

Scoping Study

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The scoping study has been regarded as a type of literature review used to map relevant literature in the field of interest (Arksey and O'Malley 2005). A scoping study examines broader dimensions of a problem often undertaken as a pre-project preliminary exercise. The scoping study has superseded the rapid rural appraisal or participatory rural appraisal (PRA) where a multidisciplinary team is commissioned to do a "quick and dirty" review of the situation.

What is a scoping study?

A scoping study is often done to focus on identifying the extent, nature, and range of research and implementation issues related to a problem, to map the key concepts relevant to a research area and the main sources and types of evidence available. A review of available literature will help determine research gaps which a future larger study can address. A scoping study can be conducted as a stand-alone project where an area is complex or has not been reviewed comprehensively before' (Mays et al. 2001).

As applied in development projects, the intent of a scoping study is to assess the magnitude, seriousness and intensity of the problem and the actions taken by the people concerned and affected by it. This is done by reviewing the literature, historical data, and reports, and collecting preliminary data to scope for research and implementation issues, to provide some understanding of the problem, and develop an integrated strategy or a set of recommendations to deal with the problem. Various tools are available that can be used in a scoping study. Historical profiles, problem tree, seasonal charts, discrimination profiles, and strengths-weaknesses-and threats (SWOT) analysis are some examples. Collecting preliminary data will involve field visits, key informant interviews and a series of focus group discussions with stakeholders.

Analytical framework

In a recent scoping study we conducted for the Australian Centre for International Agricultural Research (ACIAR), these were the steps that we followed:

1. Identify the research problem - Our research question was: *What are the research and implementation issues related to management of the BPH/virus problem in the Mekong Delta?*
2. Determine the dimensions of the problem – The relevant dimensions that the project team considered essential to develop an integrated management of the

BPH/virus problems and prevent its spread and communicate management strategies to farmers were: *What are the biology of the viruses, vector-virus relationships, vector migrations, vector ecology and farmers' perceptions of the vector and viral diseases?*

3. Review existing research literature – historical data and reports. We analyzed and reviewed literature, information, monitoring data, results of pilot projects and field trials conducted and documents available from the Ministry of Agriculture Vietnam. We reviewed occurrence and variability of virus diseases (Rice Yellow Syndrome) transmitted by BPH in whole of Vietnam, BPH population variability, and identified migratory patterns for developing a monitoring scheme and scoping for natural biological control possibilities.
4. Conduct field visits to observe research and implementation activities – In addition, we observed “Escape strategy” demonstration plots and community light traps to understand their assumptions and mechanisms. Fields suspected to be affected by rice grassy stunt (RGSV) and rice ragged stunt (RRSV) viruses and plants with leaf yellowing/bronzing, and those with typical symptoms of RGSV infection (profuse tillering and stunting) RRSV infection such as the ragged/serrated leaves and twisting of the leaf tip were also observed.
5. Conduct focus group discussions and key informant interviews with stakeholders. We conducted field visits and a series of focus group discussions (FGDs) with rice farmers in Tien Giang, Long An, Vinh Long, and Nha Trang provinces to identify major perception constraints of farmers to the viral diseases and their management and scope for opportunities for communication to farmers.
6. Collate, summarize and present reports in a consultation workshop with stakeholders to validate the findings. A one day consultation workshop of 70 participants from research, extension, policy making and mass media from Vietnam, Cambodia, China, Philippines, Indonesia, Korea and FAO was held to develop plans for next steps. Using SWOT analysis, the following next steps were developed:
 - 1) The “Escape Strategy” lacks robustness and more research efforts to improve knowledge of the ecological bases and monitoring methods and decision protocols are needed.
 - 2) Planthopper outbreaks are due to sudden abnormal explosive increases in populations. An analytical framework has been developed and there is

now a need to develop a research program to validate the cause-effect relationships between various factors.

- 3) Biological control services are foundation to sustainable pest management. There is a need to develop a research program to assess these ecosystem services, develop strategies to enhance, and sustain them through cultural practices, like increasing habitat biodiversity.
- 4) 4) Insecticide resistance to recently introduced insecticides seems to have appeared in some areas. There is a need to establish an insecticide resistance monitoring network and o use standard protocols.
- 5) The increasing importance of the white back planthopper (WBPH), especially in the north, due to the growing of popular hybrid rice varieties, raised the need to conduct research to understand ecological and vector-virus relationship.
- 6) The causal viral agents of “yellowing syndrome” need to be further characterized. A simple diagnostic kit needs to be developed for use in research and extension.
- 7) Further understanding of the genetic variability of the pest using microsatellite markers needs to be investigated.
- 8) Vietnam has a well staffed and widely distributed plant protection network. In addition, farmers have wide access to mass media. There is a need to develop a strategic communication plan to maximize rapid dissemination of essential and accurate information that will promote sustainable practices which will reduce vulnerability to pest outbreaks.

Farmer-level, community, or policy impacts

The SRA project identified some gaps and opportunities to strengthen research and implementation of sustainable management of the BPH/virus problem, which was endorsed by the vice minister and director general of the Plant Protection Department. The next step is to use the initial results of the SWOT analysis to conduct a more thorough (probably 1 whole day) SWOT analysis to develop details. The result of the second SWOT will be used to develop a full proposal for donor funding. The interim “escape” technique developed by the local extension has potential and the government has adopted it for full scale implementation. The main concern is about its reliability. There is immediate need for research to perform a reliability analysis and conduct research to improve the technique. Without this research

support, the adoption of the “escape” technique will lack credibility and reliability, and might eventually suffer discontinuance. A full research proposal will certainly contribute towards sustaining the adoption of this SRA’s initial outputs. This finding had raised questions on the popularly prompted “escape” technique which might have immediate negative impact on government’s implementation plans.

References

- Arksey, H. and O’Malley, L. (2005). Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology*, 8 (1): 19-32.
- Mays, N., Roberts, E. and Popay, J. (2001) Synthesising research evidence. In N. Fulop, P. Allen, A. Clarke and N. Black (eds) *Studying the Organisation and Delivery of Health Services: Research Methods*. London: Routledge, pp. 188-220.