Tools for supporting systems approach – from the IPPC Project with STDF funding

Nelson Laville, official facilitator for Systems Approach tools

Systems Approach dates back to the 1980s

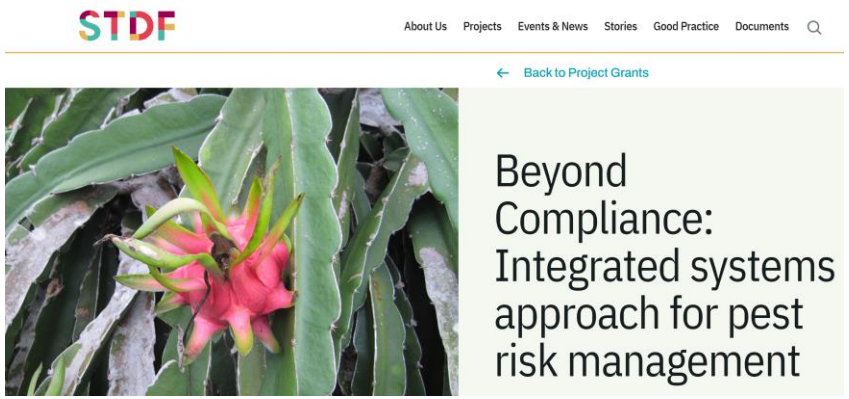
- ISPM 14 *ready for revision
- Article on history is available online -

"What we aspire to is that the different measures within a Systems Approach toolbox could cumulatively reduce or eliminate pest presence in a consignment."

Eric Jang

Increased demand for support for systems approach

- Loss or preference away from chemical options, both field and post-harvest fumigation
- Adaptation of pests to new areas with climate change and less crop diversity
- High costs of proposing trade that does not occur, or stopping trade when one exporter fails to comply cannot be tolerated in today's economy
- Change in the European approach to embrace more combined measures for Pest Risk Management: the PRATIQUE project in Europe led to STDF project 2011-2014 in SE Asia with four NPPOs: Thailand, Vietnam, Malaysia and Indonesia, Imperial College London, CABI, Queensland University of Technology, and NZ and Singapore observers – the aim was to co-create new decision support tools



These STDF-supported tools were streamlined and aligned further with regional understandings of plant health concepts, under an IPPC Project funded by STDF, Beyond Compliance Global. This resulted in Systems Approach experts trained to facilitate the IPPC tools for all FAO languages.

They came from:

- **Kenya, South Africa, Uganda**
- **Iraq**
- **Mexico, Dominica, Belize**
- **Latvia and China** – with alternative funding
- RPPOs - **Communidad Andino and**
- **Near East Plant Protection Organization**

Food and Agriculture Organization of the United Nations

International Plant Protection Convention

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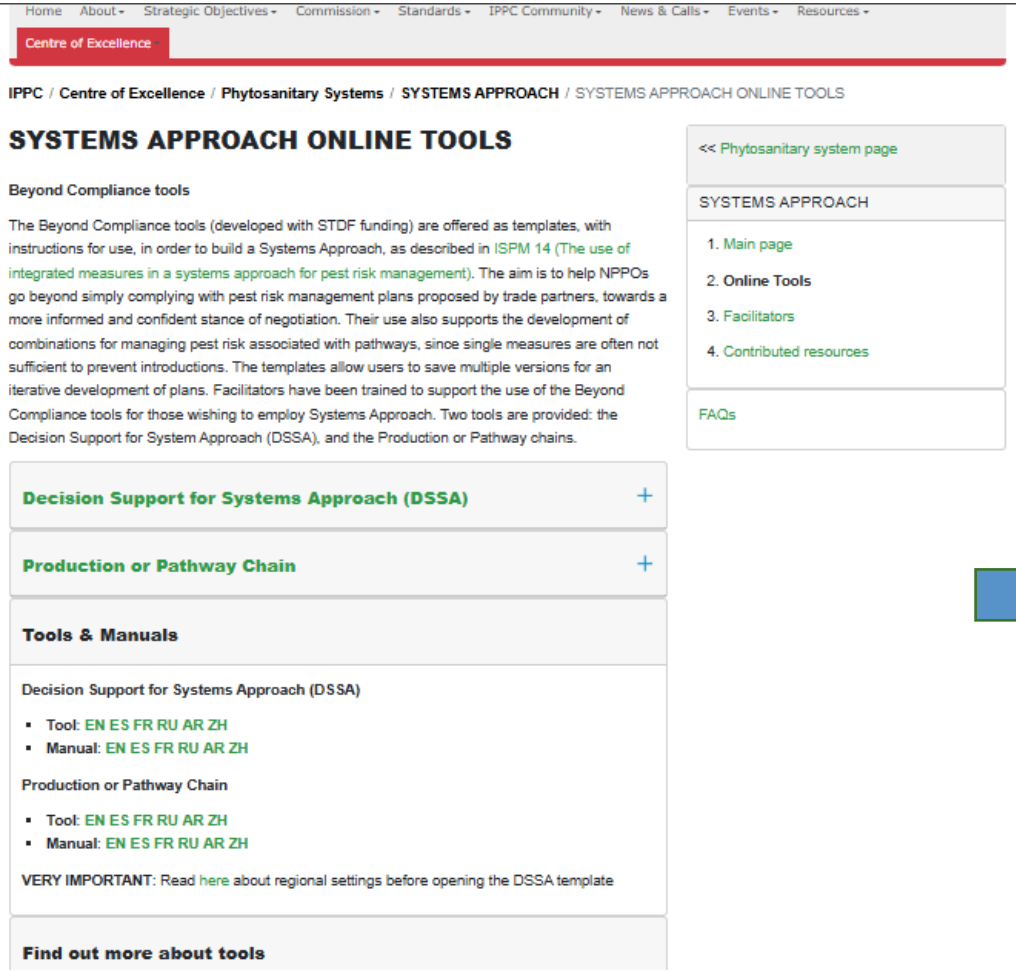
Phytosanitary Systems

