Indicators to Measure the Performance of a National SPS System

STDF / OECD Working Paper (DRAFT)[1]

[1] This draft working paper has been prepared by the STDF Secretariat in collaboration with the OECD. It does not necessarily reflect the views of STDF's partners, donors, developing country representatives and observers, or the OECD. This is the third revision of this paper and reflects discussions at the STDF / OECD Technical Working Meeting on SPS Indicators, which took place in Geneva on 1 July 2010, as well as other comments received following the meeting.

Executive Summary

1. Endorsement of the Paris Declaration on Aid Effectiveness in 2005 committed donors and developing countries to change the way technical cooperation is delivered and managed as a means to improve the effectiveness of assistance and advance progress towards the Millennium Development Goals (MDGs). As such, donors and partner countries committed to put in place results-based management frameworks to ensure that their activities achieve the desired objectives and targets. Such frameworks are based on the articulation of a chain of results (logic model) and inclusion of indicators for tracking results at each step in the chain.

2. This draft working paper has been prepared by the Standards and Trade Development Facility (STDF) Secretariat, in collaboration with the Organisation for Economic Co-operation and Development (OECD), to provide a framework to identify indicators to measure the performance of a national SPS system, based on the logframe's intervention logic. This draft paper – and the provisional set of indicators proposed – is a "work-in-progress". This version takes into account discussions and comments made by participants at the STDF/OECD technical working meeting on SPS indicators in Geneva on 1 July 2010. This draft will be further revised and improved through further discussions with the STDF Working Group and other concerned stakeholders, as well as pilot testing activities, which are planned to take place in selected countries in 2011.

3. The STDF work on SPS indicators, of which this working paper is one part, is designed to support the identification and application of indicators to measure the performance of national SPS systems. In particular, this work has three main objectives: (i) to sensitize the SPS community about the importance of managing for results and, more specifically, about the value and role of indicators; (ii) to identify, pilot test and refine a representative set of indicators to measure the performance of a national SPS system; and (iii) to develop guidance materials to promote the use of indicators within results-based management frameworks for national SPS systems. In addition, this work will contribute to and support other STDF work (including on SPS action planning), as well as activities to enhance the use of results-based management within SPS-related projects and programmes, and efforts to monitor the impact of Aid for Trade by focusing on monitoring and evaluation of assistance at an operational, issue-specific level.

4. The STDF work on SPS indicators should be distinguished from other work by international and regional organizations to develop and/or apply sector-specific indicators for food safety, animal and plant health systems, including as part of capacity evaluation tools. The SPS indicators proposed here seek to "go beyond" existing sectoral indicators in an effort to develop comprehensive, cross-cutting indicators for a national SPS system as a whole.

5. This working paper focuses on the identification of a set of provisional indicators to track and measure performance of a national SPS system as a whole (*macro* level), based on the logical framework's results chain and OECD terminology, i.e. inputs → activities → outputs → outcomes → impacts. This paper does **not** undertake to develop indicators for particular SPS projects or programmes (*micro* level), which will obviously depend on the specific objectives of the intervention in question. The identification and application of macro-level indicators is a long-term and iterative activity that is likely to require substantial time and resources from a range of stakeholders. The intention is to substantially refine and improve the provisional indicators proposed here through further discussions with STDF's partners and experts in other concerned organizations, as well as pilot testing activities at the country-level. Activities to pilot test the use of these provisional indicators at the country-level will provide useful feedback on the appropriateness and value of these indicators, as well as on the complementary process of applying results-based management within the SPS area.

6. In essence, the purpose (medium-term) of a viable, functioning, resourced and transparent national SPS system is to enhance food safety, animal and plant health (including the ability to meet international SPS requirements). This will contribute towards the longer-term goal of meeting

national development objectives, which may include increased employment, income generation, increased market access, poverty reduction, improved public and animal health, etc.

7. A viable and functioning national SPS system relies on the public sector, the private sector, research and academia, and consumers and their organizations to achieve its purpose. For this system to be functional and effective, each of the components must have the capacity to carry out their particular roles and responsibilities. Effective linkages and synergies (including information exchange, dialogue and coordination) between the various national stakeholders involved is essential. Furthermore, this system operates within the context of: (i) other enabling (or disabling) factors (e.g. rule of law, governance, the investment climate, logistics and transportation infrastructure) at the country level; (ii) a regional framework (e.g. including regional trade agreements, SPS-related strategies or priorities, etc. defined by governments in that region); and (iii) an international framework (comprising international standard setting bodies, the WTO SPS Committee, bilateral agreements with trading partners, etc.).

8. The identification and use of indicators for a national SPS system has several advantages. Firstly, they are useful to aggregate the estimated impacts of multiple projects and interventions. Secondly, in an environment where joint programmes and inter-organizational collaboration are encouraged, developing and tracking key macro-level indicators provides a means to achieve synergies and enhance effectiveness in reporting, monitoring and evaluation. Thirdly, macro-level indicators can have considerable potential as policy tools to support SPS policy and decision-making in a systematic way, particularly given the number of stakeholders involved and the often fragmented state of SPS-related information at the national level. This is of particular relevance given efforts in some countries to develop and/or apply SPS actions plans to provide a framework for SPS capacity building and the mobilization of resources.

9. This paper also discusses common challenges that are – or are likely to be – faced in the design and use of SPS indicators in practice. Quantifying long-term impacts is complex due to: (i) the number of interventions (with and without donor support), as well as the linkages and interdependencies between them and resulting problems of attribution; (ii) the time required to observe results; (iii) the importance of other factors outside the scope of SPS (e.g. transportation or financial infrastructure); and (iv) availability and reliability of data, including data fragmentation and a lack of baseline data[2]. Inadequate financial resources for monitoring and evaluation, combined with difficulties in establishing the counterfactual (i.e. testing the opposite hypothesis), compound these challenges.

10. Finally, the paper makes some initial recommendations to support the identification and use of SPS indicators. These focus on the need to: (i) adapt the provisional indicators proposed for use in individual countries; (ii) strengthen data collection, reporting and management; (iii) pay attention to widely-recognized guiding principles (i.e. relevance, limited number, clarity in design, feasibility, identification of causal links, data quality and reliability, scale, etc.); (iv) identify targets and baselines; and (v) enhance capacity in results-based management in particular and management capacity in general.

[2] Baseline data is collected at one point in time and is used as a point of reference against which results will be measured or assessed. A baseline is needed for each performance indicator that will be used to measure results during the investment. *Results-Based Management Tools at CIDA: A How-to Guide* Available at: http://www.acdi-cida.gc.ca/acdi-cida/ACDI-CIDA.nsf/eng/NAT-92213444-N2H

I. Introduction

1. Demands for more rigorous monitoring and evaluation of Official Development Assistance (ODA) have moved to the forefront of the international development agenda in recent years. Donors and their national governments want to see evidence that resources are well spent, and that they contribute towards meaningful results including achievement of the Millennium Development Goals (MDGs). Implementing agencies and beneficiaries of technical cooperation have been asked to do more to provide definitive measures of the effects of various types of assistance provided (e.g. in agriculture development, private sector development, Aid For Trade, health, education), and to demonstrate that it produces tangible results and impacts for people in developing countries, in terms of poverty reduction, improved food security, etc.

2. Increasing flows of assistance have been allocated to enhance capacity in the sanitary and phytosanitary (SPS) area in developing countries in the past decade. In general, the results of these activities have been reported in terms of the outputs achieved (e.g. the number of officials trained, new legislation developed), with limited information available about the medium to long-term impacts on market access, poverty reduction, etc.. A number of factors contribute to this including issues related to attribution and timing, as well as the challenges (including methodological difficulties, time and financial resources required) inherent in quantifying these impacts. The STDF/OECD work on good practice in SPS-related technical cooperation acknowledged this situation. However, it also emphasized that without the systematic use of indicators to measure the results and sustainability of SPS technical cooperation, the real effect of such assistance on trade is little understood.[3]

3. This draft working paper has been prepared by the Standards and Trade Development Facility (STDF) Secretariat, in collaboration with the Organisation for Economic Co-operation and Development (OECD). It is a direct response to demands for more rigorous monitoring and evaluation of technical cooperation in general, and in the SPS area in particular. The focus is on the identification of indicators for a national SPS system as a whole, based on the logframe's intervention logic.

