

ABSTRACT

In the past few decades, globalization has led to an upsurge in trade and travel, which along with its many benefits, has spurred an increase in the introduction and spread of harmful organisms to pest-free areas. While limiting interference with international trade, countries assess and implement phytosanitary measures to safeguard their economy and natural resources from harmful organisms, and pest risk analysis (PRA) aids in this process. International Standards for Phytosanitary Measures (ISPM) 05 Glossary defines PRA as “the process of evaluating biological or other scientific and economic evidence to determine whether an organism is a pest, whether it should be regulated, and the strength of any phytosanitary measures to be taken against it.” The training of current and future analysts in the theory and principles of PRA underpins phytosanitary decision-making for NAPPO (The North American Plant Protection Organization) countries and all its trading partners that adhere to ISPMs.

The Plant Epidemiology and Risk Analysis Laboratory (PERAL) of the U.S. National Plant Protection Organization (USDA-APHIS-PPQ) developed the core components of this PRA course over the last decade with the objective of training analysts within and beyond the NAPPO region. As a result, from 2007 to 2012, the Risk Analysis workshop attracted 177 participants from 37 countries and 6 continents. However, the onsite workshops require extensive resources and availability of subject matter experts, often causing execution challenges. Because of these limitations, USDA-APHIS-PPQ currently does not offer PRA training to stakeholders outside the agency. Through the development of the NAPPO Phytosanitary Topics Training Portal, our aim is to create a feasible and sustainable platform for sharing content and training PRA and other phytosanitary topics to a wide audience. The portal will have a user-friendly interface and advanced educational tools to provide a distance-learning platform for delivering dynamic and interactive course content.

INTRODUCTION

The NAPPO Phytosanitary Topics Training Portal aims to be the central online training hub for NAPPO countries to support their mission of collaboration in plant protection and safe trade through implementing science-based standards and phytosanitary measures. The training portal is developed to: (1) serve as an efficient, dynamic and sustainable educational platform (2) overcome challenges attributed to limited training resources, and at the same time (3) reach a wide audience. The training material in the portal will be available in multiple languages to reach different NAPPO regions. After the completion of online training program, there may also be an opportunity for advanced onsite training for enhanced interaction with experienced risk analysts. NAPPO is well positioned to host the portal and collaborate with the North Carolina State University, Center of Integrated Pest Management (NCSU-cIPM) in establishing and maintaining the content and process.

OBJECTIVES

Our objective is to develop a learning platform and framework to compile, update and translate Phytosanitary Topics to reach and train NAPPO members and stakeholders. Compiled training materials include existing technical PRA and related materials (Sanitary and phytosanitary (SPS) measures jurisprudence, SPS disputes, etc.) developed over the last decade by the Risk Analysis laboratory of the U.S. NPPO (USDA-APHIS-PPQ) for use in online and distance learning platforms across and beyond the NAPPO region.

PLAN OF ACTION

To design the Phytosanitary Topics Portal, a small group of experts, possibly one from each member country will be needed; in addition, industry input will be important at this stage. The NAPPO executive committee will coordinate with NCSU-cIPM to identify experts. A core group of PRA experts may be tasked with updating and reviewing the Phytosanitary Topics materials whereas, the educational platforms and update of the materials will be the responsibility of NCSU-cIPM. Relevant tasks include:

- Locate relevant PRA materials
- Update materials; ensure elimination of duplication
- Translation of materials (Spanish, French)
- Research and decide on the best platforms for dissemination of information
- Develop the portal design
- Test and debug portal web site prior to final delivery

WHY PARTNER WITH cIPM?