The essential components of a Phytosanitary System are identified below and each component page brings together all of the relevant technical resources to help National Plant Protection Organization (NPPO) staff understand and access information related to a subject. Relevant technical resources include: International Standards for Phytosanitary Measures (ISPMs), CPM Recommendations, IPPC Guides and training materials as well as Contributed resources.

This page has been developed in cooperation with members of the Implementation and Capacity Development Committee (IC)

Sub pages

Systems Approach



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SYSTEMS APPROACH ONLINE TOOLS

<< Phytosanitary system page

SYSTEMS APPROACH

1. Main page
2. Online Tools
3. Facilitators
4. Contributed resources

FAQs

Beyond Compliance tools

The Beyond Compliance tools (developed with STDF funding) are offered as templates, with instructions for use, in order to build a Systems Approach, as described in ISPM 14 (The use of integrated measures in a systems approach for pest risk management). The aim is to help NPPOs go beyond simply complying with pest risk management plans proposed by trade partners, towards a more informed and confident stance of negotiation. Their use also supports the development of combinations for managing pest risk associated with pathways, since single measures are often not sufficient to prevent introductions. The templates allow users to save multiple versions for an iterative development of plans. Facilitators have been trained to support the use of the Beyond Compliance tools for those wishing to employ Systems Approach. Two tools are provided: the Decision Support for System Approach (DSSA), and the Production or Pathway chains.

Decision Support for Systems Approach (DSSA) +

Production or Pathway Chain +

Tools & Manuals

Decision Support for Systems Approach (DSSA)

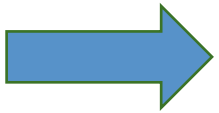
- Tool: EN ES FR RU AR ZH
- Manual: EN ES FR RU AR ZH

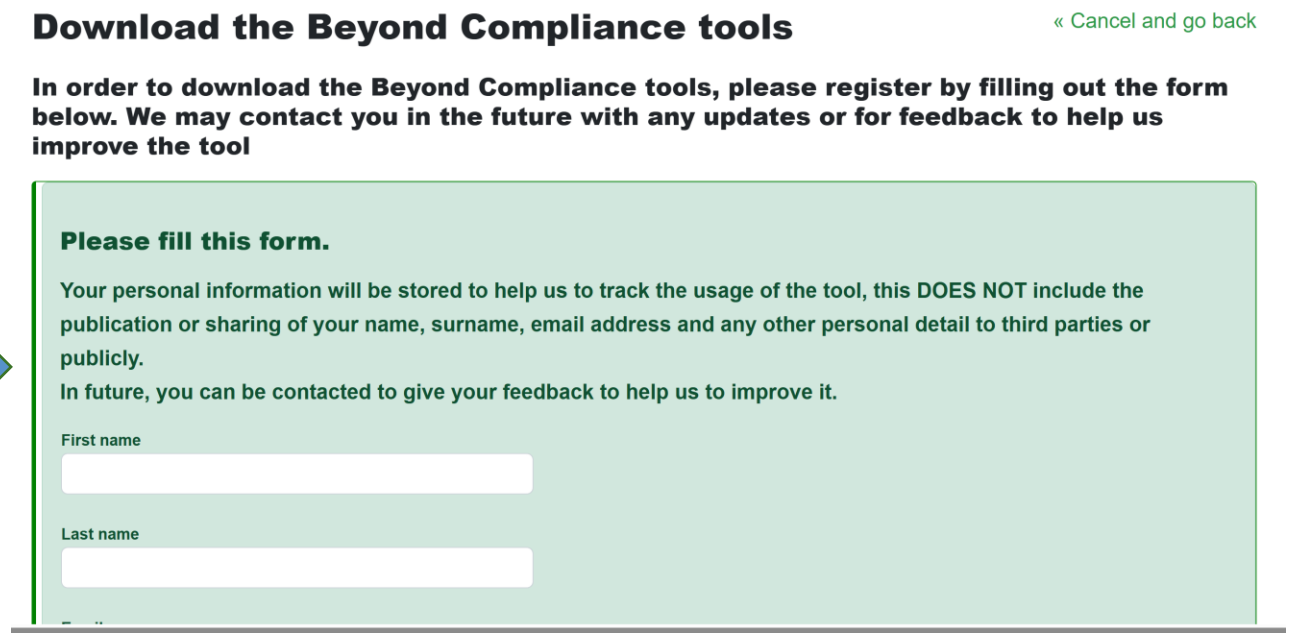
Production or Pathway Chain

- Tool: EN ES FR RU AR ZH
- Manual: EN ES FR RU AR ZH

VERY IMPORTANT: Read here about regional settings before opening the DSSA template