4. It is important to clarify at the outset that this paper does **not** undertake to develop indicators for particular SPS projects or programmes, which will obviously depend on the specific objectives of the intervention in question. Given the significant differences characterizing SPS-related projects and programmes, it is unrealistic to try to develop project/programme level indicators here. Rather, the intention is to provide a framework to identify indicators that are capable of measuring the performance of an SPS system in a country over a period of time. As such, the indicators proposed in this paper reflect the broad outcomes and results of relevant projects or programmes, as well as complementary initiatives and actions by both public and private sector and other concerned stakeholders in the country.

5. This draft working paper – including the preliminary set of indicators proposed – is a "work-in-progress". It reflects discussions and comments made by participants at the STDF/OECD technical working meeting in Geneva on 1 July 2010, which was attended by some 75 participants, including 16 experts from developing countries and regional economic communities in Africa whose participation was funded by the STDF.

6. The technical working meeting, which was co-facilitated by an SPS consultant and a results-based management specialist[4], allowed an in-depth examination and discussion of a previous version of this working paper and, in particular, the set of indicators proposed. Participants at this meeting agreed on the value of a results-based management approach to identify indicators to measure the

[3] STDF work on Good Practice G/SPS/GEN/875 and G/SPS/R/52: http://www.standardsfacility.org/Good_Practice.htm

[4] Kees van der Meer and Sheelagh O'Reilly, respectively.

performance of a national SPS system, and the use of the logical framework approach in that context. There was also consensus on the need to ensure synergies with FAO, OIE, IICA and other organizations that are applying capacity evaluation tools, since these tools generate information and data that provide a useful measurement of capacity in key areas. It was further noted that the findings of these evaluations generate useful baseline data, and some of these could be combined to form composite indicators for particular aspects of SPS capacity. More in-depth discussions with the organizations responsible for these capacity evaluation tools will be undertaken as a next step to further explore these opportunities and the linkages with the STDF/OECD work.

7. The technical working meeting (and subsequent STDF Working Group meeting on 2 July) also endorsed the need for pilot testing work on SPS indicators to ensure that country-level processes, practicalities and experiences are reflected, and thereby further improve and advance the STDF/OECD work. There was agreement that one size does not fit all and that any set of provisional indicators would need to be adapted by countries depending on their particular circumstances. There was also consensus that, wherever possible, pilot testing activities should be linked to other STDF work (e.g. individual STDF projects, STDF economic analysis pilot testing, STDF/EIF training on project design, SPS action planning, etc.) as well as capacity evaluation work led by other organizations, notably OIE, FAO, IICA (see section IV below). It is intended that this draft working paper will be improved and finalized based on this pilot testing work in selected countries, and published as a guide for the development and application of SPS indicators.

Purpose

8. The STDF/OECD work on SPS indicators, of which this working paper is one part, is designed to support the identification and application of indicators to measure the performance of national SPS systems. In particular, this work has three main objectives:

i. to sensitize the SPS community at large about the importance of managing for results and, more specifically, about the usefulness of indicators as a tool to better monitor and measure outcomes, to improve project design and management and, where possible, to evaluate the long-term impact of SPS capacity building;

ii. to identify, pilot test and refine a representative set of provisional indicators to measure the performance of a national SPS system; and

iii. based on the pilot testing exercise, to develop guidance materials – targeted at national authorities responsible for SPS management – to promote the use of indicators to measure the performance of national SPS systems and strengthen the development of SPS action plans.

9. Various stakeholders are expected to benefit from this work including:

- donors and development agencies responsible for financing and/or implementing SPS capacity building initiatives;
- international organizations responsible for developing standards and encouraging members to implement them, including through participation in SPS capacity building initiatives; and
- other stakeholders in developing countries who are involved in SPS-related projects and programmes, as well as national-led initiatives to strengthen SPS capacity including the development and/or implementation of SPS policies, strategies, action plans, etc.

10. This work on SPS indicators will feed into and support other work by the STDF on SPS action planning and the use of economic analysis to inform SPS decision-making. It will support

ongoing efforts to enhance results-based management and improve the development and application of indicators as part of individual SPS-related projects and programmes. It also contributes to efforts by the OECD's DAC Secretariat and the WTO to monitor the impact of Aid for Trade by focusing on monitoring and evaluation of assistance at an operational, issue-specific level.

Methodology

11. This working paper has been prepared on the basis of: (i) desk research; (ii) inputs received from STDF partners, donors and other collaborating organizations; and (iii) key informant interviews with selected STDF partners and donors, as well as practitioners in the SPS field and the wider "managing for results" community.

12. A number of challenges were encountered during the desk research. Despite requests for information, it was difficult to obtain documents related to SPS-technical cooperation projects including indicator sets. This partly reflects the fact that limited work seems to have taken place to apply results-based management in the SPS area within individual organizations or to develop and use SPS specific indicators. Where SPS-related documents were available, questions sometimes arose regarding the terminology used. In some cases, little if any distinction was made between immediate (output), medium-term (outcome) and long-term (impact) objectives and indicators. Other challenges related to the use of aggregate-level indicators (e.g. increased food and agricultural exports) that were difficult to link to project or programme interventions, the scarcity of baseline data and, in some cases, confidentiality requirements.

Structure of this paper

13. Following this introductory section, the working paper is structured as follows:

- Section II provides a brief overview of the increased focus on indicators in the context of results-based management and the aid effectiveness agenda, and introduces the different types (output, outcome, impact) of indicators.
- Section III addresses the scope of a national SPS system and SPS capacity, as well as the rationale for indicators to measure the results and performance of the system as a whole.
- Section IV sums up efforts to date to develop and apply indicators that are relevant for SPS, notably indicators for food safety, animal and/or plant health.
- Section V considers technical issues related to the design and measurement of SPS indicators.
- Section VI sets out a preliminary set of possible indicators for a national SPS system based on the logframe's output-outcome-impact model.
- Section VII discusses some common challenges faced in the identification and/or application of SPS indicators.
- Section VIII outlines some preliminary recommendations to strengthen the identification and use of SPS indicators.

II. The aid effectiveness agenda and mounting attention to indicators

14. Endorsement of the Paris Declaration on Aid Effectiveness[5] in 2005 committed donors and developing countries to change the way technical cooperation is delivered and managed, as a means to improve the effectiveness of available assistance and advance progress towards achievement of the Millennium Development Goals (MDGs). One of the five core principles in the Paris Declaration focused on "managing for results" (Box 1). By calling on donors and partner countries to direct resources to achieving results, and use information on results to improve decision-making and programme performance, it drew attention to the importance of indicators as a tool for this purpose.

Box 1. The Paris Principles on Aid Effectiveness, 2005

Ownership	Partner countries exercise effective leadership over their development policies, and strategies and coordinate development actions.
Alignment	Donors base their overall support on partner countries' national development strategies, institutions and procedures.
Harmonization	Donors' actions are more harmonized, transparent and collectively effective.
Managing for results	Managing resources and improving decision-making for results.
Mutual accountability	Donors and partners are accountable for development results.

Source: Paris Declaration on Aid Effectiveness. Available at: http://www.oecd.org/dataoecd/11/41/34428351.pdf.

