially informing them to be vigilant for SALB and to report immediately to the Survey and Monitoring Officer in the event of any suspected presence of SALB in their respective holdings. This instructional and informative leaflet should be prepared and distributed by the Survey and Monitoring Coordinator for dissemination to all estates and smallholders.

2.3 Delimiting surveys

When an infection of SALB is suspected or detected in an area, a delimiting survey should be conducted immediately to determine the extent of the infection. This involves inspection (as outlined under the Sampling Procedure, section 2.1.1.3) of all the surrounding fields starting from the centre of the infected area and extending to a radius of 5 km (beyond the affected areas).

2.4 Monitoring/Evaluation surveys

The purpose of the monitoring and evaluation surveys is to monitor the effectiveness of the eradication measures that have been carried out and to establish whether the disease has been contained, eradicated or has spread to other areas surrounding the infested zone. Hence monitoring and evaluation surveys will have to be conducted once the eradication procedures have been initiated. They need to continue until eradication is declared or until it is determined that eradication is not possible. If the incursion is contained, ongoing monitoring surveys will be necessary.

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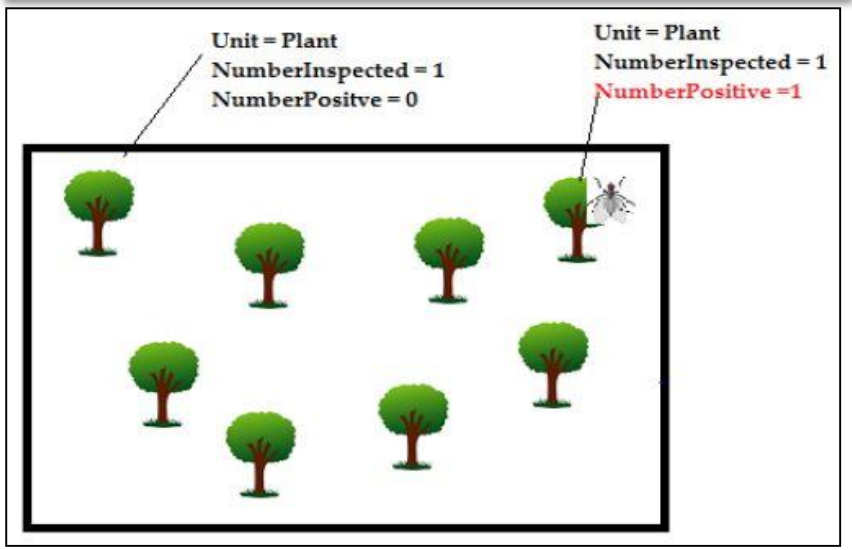
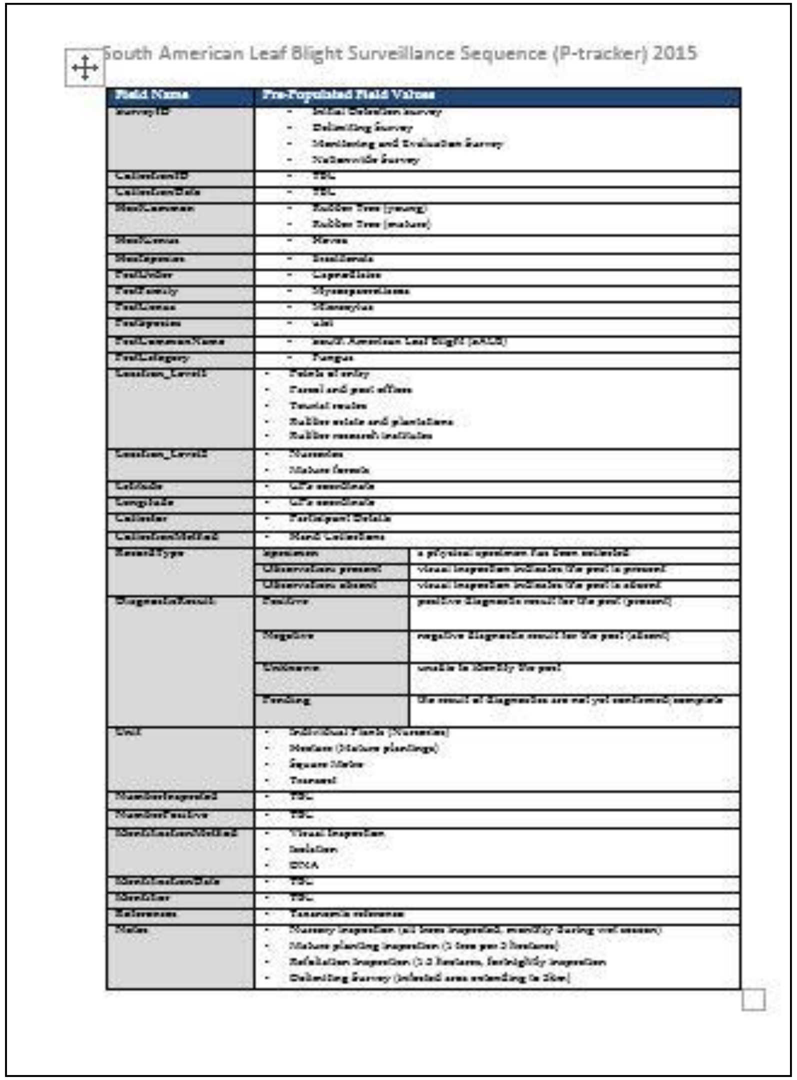
Surveillance Programme Delivery