Find out more about tools





Download the Beyond Compliance tools

« Cancel and go back

In order to download the Beyond Compliance tools, please register by filling out the form below. We may contact you in the future with any updates or for feedback to help us improve the tool

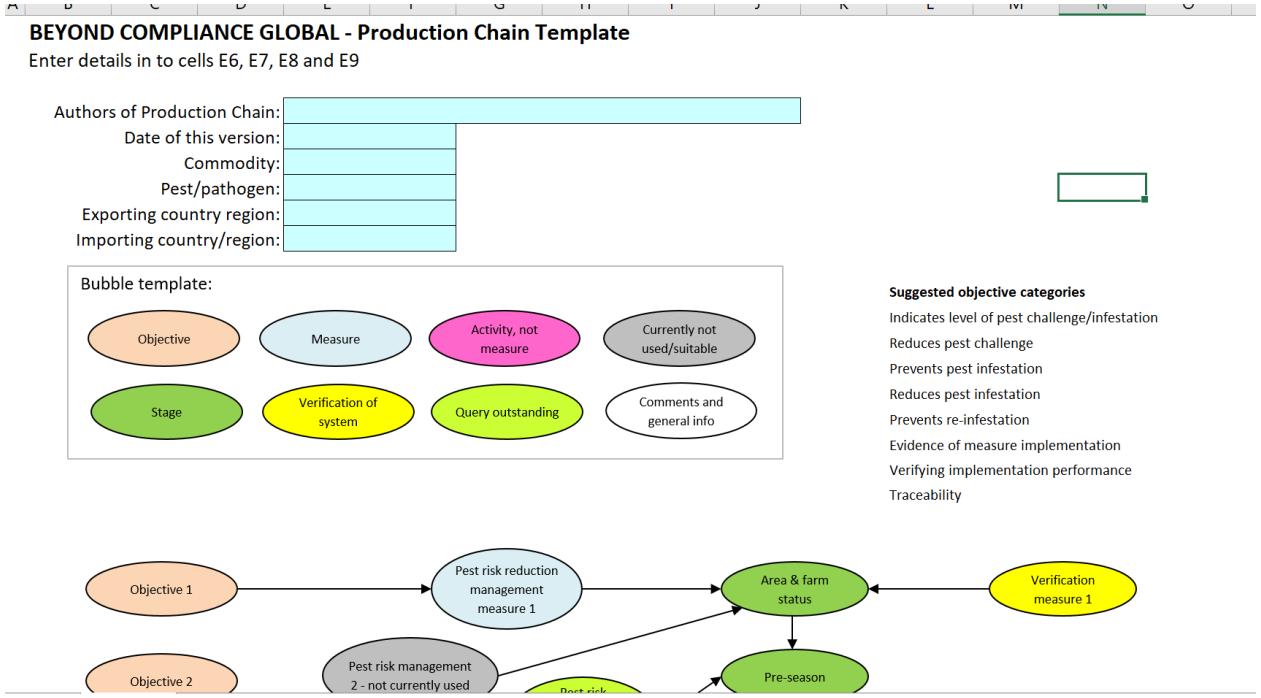
Please fill this form.

Your personal information will be stored to help us to track the usage of the tool, this DOES NOT include the publication or sharing of your name, surname, email address and any other personal detail to third parties or publicly.
In future, you can be contacted to give your feedback to help us to improve it.

First name

Last name

Production Chains (or pathways)



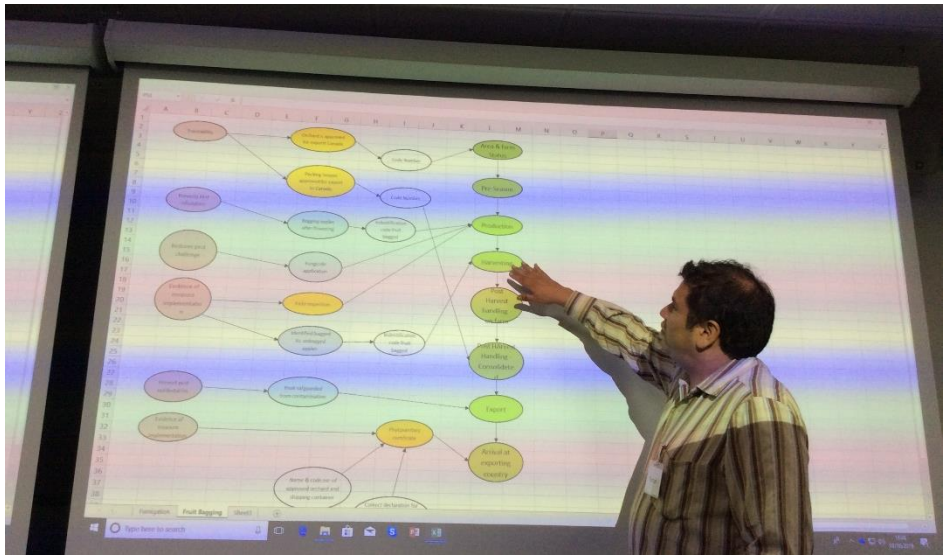
This is a common sense way to visualize (with color coding) and discuss components or options for a Systems Approach along the production chain or a pathway without estimating efficacy.