15. Reviewing the implementation of the 2005 Paris Declaration in 2008, the Accra Agenda for Action[6] concluded that greater efforts were needed to turn the Paris Principles into action. One of the concerns raised focused on accountability, emphasizing that "developing and donor countries alike must be accountable to each other and to their parliaments and citizens, demonstrating how their policies and programmes translate into real impact on people's lives".[7]

Indicators as a key tool within results-based management

16. As part of this international dialogue on how to improve the effectiveness of technical cooperation, donors and partner countries have committed to put in place results-based management frameworks to ensure that their activities achieve the desired objectives and targets. Managing for results implies "articulating a chain of results from project inputs, to activities, outputs, outcomes and long-term impacts, which provides a framework within which to monitor and measure expected changes that will result from project activities. Key changes described in the results chain are translated into targets and associated baseline value, and indicators are identified for tracking results at each step in a programme's logic. Therefore, indicators are a critical component of the results-based

[5] The Paris Declaration on Aid Effectiveness (2005) has been endorsed by some 114 countries and 25 international organizations. It sets out a roadmap of practical commitments to promote ownership, alignment, harmonization, managing for results and mutual accountability, organized around five key principles, each of which has a set of indicators of achievement.

[6] The Accra Agenda for Action was adopted in September 2008, in Accra, Ghana by Ministers, Heads of Agencies and other Senior Officials in an effort to accelerate and deepen implementation of the Paris Declaration and help ensure achievement of the MDGs by 2015. See: http://www.oecd.org/document/18/0,3343,en_2649_3236398_35401554_1_1_1_1,00.html

[7] Gearing up for Accra: Setting a new agenda for action. OECD. DAC News. July 2008. See: http://www.oecd.org/dataoecd/47/42/41018694.htm

management systems, enabling donors to integrate measurement of results into all phases of the project or programme implementation."[8]

17. Results-based management is designed to improve programme delivery and strengthen management effectiveness, efficiency and accountability through a focus on the achievement of defined and measurable results and impact. It seeks to overcome what has been called the "activity trap", that is, getting so involved in the detail of day-to-day activities that the ultimate purpose or objectives are forgotten.[9] As such, it aims to move the emphasis away from the type of activities undertaken (e.g. training, provision of advice) to try to identify and measure the ultimate changes that these activities are expected to induce, for instance on poverty reduction, economic growth and other higher-level objectives.

18. Use of the logical framework (logframe[10]) to identify and, in turn, monitor and report on outputs, outcomes and impact is a key part of the results-based management approach. Indicators are also essential. Indicators give a precise definition of the intervention logic, providing an operational description of the overall objective, purpose and results in terms of the variable (what will change?), target value (how much?), target groups/beneficiaries (who whom?) and time (by when?). Indicators quantify, describe and simplify information in a manner that facilitates understanding by policy makers and practitioners. They also contribute towards accountability, transparency, continuous feedback and ongoing learning.

Distinguishing between output, outcome and impact indicators

19. The results-based management literature categorizes indicators according to outputs, outcomes and impacts (Figure 1).[11] Output indicators measure goods and services provided. Outcome indicators measure immediate or short-term results. Impact indicators monitor longer-term results.

20. Efforts to measure SPS performance and results require output, outcome and impact indicators, as well as data for each. Indicators of outputs alone are insufficient because the link between a given output and the consequent outcome and/or impact may be ambiguous or of unknown magnitude. For instance, the SPS dimension of a market access problem may be relatively small so even a successfully implemented project (which satisfactorily meets the designated output indicators) may not lead to significant improvements in market access (i.e. outcome and impact indicators) in the absence of attention to other non-SPS constraints (see Figure 2).

[8] OECD. 2010. How to manage for results: Some reflections on the use of common indicators. paper prepared for the Joint Meeting of the Development Assistance Committee and The Working Party of the Trade Committee on Aid for Trade, 7 June 2010. COM/DCD/TAD(2010)1. Available at: http://www.olis.oecd.org/olis/2010doc.nsf/ENGDATCORPLOOK/NT00002B0E/$FILE/JT03283440.PDF

[9] UNESCO. 2008. Results-based Programming, Management and Monitoring at UNESCO. Guiding Principles. See: http://unesdoc.unesco.org/images/0017/001775/177568E.pdf

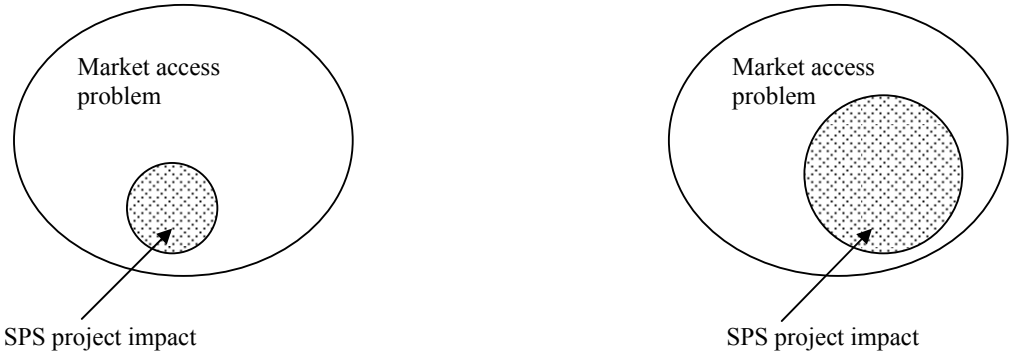
[10] The logframe is an important and widely-used tool for managing the complete project cycle from design to implementation, monitoring and evaluation. It provides a framework for conceptualizing project objectives and linking them back to project interventions (World Bank. The LogFrame Handbook. http://www.wau.boku.ac.at/fileadmin/_/H81/H811/Skripten/811332/811332_G3_log-framehandbook.pdf).

[11] It is worth noting that the terminology used by bilateral donors and international organizations in the context of results-based management differs. This paper will seek to use the OECD definitions.

Figure 1. OECD definitions of output, outcome and impact[12]

Output	Outcome	Impact
The products, capital goods and services which result from a development intervention; may also include changes resulting from the intervention, which are relevant to the achievement of outcomes.	The likely or achieved short-term and medium-term effects of an intervention's outputs.	Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended.

Figure 2. Impact of two different SPS projects on a market access problem[13]



21. Similarly, the use of impact indicators alone is often insufficient because most development objectives are achieved as a result of a number of different interrelated interventions. Measuring the extent to which the objective has been achieved and identifying the contribution made by each intervention or project is extremely complex and challenging. For instance, changes in market access depend on the effects of multiple activities and interventions, as well as on other external factors (e.g. competitiveness, exchange rate stability, transportation and financial infrastructure, ability to meet requirements of individual buyers, absence of extreme weather events, appropriate ecological conditions). Unless the contribution of a particular intervention to changes in market access conditions is measured, that intervention may be credited for improvements it did not help bring about or incorrectly blamed for problems it did not cause. Challenges related to attribution are also discussed in sections V and VII of this document.

22. General characteristics of output, outcome and impact indicators are presented in Table 1.

[12] OECD Glossary of Key Terms in Evaluation and Results Based Management (2002).
[13] Adapted from World Bank. 1999. Environmental Performance Indicators.