- General Surveillance
- Specific Surveillance
  - Early Warning Surveillance
  - Delimiting Surveys
  - Monitoring and Evaluation



Survey Pest Records and Data Standard Requirements

- Scientific name of pest and Bayer code if available
- Family/order
- Scientific name of host locality, e.g. location codes, addresses, coordinates
- Date of collection and name of collector
- Date of identification and name of identifier
- Date of verification and name of verifier
- References, if any
- Additional information, e.g. nature of host relationship, infestation Status, growth stage of plant affected, or found only in greenhouses.
- Specimen collection ID’s
- Digital images etc.



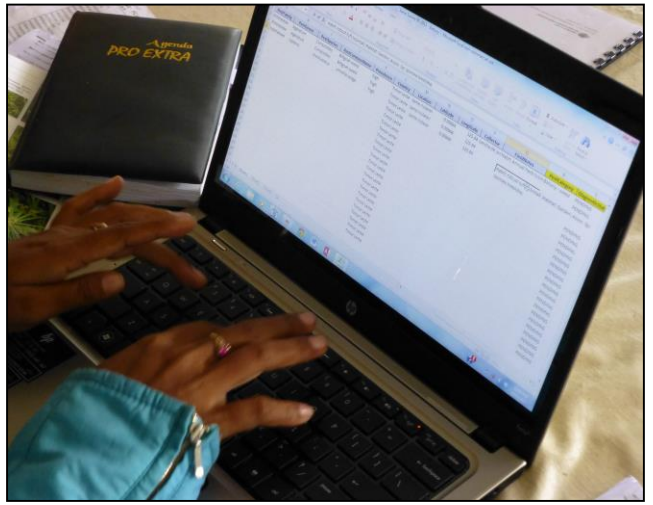
Surveillance Information Roles and Responsibilities

DATA COLLECTION

- P-tracker data collection (Surveillance Officers)

DATA PROCESSING & DATABASE ADMINSTRATION

- Prepare Excel output(s) from P-tracker (Surveillance Officers)
- Data Quality (Surveillance Officers)
- Data input (Data Management Officers)
- Maintain metadata (Data Management Officers)
- Monitor diagnostics(Data Management Officers/ Diagnosticians)
- Data Verification (Data Management Officers/Diagnosticians)
- Data provision (Data Management Officers)
- Data Analysis & Reporting (Data Analysts)



Surveillance Verification and Quality Assurance

- Surveillance records from general and specific surveillances need to be checked and validated for accuracy in terms of their:

- Spelling (all fields within the record)

- Taxonomic classification of the pest

- Scientific name currency of the classification (Old or out of date scientific names)

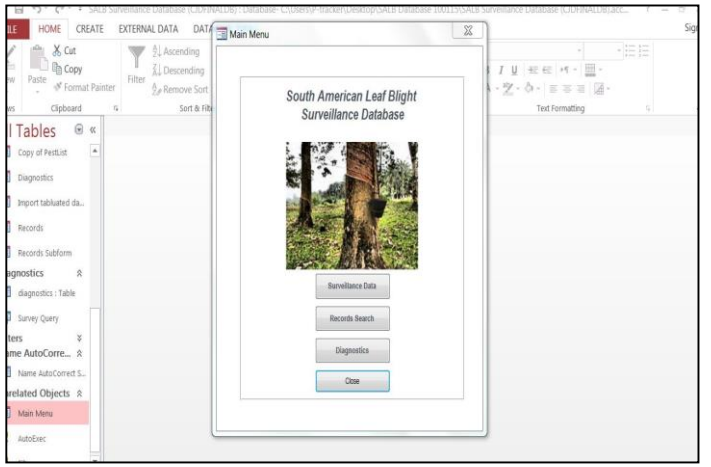
- Geospatial information (latitudes, longitudes, country, province)

