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Prioritizing SPS Capacity Needs using Multi-Criteria Decision Analysis

Developing countries face considerable demands to enhance their sanitary and phytosanitary (SPS) capacity as a means to boost agri-food exports or meet other domestic economic and social policy objectives. Since resources from national budgets and development partners are generally insufficient to meet all of these needs, priorities must be established. A new decision-support tool, based on Multi-Criteria Decision Analysis (MCDA), has been developed by the STDF to help decision-makers prioritize and make choices between competing SPS investments.

What is MCDA?

Decisions on where to allocate resources for SPS capacity building involve a number of complex technical issues, as well as questions about the likely effects on trade, economic growth or poverty reduction. Decision-makers need to consider and weigh up multiple criteria, for instance about the costs and expected effects on trade, agricultural productivity, poverty reduction or other policy objectives. Yet information about these effects is frequently not available. As a result, decisions on where to allocate resources to strengthen SPS capacity are often made based on instinct, or reflect the stakeholders with the "loudest voice" or best access to decision-makers.

Multi-Criteria Decision Analysis (MCDA) offers a structured process to establish priorities amongst diverse SPS capacity building options, complementing official capacity evaluation tools. It provides a tool to inform and aid SPS decision-making processes in order to enhance the economic efficiency of investment decisions so that scarce resources are allocated in a manner that best meets a country's economic development, poverty alleviation, public health and/or other objectives. The use of MCDA promotes more transparent and accountable choices between multiple SPS capacity building options. It also facilitates more inclusive decision-making processes involving diverse public and private stakeholders.

How is MCDA used?

The MCDA Tool provides a structured framework to prioritize SPS capacity building options (investments), which can differ significantly in their characteristics, as well as the associated flow of costs and benefits over time. These options are defined on the basis of: (i) the product(s) affected; (ii) the specific SPS issue/problem faced by exporters of the product(s), whether relating to existing or potential exports; (iii) the export market(s) where this SPS issue/problem is faced; and (iv) distinct capacity building options that would solve this SPS issue.

For instance, they might include mycotoxin testing for groundnuts, hygiene controls for molluscs, determination of pest-free status for bananas, post-harvest treatment for mangoes, HACCP-based controls for cashews, etc. While other more generic or structural SPS weaknesses may exist (e.g. out-dated legislation, shortage of trained personnel), it is more difficult to include them in the analysis in view of the complexities in determining their links to specific impacts on trade, domestic public health, etc.

The outputs generated through use of the MCDA Tool reflect the stakeholders involved. Therefore, the process (see Box 1) should engage representatives of all public and private stakeholders responsible for managing and/or complying with SPS measures. For instance, these may include government departments responsible for food safety, animal and plant health, trade and/or export promotion, agricultural producers and exporters, industry associations, academia and research institutes, etc.

Key messages

- **Multi-criteria decision analysis offers a practical decision-support tool to help establish SPS priorities and ensure that available resources are used as efficiently as possible.**
- **Use of MCDA generates evidence that can help to convince policy-makers and donors of the need to invest in SPS capacity.**
- **The use of MCDA facilitates an open and transparent discussion among public and private stakeholders about SPS capacity building needs.**
- **The process of applying MCDA should be participatory, involving all relevant public and private stakeholders with an interest in SPS compliance.**
- **National SPS coordination mechanisms can play a useful role in facilitating application of the MCDA Tool.**
- **Using MCDA changes the fundamental nature of decision-making, which increases the need for buy-in at a relatively high managerial and/or political level.**

Box 1: Steps in the Use of MCDA

1. Compile and analyse available information on SPS needs, constraints and opportunities to inform the process.
2. Define the set of SPS capacity building options (investments) to be considered during the analysis.
3. Define the criteria (e.g. cost, impact on trade, agricultural productivity, poverty reduction, etc.) to be used to prioritize amongst the selected options, and the relative weights to be assigned to each criterion.
4. Prepare information cards bringing together all the information collected (Steps 1 to 3) in a structured, coherent and transparent manner.
5. Derive quantitative priorities amongst the options using an out-ranking approach. Computer software can be used to quickly and easily compare the options in a pairwise fashion (positive/negative flows).
6. Rank the capacity building options on the basis of net flows. Diagnose the results generated and "play" with the software to check whether the ranking changes significantly when the inputs are modified.
7. Review and discuss the ranking of SPS priorities with national stakeholders and development partners.
8. Refine the analysis and prioritization, as needed, on the basis of stakeholder feedback and validation, and any additional or new data.

What are the initial experiences with this Tool?

The STDF applied the MCDA Tool in Mozambique and Zambia in 2011, together with public and private sector stakeholders involved in the SPS area. It is currently being applied by the Belize Agricultural Health Authority as part of an STDF project, and will be used in Southeast Asia (country to be determined) in 2012. Other countries, regions and organizations have expressed interest in applying the tool, and additional applications are planned. The STDF is observing these applications closely in order to further refine the process and improve the MCDA Tool.

Using MCDA changes the fundamental nature of decision-making. This may necessitate that more time and/or resources are allocated to decision-making, pointing to the need for buy-in at a relatively high managerial and/or political level.

Experiences to date highlight the usefulness of this approach to facilitate an open discussion among diverse public and private stakeholders about priorities for SPS capacity building. Clearly, groups whose preferred options are ranked on top will be "happier" with the results than others whose preferences come out lower down. The open process ensures that all the information used is "on the table", enabling participants to raise concerns (e.g. about data) and to understand why one option is prioritized above another one. If and when new capacity needs emerge, existing needs are addressed or new data is available, the analysis may be re-applied.

Ideally, stakeholders would re-apply the MCDA Tool periodically to take account of emerging SPS needs or new data. The "hard facts" generated through this process could inform the development of SPS action plans and formulation of projects, as well as ongoing resource allocation decisions by government and donors. This process will be most effective where a "champion" or driver emerges to facilitate application of the tool and involvement of all the concerned stakeholders. Where national SPS coordination mechanisms effectively bring together local SPS stakeholders on a regular basis, they would be an ideal position to lead this work.

Further information

↗ To consult the MCDA Tool, and find information on where it has been applied as well as the computer software used to derive quantitative priorities, e-mail STDFSecretariat@wto.org or visit the STDF website: http://www.standardsfacility.org/en/TAEcoAnalysis.htm