Table 1. Characteristics of output, outcome and impact indicators[14]

	Performance (efficiency of the project or programme)		Results (changes resulting from the project or programme)	
Log frame level	**Inputs**	**Outputs**	**Outcomes**	**Impact**
Monitoring and evaluation activity	Monitor resources and activities	Outputs are generated by the project / programme, and track delivery of goods and services	Assess early results	Monitor and evaluate longer-term results of the project / programme.
Characteristics of indicator	Related to physical, human and financial resources provided for the project.	Output indicators may include physical outputs, services, training, advice, etc.	Outcome indicators should respond quickly and be easy to measure. They should measure the extent to which beneficiaries changed behaviour due to the project. Typical indicators include access, use and satisfaction with respect to projects services.	Impact indicators may move slowly and be difficult to measure. They must show evidence of change and analysis must establish the extent to which change is attributable to the project / programme being evaluated.
Sources of verification	Project documents, administrative records, etc.	Project reporting, administrative records, etc.	Surveys of beneficiaries, service providers, project reporting, etc.	Ongoing monitoring and evaluation activities, dedicated evaluation studies, etc.
Frequency of reporting	3-12 months	6-18 months	1-5 years	5 years and over

III. Measuring performance and results of national SPS systems

Components and capacities of a national SPS system

23. Following discussions at the technical working meeting, this revised paper seeks to clarify the purpose of a national SPS system. In essence, the purpose (medium-term) of a viable, functioning, resourced and transparent national SPS system is to protect human (food safety), animal or plant life and health, as reflected in the preamble to the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). The SPS Agreement focuses specifically on the relationship between international trade and measures related to food safety, animal and plant health. It aims to strike a balance between the rights of governments to protect health of consumers by ensuring food is safe and protecting plant health and animal health, while ensuring that such measures are not disguised restrictions on trade. The ability to comply with international requirements – notably the standards, guidelines and recommendations standards of the Codex Alimentarius

[14] Adapted from FAO / World Bank / Global Donor Platform for Rural Development. 2009. Tracking results in agriculture and rural development in less-than-ideal conditions. A source book of indicators for monitoring and evaluation. 2009. See: www.donorplatform.org/component/option,com_docman/task,doc_view/gid,863

Commission, the World Organisation for Animal Health (OIE) and the International Plant Protection Convention (IPPC) – is fundamental to implementation of the SPS Agreement.

24. The existence of a viable, functioning, resourced and transparent national SPS system therefore helps trade in agricultural and food products to flow as smoothly as possible. However, as discussed above, its purpose goes beyond trade. Similarly, while the purpose of a national SPS system is not to achieve higher-order goals, the existence of a national SPS system will contribute towards the achievement of higher-order, longer-term national development goals and objectives, which may include poverty reduction, increased employment, income generation, increased market access, improved public health, etc. In this way, a national SPS system therefore also *contributes* towards the attainment of MDG 1 (Eradicate extreme poverty and hunger) and MDG 8 (Develop a global partnership for development).

Box 2: Definition of SPS Measures

SPS measures are measures intended to protect human, animal or plant life or health against risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms; or to protect human or animal health against risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs; or otherwise to prevent or limit damage from the entry, establishment or spread of pests.

Source: Annex A, SPS Agreement

25. There are synergies between a viable, functioning, resourced and transparent national SPS system and success in accessing export markets. For instance, if a national SPS system has adequate capacity for domestic inspection and enforcement, rates of rejections of food and agricultural exports should be low. However, SPS capacity is important not only to meet requirements in export markets but also to facilitate controls on imported agricultural and food products and on domestic production. In countries with significant imports of food and agricultural products, these controls may sometimes be of greater importance than export controls.

26. SPS capacity refers to a country's ability to design, disseminate and implement SPS measures so as to achieve the appropriate level of protection (ALOP) against the risks faced (Box 2), and to meet the SPS requirements of trading partner countries. As discussed below, these capacities exist in both the public and private sector. Indeed, given the private sector's crucial role in food and agricultural trade, producers, processors and traders must have a defined role and capacity to control SPS risks (particularly in the area of food safety) that complements public sector resources, systems and programmes of government.[15]

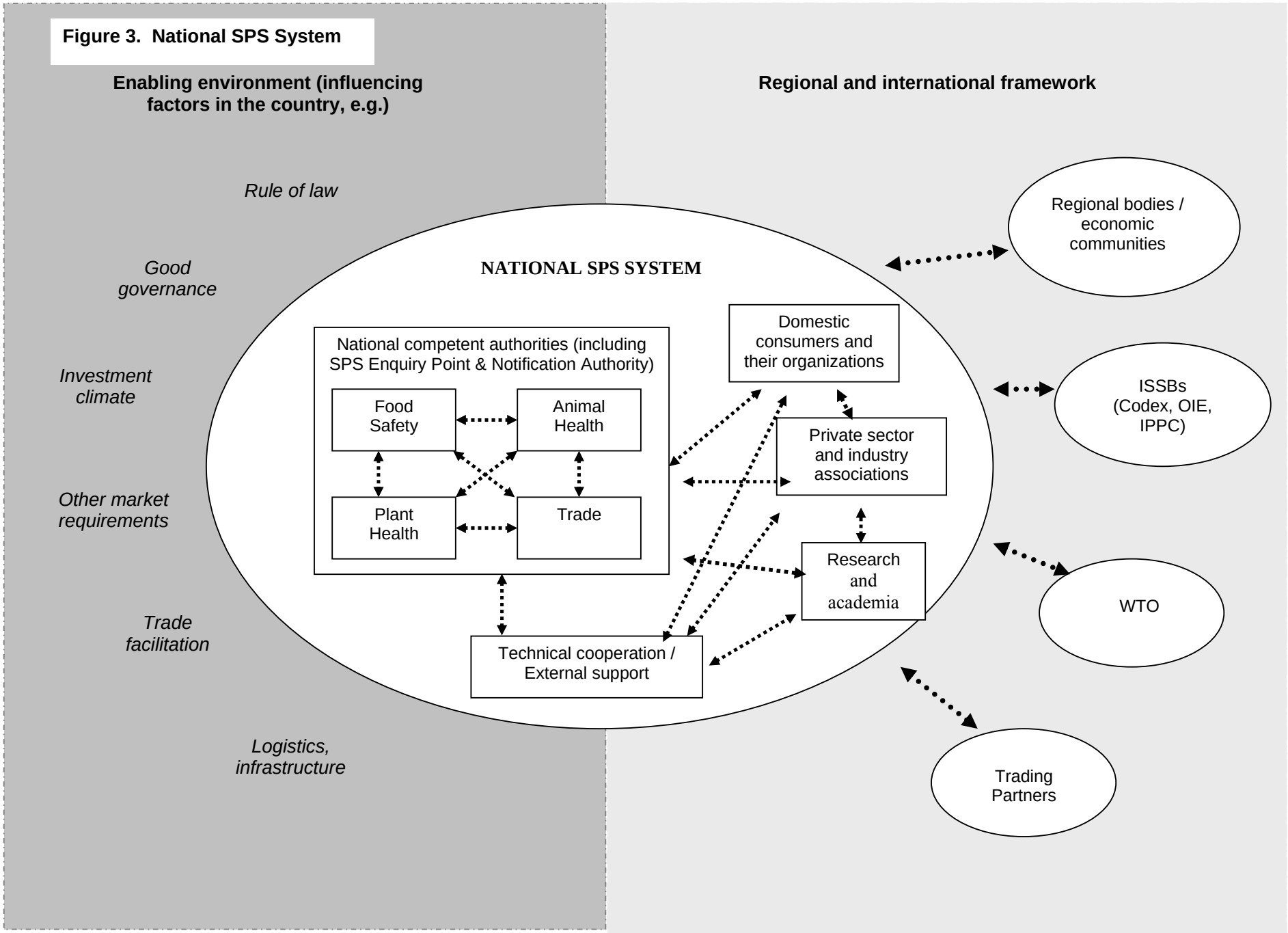
27. As illustrated in Figure 3, a national SPS system relies on the public sector (relevant competent authorities for food safety, veterinary services, plant health and/or trade, SPS Enquiry Points and National Notification Authorities), the private sector (including producers, processors, traders, enterprises and their workers, industry associations, etc.), research and academia, and consumers and their organizations. For this system to be functional and successful, each of the components must have the capacity to carry out their particular roles and responsibilities. In addition, it is essential to have effective linkages and synergies – including information exchange, dialogue and coordination – between the various national stakeholders involved.