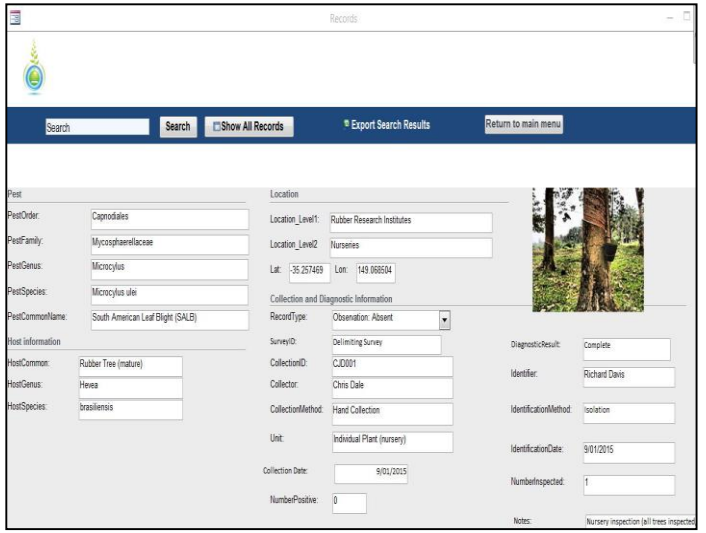
Surveillance Information Management and Databasing

- Data management tools to effectively manage large volumes of surveillance data (specimen, observation, negative and host surveillance records).

- Data management tools to search and query large datasets with multiple fields to generate pest lists, location level datasets.

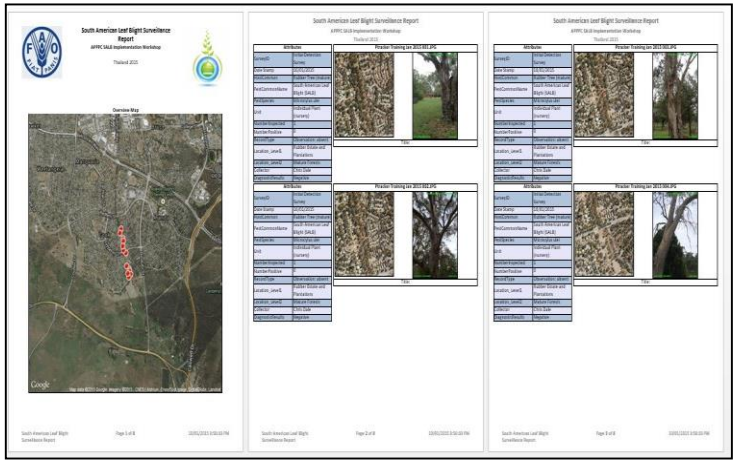
- Data management tools that can effectively manage multidisciplinary surveillance records (entomology, pathology, botanical related data) into one functional data management system to enable effective pest and host surveillance data.





Surveillance Information Analysis and Reporting

- Provide pest status reporting in accordance with international and national reporting obligations
- Pest reporting can be presented in a number of forms providing it details evidence of surveillance activities.
- The publishing of surveillance data in scientific journals and publications does not represent official reporting given the limited publication and access considerations.



Conclusion of Surveillance Information Management System

Surveillance information management systems should capture and manage all surveillance data (general and specific), be easily accessible, easily searchable, easily reviewable and meet the surveillance and reporting needs of an NPPO.

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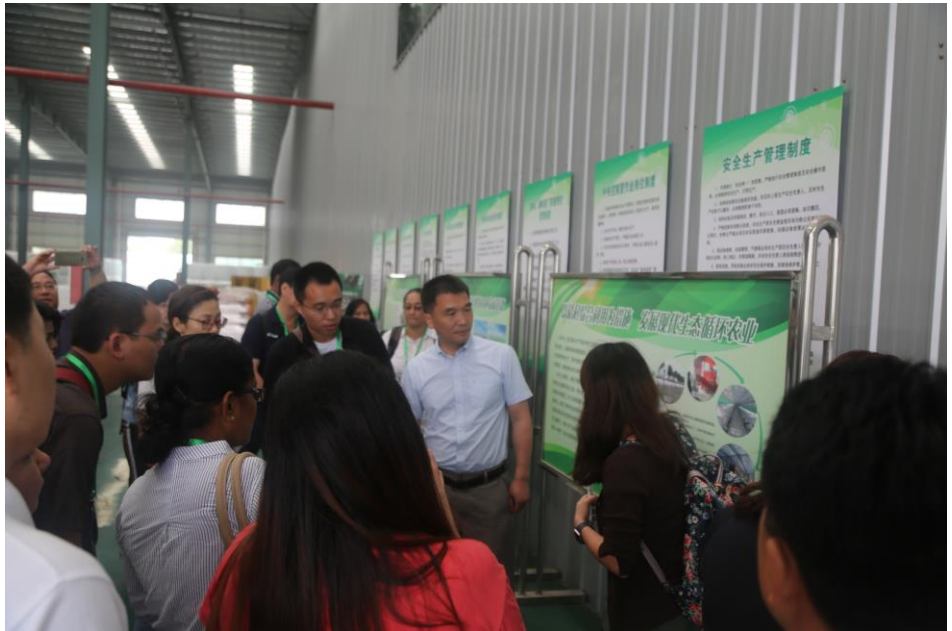
Opening Ceremony & Workshop Activities

Taicang National Modern Agriculture Zone

Taicang National Modern Agriculture Zone



Shanghai Key Laboratory of Plant Functional Genomics And Resources, Shanghai Chenshan Plant Science Research Center

Chenshan Botanical Garden