The objective of each measure is identified, which supports confirmation of independent measures and highlights gaps and redundancies.

Verification and traceability measures are included (as defined in ISPM 5 – phytosanitary measures)

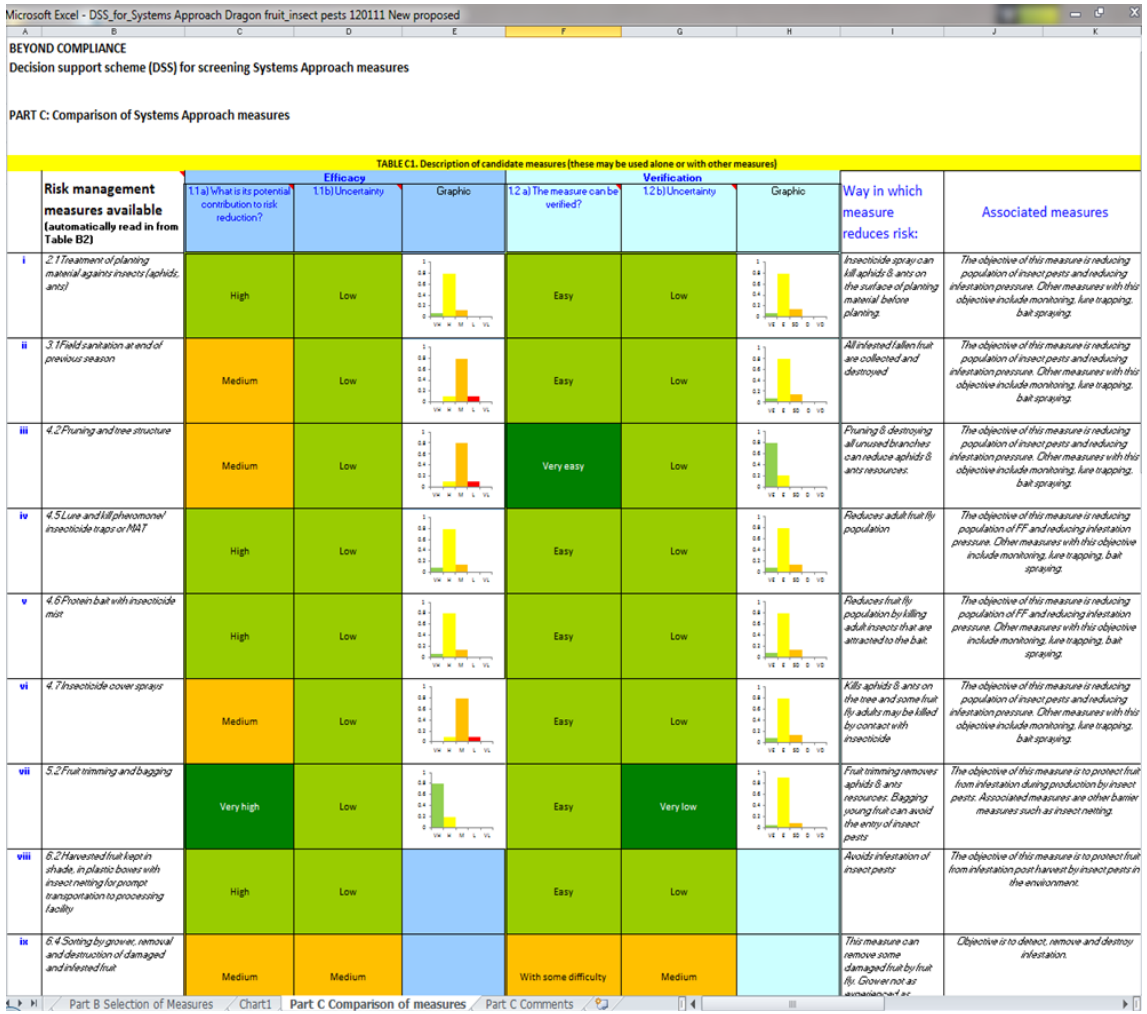
Activities that are not official can be included, as well as measures not currently employed.