28. Figure 3 illustrates that the existence of an SPS system is, on its own, not sufficient for trade. The results and performance that this system can achieve is influenced by other factors – such as rule

[15] Gascoigne. 2007. Identification of Parameters for Good Practice and Benchmarks for Judging the Impact of SPS-Related Technical Assistance. Report prepared for the Standards and Trade Development Facility (STDF), Geneva.

of law, governance, the investment climate, logistics and transportation infrastructure, etc. – within the country. These factors can be enabling or disabling. In addition, a national SPS system operates within: (i) a regional framework that may include regional trade agreements, SPS-related strategies or priorities, etc. defined by governments in that region; and (ii) an international framework comprising the international standard setting bodies (Codex, OIE, IPPC), the WTO SPS Committee, bilateral agreements with trading partners, etc.

Figure 3. National SPS System

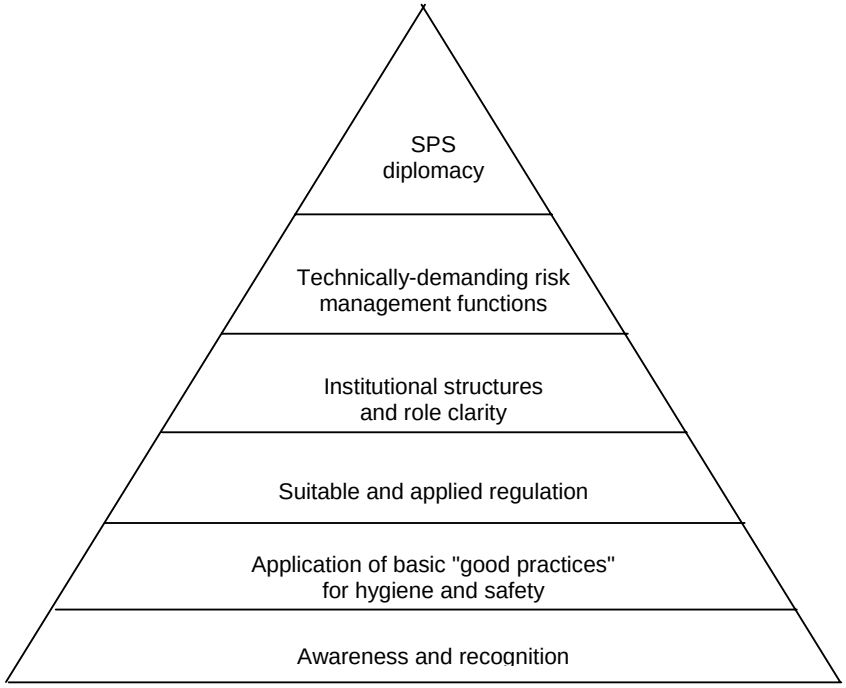


29. A national SPS system also relies on sectoral capacity in food safety, animal and plant health, and trade to comply with SPS requirements and demonstrate compliance. This will normally include policies, laws and regulations, institutions and infrastructure to carry out diagnostic analysis, inspection, certification, monitoring and surveillance, enforcement, risk analysis, information exchange, etc. across food safety, animal and plant health.

30. The level of SPS capacity required by any one country will reflect the type, number and severity of SPS risks faced **and** the economic opportunities that are available if SPS risks are controlled. This will differ significantly for different product-market combinations[16] and particular market segments depending on whether they have high, medium or low demands for quality and safety.[17]

31. The hierarchy of trade-related SPS management functions, developed by the World Bank, captures six key dimensions of SPS capacity (Figure 4 and Box 3).

Figure 4. Hierarchy of trade-related SPS management functions[18]



32. While the hierarchy moves from lower levels of capacity (i.e. SPS awareness and recognition) towards higher levels (i.e. SPS diplomacy), in practice, many of the functions in the hierarchy will need to be carried out in parallel, with different thresholds for different product market combinations.

[16] Personal communication. Kees Van der Meer.

[17] Often a two or three-tier system develops in agricultural production, with some farmers producing on contract to supply to tightly controlled standards for export; other, typically smaller farmers, producing independently for the traditional local market; with perhaps an intermediate group supplying local supermarkets. Kees van der Meer.

[18] World Bank. 2005. Tanzania's Agro-Food Trade and Emerging Sanitary and Phytosanitary (SPS) Standards: Toward a Strategic Approach and Action Plan. Washington DC. See: http://www.integratedframework.org/files/english/Tanzania_DTIS_Vol1_Nov05.pdf

Box 3. Key dimensions of SPS capacity*

Awareness and recognition of SPS requirements and controls: The extent to which stakeholders – from the level of decision-makers to implementers and operators – in both the public and private sector are: (i) aware of the importance of effective SPS controls to export competitiveness; and (ii) recognize their own role and contribution within a functional SPS system.

Application of basic "good practices" for hygiene and safety: The ability of actors within export-oriented supply chains to apply established risk and quality management practices – including good agricultural practices (GAP), good manufacturing practices (GMPs) and Hazard Analysis and Critical Control Point (HACCP)-based quality management systems – from production to distribution.

Suitable and applied regulation: The existence of a suitable legal regulatory framework for SPS management as well as capacity (including competent staff, standard operating procedures, financial resources, etc.) to effectively implement and enforce regulations.

Institutional structures and role clarity: Transparent institutional structures including clarity of roles and mandates, and effective information exchange and coordination between the public and private sector stakeholders involved in SPS management is a key dimension of SPS management capacity.

Technically-demanding risk management functions: The ability to control SPS risks – including several plant and animal diseases – that are more systemic in nature and not confined to particular production or processing operations. Such risks cannot be fully controlled on a decentralized basis and require broader oversight or collective action. Ability to control or manage these risks normally requires more technically-demanding functions – including research and analysis, effective systems for surveillance, quarantine or emergency management, which often require sophisticated skills, specialized equipment and well-defined organizational structures, supported by recurrent funding.

SPS Diplomacy: The extent to which countries can engage bilaterally with their trading partners (both developed and developing and representing different market segments), as well as with international standard-setting bodies (Codex Alimentarius, OIE and IPPC) and the WTO SPS Committee.

** Source: Based on the World Bank's Hierarchy of trade-related SPS management functions*

Therefore, achieving meaningful and sustainable impacts will depend on effective capacity in each of these layers.

33. This hierarchy also recognizes the different and complementary roles of the public and private sector within an effective SPS management system. While government authorities are responsible for providing an effective legal and regulatory framework for SPS management, as well as provision of technically-demanding risk management functions and engaging in SPS diplomacy with international bodies and trading partners, the private sector has a fundamental role to play in the development and sustainability of SPS capacity, particularly within the food safety sub-sector and in the least-developed countries. In many cases it is through the specific actions of individual producers and processors that compliance with SPS measures is achieved. One example is the application of HACCP-based quality management systems and other elements of hygienic practices in the production, processing and handling of agricultural and food products. In some cases, capacity in the private sector (e.g. a laboratory established and operated by individual enterprises or an industry organization) can complement, and even substitute for, the public sector capacity. In low-income and,

particularly, least-developed countries (LDCs), SPS management capacity is unevenly distributed across the public and private sectors. For instance, in some cases where overall SPS management capacity is very limited, considerable capacity may exist in key strategic areas such as established export sectors or supply chains with a small number of dominant enterprises.[19]

Rationale for indicators for the national SPS system

34. Given the diversity of SPS problems, the variety of contexts in which they arise and the range of possible solutions to address these problems, it is neither feasible nor practical to identify an "exhaustive" set of indicators applicable to all situations. Nevertheless, it is possible to define some representative indicators capable of measuring the overall SPS outcomes and results in a country over a period of time. Such indicators are **not** directly linked to individual projects but rather reflect the broad outcomes of multiple projects, national initiatives, policy changes, etc. This approach acknowledges that the creation of an effective SPS system requires more than one project or programme, as well as complementary initiatives and actions by both public and private sector stakeholders in that country.