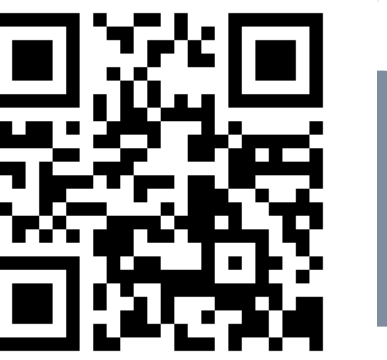


For more than 25 years, the NSF Center for Integrated Pest Management (cIPM) at North Carolina State University (NCSU) has partnered with numerous federal, state, international and industry partners to develop innovative IT solutions that serve the needs of our stakeholders.

cIPM operates an Enterprise Data Center that is USDA-certified, offering enterprise class infrastructure built from the ground up employing state-of-the-art technologies. cIPM utilizes industry-standard best practices to provide Infrastructure as a Service (IaaS) (SAN Storage, NAS Storage, Backup, Network, Facility) and Platform as a Service (PaaS) (Server, Web Server, Web Application Server, Web Portal, Database, Content Management) application hosting and deployment.

The Center employs software developers, content specialists, web designers, subject matter experts and other professionals to create, deploy and manage systems that we have developed. The Center employs an iterative development cycle (utilizing a client feedback loop) during all phases of development to ensure that the end-software product meets stakeholder needs. As a University Research Center, cIPM has access to a wide breadth of advanced software and technological solutions. Working with our NAPPO colleagues, cIPM will utilize the most appropriate technological tools and solutions to create and manage the NAPPO Phytosanitary Topics Training Portal.

TRAINING CONTENT



Pest Risk Analysis Training

- Provide participants with an understanding of the purpose of PRA
- Develop the skills needed to conduct PRA
- Provide experience in PRA
- Provide international examples
- Develop self-confidence in PRA



Understanding New ISPMs

- Introduction to the structure of ISPMs
- Understanding newly drafted ISPMs
- Issues when implementing new ISPMs



Plant Health System Analysis

- International Regulatory Framework
- Regional Plant Protection Organization
- National Plant Protection Organization
- US Regulatory System



International Trade and the Phytosanitary Framework (Understanding WTO and IPPC)

- The GATT
- The WTO
- The SPS Agreement
- SPS and IPPC/ISPMs

LEARNING PLATFORM

The Moodle online learning environment is the most widely used teaching and learning platform available, with over 80,000 registered sites supporting over 90 million academic and other enterprise users in 232 countries worldwide. The open-source Moodle software is web-based and is cross-browser compatible. Thus, users across the globe can access course content using a variety of connected devices (computer, tablet, smartphone, etc.). Moodle supports more than 120 languages natively, permitting end-users to localize their individual setting in the language of their choice.

The Moodle software has been developed with processes in place to protect against unauthorized access, data loss and misuse. Moodle utilizes role-based security controls to restrict access to course content in order to safeguard data and to ensure end-user privacy. cIPM has previously hosted Moodle software-driven sites (i.e., Pesticide Environmental Stewardship). Thus, the NAPPO Phytosanitary Topics Training Portal can be hosted by cIPM within our data center or deployed to a cloud-based secure site (Amazon Cloud Services). Alternately, the Topics Training Portal can be hosted at NCSU within the DELTA (Distance Education and Learning Technology Applications) Moodle environment (<http://delta.ncsu.edu>).

ENVISIONING THE FUTURE

The screenshot shows the Moodle interface for the 'PEST RISK ANALYSIS (PRA) TRAINING COURSE'. It includes a navigation menu with 'HOME', 'MEMBERSHIP', 'EVENTS', 'TRAINING', 'NEWS RESOURCES', and 'ABOUT NAPPO'. The main content area welcomes users to the information page about the course. It lists three ISPM standards covered: ISPM No. 2 (Framework for pest risk analysis), ISPM No. 11 (Pest risk analysis for quarantine pests), and ISPM No. 21 (Pest risk analysis for regulated non-quarantine pests). A sidebar on the right features 'TOP 10 eLearning Statistics and Facts For 2015 You Need To Know' with a 'Community driven, globally supported.' tagline.