There is always paper and pen, or color post it notes – but it is harder to edit, share or project larger



Decision Support for Systems Approach tool

- This tool provides structure for:
  - Background details from a dossier, PRA or similar characteristics affecting management options
  - Selecting possible phytosanitary measures from the limited range of options
  - Evaluating the measures and overall system, with data or expert judgement
- The tool is most relevant for working through details of proposals with a group
- Individual efficacy of measures assessed (including uncertainty)
- Expert elicited distributions are easy to evaluate and communicate, using graphic representation



Microsoft Excel - DSS_for_Systems Approach Dragon fruit_insect pests 120111 New proposed

BEYOND COMPLIANCE

Decision support scheme (DSS) for screening Systems Approach measures

PART C: Comparison of Systems Approach measures

TABLE C1. Description of candidate measures (these may be used alone or with other measures)

	Risk management measures available (automatically read in from Table B2)	Efficacy			Verification			Way in which measure reduces risk:	Associated measures
		1.1 a) What is its potential contribution to risk reduction?	1.1b) Uncertainty	Graphic	1.2 a) The measure can be verified?	1.2 b) Uncertainty	Graphic		
i	2.1 Treatment of planting material against insects (aphids, ants)	High	Low		Easy	Low		Insecticide spray can kill aphids & ants on the surface of planting material before planting.	The objective of this measure is reducing population of insect pests and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
ii	3.1 Field sanitation at end of previous season	Medium	Low		Easy	Low		All infested / fallen fruit are collected and destroyed	The objective of this measure is reducing population of insect pests and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
iii	4.2 Pruning and tree structure	Medium	Low		Very easy	Low		Pruning & destroying all unused branches can reduce aphids & ants resources.	The objective of this measure is reducing population of insect pests and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
iv	4.5 Lure and kill pheromonal insecticide traps or MAT	High	Low		Easy	Low		Reduces adult fruit fly population	The objective of this measure is reducing population of FF and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
v	4.6 Protein bait with insecticide mist	High	Low		Easy	Low		Reduces fruit fly population by killing adult insects that are attracted to the bait	The objective of this measure is reducing population of FF and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
vi	4.7 Insecticide cover sprays	Medium	Low		Easy	Low		Kills aphids & ants on the tree and some fruit fly adults may be killed by contact with insecticide	The objective of this measure is reducing population of insect pests and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
vii	5.2 Fruit trimming and bagging	Very high	Low		Easy	Very low		Fruit trimming removes aphids & ants resources. Bagging young fruit can avoid the entry of insect pests	The objective of this measure is to protect fruit from infestation during production by insect pests. Associated measures are other barrier measures such as insect netting.
viii	6.2 Harvested fruit kept in shade, in plastic boxes with insect netting for prompt transportation to processing facility	High	Low		Easy	Low		Avoids infestation of insect pests	The objective of this measure is to protect fruit from infestation post harvest by insect pests in the environment.
ix	6.4 Sorting by grower, removal and destruction of damaged and infested fruit	Medium	Medium		With some difficulty	Medium		This measure can remove some damaged fruit by fruit fly. Grower not as	Objective is to detect, remove and destroy infestation.

Part B Selection of Measures | Chart1 | Part C Comparison of measures | Part C Comments

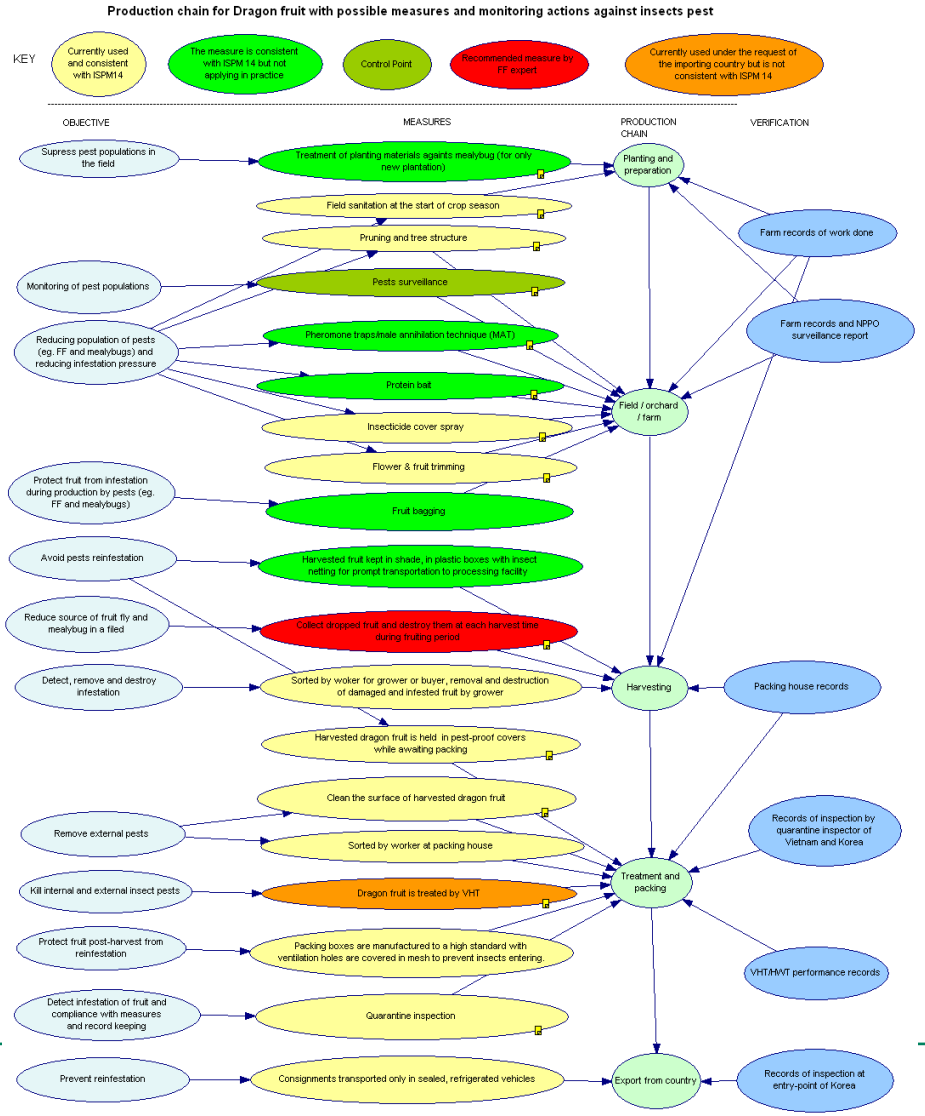
DSSA filled in by a group discussion, there is a place to save references such as publications used