35. This working paper focuses on the identification and application of a set of provisional indicators for a national SPS system (*macro* level), based on the logical framework model. The set of indicators proposed here is a "work in progress" in that it is possible to consider adding or removing indicators from the list in the logical framework matrix at any point, based on experience with their use, including during the proposed pilot testing. This paper, including the provisional indicators proposed, is intended to provide a framework to help countries set their own targets and measure their SPS performance against these targets.

36. The identification and use of indicators for a national SPS system has several advantages. Firstly, they are useful to aggregate the estimated impacts of multiple projects and interventions. Secondly, in an environment where joint programmes and inter-organizational collaboration are encouraged, developing and tracking key macro-level indicators provides a means to achieve synergies and enhance effectiveness in reporting, monitoring and evaluation. Thirdly, macro-level indicators can have considerable potential as policy tools to support SPS policy and decision-making in a systematic way (Box 4), particularly given the number of stakeholders involved and the often fragmented state of SPS-related information at the national level. This is of particular relevance given

Box 4. Use of SPS indicators to support national decision-making

The process of developing and applying macro-level SPS indicators at the national level, including the collection of appropriate data, provides a means to:

- bring important SPS issues to the political agenda;
- promote national dialogue on SPS capacity and priority needs;
- facilitate reporting on the SPS situation to decision-makers and the general public (domestic and international);
- assess the achievement of national goals and targets, and revise as required;
- facilitate the preparation and monitoring of SPS action plans;
- contribute to and support consideration of the costs and benefits of different types of interventions; and
- assess the performance of implementation of SPS action plans.

efforts in some countries to develop and/or apply SPS actions plans to provide a framework for SPS capacity building and the mobilization of resources. Indicators to monitor the performance of these

[19] Spencer Henson, Stenven Jaffee, Cees de Haan and Kees van der Meer. 2002. Sanitary and Phytosanitary Requirements and Developing Country Agro-Food Exports: Methodological Guidelines for Country and Product Assessments. World Bank. August 2002. http://siteresources.worldbank.org/INTRANETTRADE/Resources/Topics/Standards/standards_challenges_methodologypaper.pdf

plans are useful to assess and evaluate the overall effects of SPS capacity building interventions, or non-intervention, over the medium to long-term, and make any necessary adjustments.

37. While this working paper is expected to contribute to, and support, the process of developing indicators for particular SPS projects and programmes, the focus here, as stated above, is **not** on indicators for specific SPS interventions, projects or programmes. This reflects the need to define and tailor indicators at the project/programme (*micro*) level to the specific objectives and components of the project/programme in question.

38. Finally, the STDF/OECD work to identify provisional indicators to measure the performance of a national SPS system should be distinguished from other ongoing work to develop and/or apply sector-specific indicators for food safety, animal and plant health systems (see below). The SPS indicators proposed here seek to "go beyond" existing sectoral indicators in an effort to develop comprehensive, cross-cutting indicators for the national SPS system as a whole. The development and application of these SPS indicators will obviously depend on the involvement of all the concerned sectors (including food safety, animal and plant health) in the country.

IV. Efforts to date to identify and apply indicators for food safety, animal and/or plant health

39. The Food and Agricultural Organization of the United Nations (FAO), the World Organisation for Animal Health (OIE) and other international/regional organizations have developed – or are in the process of developing – sector-specific indicators for food safety, animal and/or plant health. These sector-specific indicators – both quantitative and qualitative – seek to measure capacity and performance within food safety, animal and plant health, and some focus directly on trade. As such, they are relevant to the identification and application of indicators focusing on SPS as a whole. However, SPS indicators should go beyond sectoral indicators for food safety, animal and/or plant health to provide a measure of capacity in the SPS system as a whole.

40. Some of the existing sectoral indicators have been developed as part of SPS-related capacity evaluation tools to provide a measure of the capacity of national food safety systems, veterinary services, phytosanitary services, etc.[20] Others have been developed in an effort to measure the performance of specific interventions to enhance capacity in food safety, animal and/or plant health, and trade.

41. The Inter-American Institute for Cooperation on Agriculture (IICA) has developed a tool to assess the performance, vision and strategy for sanitary and phytosanitary services measures (IICA PVS SPS Tool).[21] This tool is of particular interest to the STDF/OECD work because "it approaches the issue of sanitary and phytosanitary measures from an institutional, international, and horizontal perspective. Institutional and international because it focuses on the responsibility of national public and private entities of maximizing the benefits from and compliance with commitments made by the country to international standardization organizations and the World Trade Organization (WTO). In addition, the instrument is horizontal, because it analyzes all sectors rather than just one in particular."[22] The three components and variables included in the IICA PVS SPS Tool are presented in Annex 1.

42. The IICA PVS SPS Tool has been applied in 28 countries in Latin America and the Caribbean. Through this process, stakeholders at the country level have produced national

[20] STDF. 2008. SPS-related Capacity Evaluation Tools: An overview of tools developed by international organizations: www.standardsfacility.org/files/various/STDF_Capacity_Evaluation_Tools_Eng_.pdf

[21] http://www.iica.int/Esp/organizacion/LTGC/Sanidad/Publicaciones%20de%20SAIA/B0744I.pdf

[22] IICA. 2008. performance, vision and strategy (PVS) for sanitary and phytosanitary measures: An institutional vision. Written by Eric Bolanos Ledezma and Ana Marisa Cordero Pena for the Inter-American Institute on Agriculture (IICA).

implementation agendas (or road maps) on SPS issues based on information collection and national consultations involving public and private sector stakeholders (known as "common vision" sessions).

43. The Tool for the Evaluation of Performance of Veterinary Services (OIE-PVS Tool[23]), developed by the OIE, includes a series of critical competencies to measure the performance of veterinary services for animal health in four main areas (fundamental components of the OIE-PVS Tool): (i) human, physical and financial resources; (ii) technical authority and capability; (iii) interaction with stakeholders; and (iv) market access. Each critical competency includes qualitative levels of advancement based on critical competencies in the OIE Terrestrial Code on Veterinary Services (Chapter 3.1) and on the Evaluation of Veterinary Services (Chapter 3.2). To establish the current level of performance, critical competencies with five possible levels of advancement are identified for each of the four fundamental components. A higher level of advancement assumes that the services are complying with the preceding (non 1) levels (e.g. level 3 assumes compliance with level 2 criteria). For each critical competency PVS assessors use a list of suggested indicators that the OIE has developed on the basis of extensive experience with the conduct of evaluations within the PVS framework. In addition, the OIE has provided a Manual for Assessors as well as Guidelines for countries requesting or considering a PVS Evaluation. The OIE has extensive experience in applying these indicators as part of capacity evaluations carried out with the support of accredited experts within countries. However, it should be noted that these are technical indicators for veterinary services with limited attention to development outcomes or impact.[24]

44. The FAO has developed a generic set of indicators for food safety projects as part of a guidance document on evaluating the impact of capacity building activities in the field of food quality and safety.[25] These indicators are intended to assist those involved in the development of specific indicators for individual projects. In the plant health area, indicators have been developed as part of the strategic framework for building national phytosanitary capacity proposed by the Commission on Phytosanitary Measures (CPM) of the International Plant Protection Convention (IPPC).[26]

45. One challenge raised regarding some of the above tools is that they contain large numbers of indicators to describe a system from a technical perspective, however, the indicators are not prioritized.

46. The World Bank has developed a set of indicators of participation in international institutions relating to SPS and other technical measures, as part of methodological guidelines for country and product assessments of SPS requirements.[27] The latter were developed to support the development of action plans but have not been applied widely.

[23] http://www.oie.int/eng/oie/organisation/A_2010_PVSToolexcludingindicators.pdf

[24] The OIE emphasizes the need to recognize the challenges in "extracting" – out of context – particular sector-specific indicators and cautions that indicators from the OIE-PVS Tool should be considered only within the framework of the specific PVS evaluation, given that the number (and complexity) of indicators for each critical competency varies and that these indicators have been determined by accredited experts for the purpose of the PVS.