- The DSSA tool is Excel-based using Visual Basic for Applications (VBA) macros to move input across the parts
  - Read the manual for steps to change the setting which allows this to be a Trusted file (or if your institution is blocking all macros, find a personal computer to use the tool)

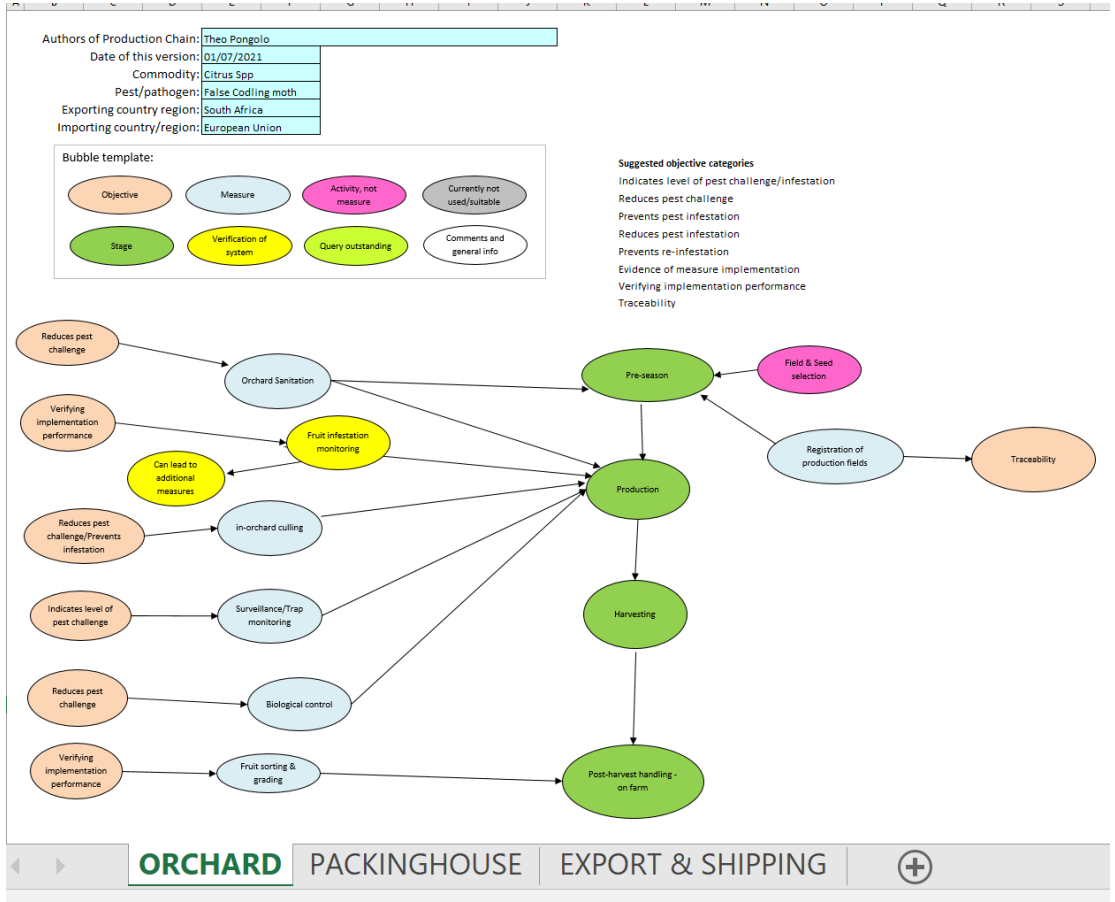
Example Production Chain

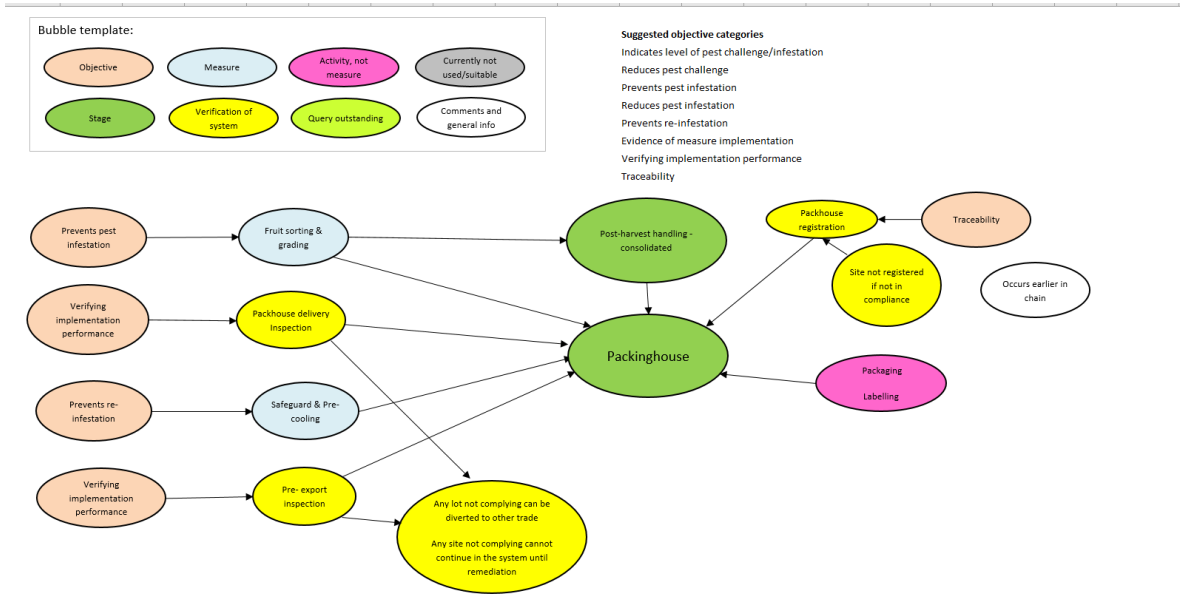
Publicly available from e-Book

Dragon fruit from Vietnam



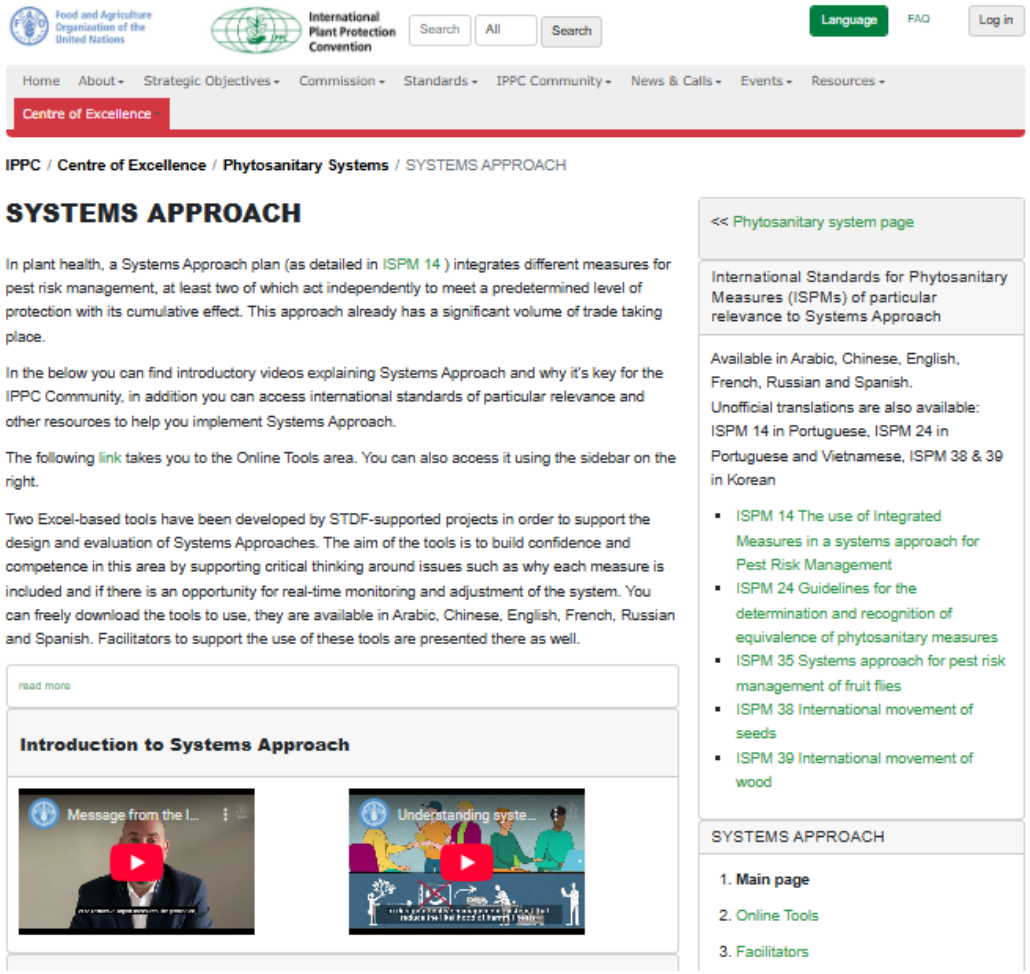
Complex case broken down into measures in the orchard, measures in packing house etc.





Resources on Systems Approach

- Video message from the Implementation and Capacity Building Committee about the resources
- Video explaining Systems Approach, that can be used with stakeholders
- PowerPoints on basic concepts
- Tools that can be downloaded from online
- Manuals supporting use of these tools
- e-Book from first project, describing Systems Approach and methods for working with tools (Free download from the STDF website or click on right side bar Contributed Resources from page shown)



Same resources are on the new Plant Health Campus under Market Access – consider other uses including protection of natural biodiversity when importing plant products

Market access

This category provides practical guidance for achieving and maintaining market access. You will learn about the rights and obligations of NPPOs in relation to trade in plants and plant products and will also be introduced to a typical process for securing access to a new market.

This category will also provide information about the role that systems approaches can play in market access.

Featured Video

Understanding systems approach

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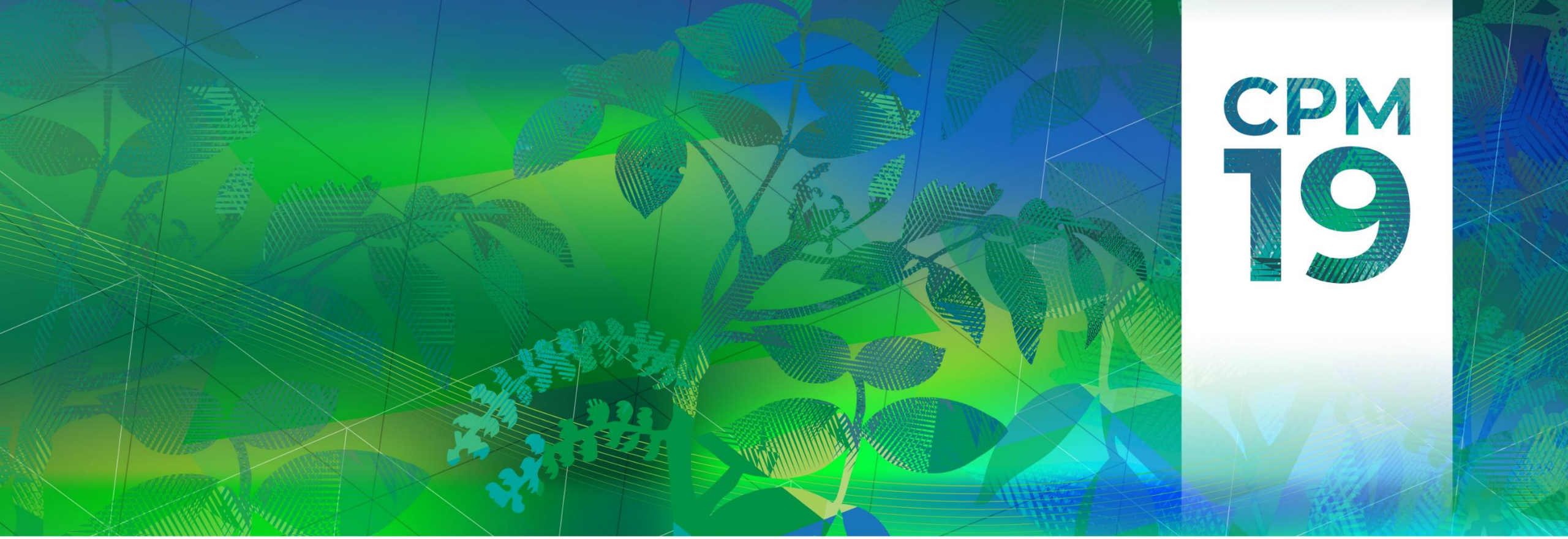
- *Your export opportunities are only as good as your national pest status*
- *Your national pest status is only as good as your strategy for import requirements, contingency planning and overview of the entire picture*

Recap -

- Lack of evidence around efficacy of options leads to requests for more measures to allow trade to start – a good Systems Approach protocol can provide more data from the trade itself, while reducing redundancy over time
- Stakeholders – producers, consolidators, packing house and brokers with researchers and regulators – should be involved in designing Systems Approach plans that are feasible for both large and small growers, and the IPPC tools can support that
- Negotiation between trade partners often takes years – these tools can help to highlight exactly where the disagree is. Maybe it is not important!
- Trade negotiations involve more regulators and fewer biologist as all of our NPPOs face restricted resourcing – tools can support that negotiation phase

- There are IPPC tools on the International Phytosanitary Portal to support systems approach – These have been moulded by NPPO and RPPO representatives over the past decade to be easily understood and fit for purpose to use for designing and evaluating export, import or other pathway risk management using Systems Approach
- The IPPC materials are in all FAO languages and provided in Excel software which is widely available (although they also work with a pen and paper!)
- Facilitators are available to support you and STDF would consider PPG requests for implementing these tools in support of market access
- Additional funds would allow merging or coordination with other initiatives, if desired. Additional funds could be used to train additional facilitators in the IPPC tools



Thank you