[25] More information is available here: http://www.fao.org/ag/agn/agns/files/CBIndicatorPaper.pdf

[26] IPPC. Building National Phytosanitary Capacity (Strategic Framework). February 2010. https://www.ippc.int/file_uploaded/1267093551_2010-DRAFT-IPPC_bnpc_strategy.doc

[27] Spencer Henson, Stenven Jaffee, Cees de Haan and Kees van der Meer. August 2002. Sanitary and Phytosanitary Requirements and Developing Country Agro-Food Exports: Methodological Guidelines for Country and Product Assessments. World Bank. August 2002.
http://siteresources.worldbank.org/INTRANETTRADE/Resources/Topics/Standards/standards_challenges_methodologypaper.pdf

47. The European Commission is currently developing indicators in the field of trade-related assistance and private sector development in which SPS indicators are also being explored.[28] These indicators, when available, will also be of use to refine and improve the indicators proposed in this working paper.

48. The Aid for Trade dialogue is examining the possibility of "developing a core list of commonly agreed indicators for cross-country comparability, and to link them to subsets of country specific indicators for Aid for Trade".[29] In this context, work is ongoing to review existing indicators to measure aid for trade results at the country level and consider their policy relevance and analytical soundness. This work is taking place in the run-up to the Third Global Review of Aid for Trade in 2011, which will focus on monitoring and evaluation. An expert meeting at the OECD in October 2010 discussed the potential and value of selecting and integrating a small number of "universal" indicators across all types of aid-for trade projects and programmes, as a means to facilitate the aggregation of results at the country level. One approach being considered under this work is to "identify and 'tag' certain aspects of results and promote common results measurement and reporting practices. Indicators would be set at the outcome level where measurements of the results (or the degree to which the goals were achieved) could be bundled up".[30].

49. Bilateral donors, development agencies and other organizations involved in capacity building activities related to food safety, animal and/or plant health, and SPS more broadly, are also making increasing use of indicators to monitor and evaluate the performance and impact of their interventions. Many of these organizations – including the Canadian International Development Agency (CIDA)[31], the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)[32], the Danish International Development Agency (Danida), the United Kingdom Department for International Development (DFID), the Economic Cooperation and Development Division at the Swiss State Secretariat for Economic Affairs (SECO)[33], the Swedish International Development Cooperation Agency (SIDA)[34], the United States Agency for International Development (USAID) – have developed guidance to promote the routine use of logical frameworks (including the inclusion of indicators), as part of results-based management for their SPS-related projects and programmes.

50. Similarly, most bilateral donors and multilateral agencies have developed separate indicators to measure the outcomes of their trade-related assistance. For instance, indicators for "trade development" activities include: export growth rates; changes in the export structure; changes in the share of value-addition of exports; and trade's share in the country's GDP.[35] However, an OECD review of the efforts of donors and multilateral agencies to measure performance and impact of trade-related assistance notes the challenges in determining the "development" effectiveness and longer-term impact of trade-related assistance. These are often due to the lack of clear and measurable programme objectives and performance indicators (particularly impact indicators) in programme

[28] EC Internal Working Paper on Indicators in the Field of Trade Related Assistance and Private Sector Development. Not dated.

[29] OECD, 2009. COM/DCD/TAD(2009)4/REV1.

[30] OECD. 2010. Experts Meeting on Indicators (22 October 2010): Measuring Aid-For-Trade Results at the Country Level. Background Note for Discussion.

[31] http://www.acdi-cida.gc.ca/acdi-cida/acdi-cida.nsf/eng/NIC-31595014-KEF

[32] GIZ was established in January 2011 following a merger of the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Internationale Weiterbildung und Entwicklung gGmbH (InWEnt) and Deutsche Entwicklungsdienst gGmbH (DED).

[33] http://www.seco-cooperation.admin.ch/dienstleistungen/00602/index.html?lang=en

[34] http://www2.sida.se/shared/jsp/download.jsp?f=SIDA1489en_web.pdf&a=2379

[35] OECD. 2007. Trade-Related Assistance. What do recent evaluations tell us? See: http://www.oecd.org/dataoecd/19/3/37326353.pdf

documents, and difficulties to attribute changes in a country's export performance or overall policy making to specific projects due to attribution and time lag problems.[36]

51. Some regional economic communities (including COMESA) have initiated work to identify indicators to measure performance as part of SPS action planning. UNIDO intends to develop SPS compliance indicators. The STDF will continue to make every effort to share information on its work on SPS indicators with other concerned organizations and to identify and pursue concrete areas for collaboration with concerned stakeholders, including during the planned pilot testing activities at the country level.

V. Technical issues related to the design and measurement of SPS indicators[37]

52. Clarifying the **scope** of SPS is important since there are diverging implicit definitions that ask for somewhat different indicators. Some definitions tend to include all animal health, plant health and food safety measures in SPS, regardless of whether there is a relation to trade flows. Others narrowly look at measures to promote exports from developing countries to premium markets. Most support for SPS capacity building targets this latter segment. A third approach would be to consider only trade-related measures and capacities needed thereof. Since many capacities can be used for trade-related and domestic tasks there are areas of overlap, which is fine.

53. **Country-specificity** is important. Countries can differ much in the SPS capacities they need and can afford. One size does not fit all. A number of factors affect the need for SPS capacities including:

- Size of country (e.g. measured by area, population, size of the economy, size of the agriculture and food sector, volume of trade in agriculture and food products). The demand for SPS services increases with most measures of the size of a country. Small countries have relatively small volumes of trade to protect and to certify. Therefore, affordability of SPS capacities is challenging for small countries. Since many SPS capacities can be used for a variety of products and large volumes, and involve significant minimum fixed costs, bigger countries can afford a broader range of capacities and specialist services. Certain lumpy capacities which are considered basic and unavoidable, will require small countries to spend relatively more than bigger countries because of diseconomies of scale.

- Urbanization: Since urbanization results in more transport of food and agricultural products over long distances, often between areas with different pest and disease situations, and with producers and final users who do not know each other, health risks tend to increase and a stronger public role is needed.

- Product-market combinations: Import restrictions and buyer requirements differ much between products, destinations, market segments and by origin of production, because of inherent risks of health hazards and preference of buyers. Hence, products can be called low, medium and high SPS-sensitive. Some countries apply high biosecurity standards over a broad range of products. Others are lenient. Supermarkets in OECD countries require high quality and food safety standards, which function as a threshold for large market segments. Small countries may have comparative advantage in a limited number of export products and their range of risky imports may be limited. Their need for SPS capacity depends on the SPS-sensitivity of their product-market relations.

[36] Ibid.
[37] Section provided by Kees van der Meer.

- Domestic income levels: High-income societies tend to be more sensitive about health hazards. Consequently, their SPS capacities in the public and private sector need to be more comprehensive and advanced. The adoption of food safety standards is highly related to the level of income.

- Geo-political location: Membership of regional economic cooperation agreements or common markets can highly affect what SPS capacities should be in place and what measures should be taken by member countries. In particular the EU, ASEAN and CIS offer examples of such requirements.

54. A particular benefit of country-level indicators in many areas, such as in cost of doing business, investment climate, governance, human health, is **international comparison**. It helps policy makers understand their relative position and gaps in performance. Such use could also be a main benefit of SPS indicators. However, country-specific factors complicate the design of macro-level SPS indicators that can be meaningfully compared internationally. There are two basic directions to solve this. One is designing indicators that are corrected for scale, and the other is to compare within groups of countries with similar characteristics (least developed countries, low income countries, small countries, middle income countries, etc.).

55. **Aggregation**: Many macro-level indicators cannot be measured directly. They have to be based on often large numbers of measurable sub-indicators and estimated through aggregation. This is not unique to SPS, it is common in many areas of measurement of national capacities and performance, such as cost of doing business, investment climate, governance and human health.

56. **Estimating outcome and impact**: Since outcome and impact will materialize in the future their estimation will depend on availability of models that assume causality. However, attribution of SPS measures to outcome and impact can be problematic. In many cases SPS capacities and performance are not the main constraint to achieving more production, trade and income, and hence estimation can be full of uncertainty.

57. There are three ways to **collect information** to estimate the level of an indicator. The first is to collect data from statistics and administrations. Second, use can be made of data surveillance among stakeholders and specialists. Third, specialist judgment can be used to assess information and to give scores to questions on a point scale (often yes-no, three-point or five-point scale, but also seven- or ten-point scales). The assessments for veterinary services, phytosanitary services and food safety are largely based on expert assessments. Indicators in some other areas such as investment climate and governance are mainly based on surveys with questionnaires.

58. Although having indicators for the SPS system as a whole is an important aim, it is also important to have **indicators for food safety and animal and plant health**, because the issues are significantly different and, in most countries, policy priorities for the sectors differ.

VI. Preliminary indicators to measure the performance of a national SPS system

59. This section begins to identify a **preliminary** set of indicators for a national SPS system based on the logframe's *output-outcome-impact* model discussed above and guided by the hierarchy of trade-related SPS management functions. The indicators in Table 2 are illustrative in that they are **indicative** of the types of indicators that a country might utilize to measure their SPS performance. Based on particular circumstances and needs at the country level, the indicators outlined below should be adapted and modified for use at the national level. In some cases, they might also be adapted for use at the sub-national and/or regional level.

60. It is important to acknowledge the limitations of these indicators. Previous efforts to identify indicators in other cross-cutting areas, such as governance, stressed the need to accept that any

Box 5. Examples of quantitative and qualitative indicators

Quantitative indicators are objectively or independently verifiable numbers or ratios such as volume of exports; output/cost ratios. For instance:

Number	• number of accredited laboratories • number of equivalency agreements with trading partners • number of new jobs created in food and agricultural export sector
Percentage	• percent of government budget devoted to SPS management • percent of staff of SPS competent authorities with risk analysis knowledge and capacity
Ratio	• ratio of food safety / animal / plant health inspectors to population

Qualitative indicators are subjective descriptions or categories such as whether or not a law has been passed or an institution has been established; beneficiaries' assessment of whether a project's services are excellent, satisfactory or poor; or simply a narrative describing change. For instance:

Existence (yes/no)	• SPS coordination mechanism established • SPS action plan developed / not developed • Amendments to relevant legislation passed / not passed
Category (e.g., x or y or z)	• Private sector awareness about SPS issues is "high", "medium" or "low" • Satisfaction of exporters / traders with respect to export controls is "high", "medium" or "low"

indicators will be **imperfect**. The development and application of indicators is a long-term and iterative activity that is likely to require substantial time and resources from a range of stakeholders. The indicators outlined below represent an initial, working set of indicators, to be substantially refined and improved based on pilot testing activities in countries.

61. The indicators proposed include a mix of quantitative, as well as qualitative or descriptive indicators (Box 5). Quantitative and qualitative indicators can be combined and typically complement each other.

62. Some of these indicators measure "commitment". While this is useful, there are inherent challenges. For instance, having an SPS strategy or SPS coordination mechanism is only the first step. The strategy needs to be implemented and the mechanism needs to be operational. Finally, the strategy and mechanism need to have a positive effect on SPS management capacity.

63. Wherever possible, the indicators proposed are related to existing data sets and available sources of verification.

64. A logical framework for a national SPS system – with indicators at the different levels – is presented below (Table 2). This is intended to provide a framework to help countries set their own targets and measure their SPS performance against these targets. As stated above, these indicators should be regarded as a representative set of provisional "working" indicators for a national SPS system, which may be modified and adapted on the basis of national circumstances and needs. In other words, it would be possible to consider adding or removing indicators from the list in the logical framework matrix at any point, based on experience with their use, including during the proposed pilot testing. As this work advances, one option to explore could be to refine and adapt the intervention logic in Table 2 to generate a series of logframes (supported by indicators) for national SPS systems in different types of countries (e.g. least developed, middle-income, food importing versus food exporting, etc.).

Table 2: Logical Framework for a National SPS System[38]

	Intervention logic	Objectively verifiable indicators	Sources and means of verification (examples – to be completed)	Assumptions and risks (examples - to complete)
Impact / Goal	To contribute to the achievement of national development objectives (e.g. increased employment, income generation, increased market access, poverty reduction, improved public health, etc.)	• GDP growth rate • Employment in food and agricultural sector • Poverty rate • Foreign exchange earnings from food and agricultural exports • Share of smallholders and small and medium sized enterprises (SMEs) in overall exports • Incidence of food-borne diseases	• Poverty Statistics • GDP and trade statistics from Government and multilateral organizations • Studies prepared for Global Burden of Foodborne Disease Initiative	• Enabling external economic environment • Political stability • Absence of natural disasters • Exchange rate stability • Absence of extreme weather events
Purpose (medium-term)	Creation of a viable, functioning, resourced and transparent SPS system with capacity to ensure food safety, animal and plant health (including the ability to meet international SPS requirements).	• Record of compliance or non-compliance • Increase in agri-food exports to new and existing markets • Reduction in rejections of agri-food exports due to SPS issues • Reduction in incidence of food-borne disease and improvement in food hygiene • Notifiable animal/plant diseases are controlled • Reduction in no. of pest and disease incursions • Increase in (equitable) employment • Increased sourcing of agri-food products from domestic producers • Increased agricultural productivity • Information dissemination tools for national, regional and international stakeholders[39] • Government funding for the SPS system • SPS is integrated into national economic development plans and processes • SPS issues are considered by in-country donor coordination mechanisms	• Rejection databases of trading partners (e.g. EU RASFF) • Reports on animal and plant health and food safety outbreaks/situation submitted to international organizations and trading partners • Websites of SPS Enquiry Points • PRSPs • National development plans • Notifications to WTO • Trade statistics • Employment statistics • Reports from sector associations • Studies on Disability Adjusted Life Years (DALY) • etc.	• Government commitment to improve SPS capacity • Government commitment to promote agri-food trade • Transportation and financial infrastructure • Good governance and rule of law

[38] This draft logframe includes an indicative "working" set of indicators, which will be further developed and improved during the pilot testing phase. It is also intended that the logical framework and indicators to emerge from the pilot testing work would be modified and adapted by stakeholders in countries based on their own particular national circumstances and needs.

	Intervention logic	Objectively verifiable indicators	Sources and means of verification (examples – to be completed)	Assumptions and risks (examples - to complete)
Outcomes	1. Government agencies, the private sector (including small producers, traders, industry, and their associations), consumers and donors understand the relationship between SPS capacity and national development, improved health, etc. and are committed to strengthening SPS capacity	• National SPS committee established in a strategic ministry • Information dissemination tools for different stakeholders (e.g. database reports, video, other media) • SPS issues are integrated into national development plans • SPS is integrated into national discussions on trade • SPS requirements are integrated into value chain development • SPS awareness among government agencies • SPS awareness among private sector • SPS awareness among consumers • Percentage of products that meet SPS requirements • Existence of research programmes on SPS issues and dissemination of findings	•	

[39] National stakeholders may include relevant public sector organizations (including government ministries and departments responsible for food safety, animal and plant health, competent authorities, relevant national committees), the private sector (producers, traders, suppliers, enterprises including SMEs, etc.) and their associations, civil society 8e.g. consumer associations). Regional stakeholders may include trading partners and government organizations in the region, regional economic communities (RECs), regional private sector or civil society organizations. International stakeholders may include trading partners and government organizations, international organizations, donors, international private sector or civil society organizations, etc.

	Intervention logic	Objectively verifiable indicators	Sources and means of verification (examples – to be completed)	Assumptions and risks (examples - to complete)
	2. Development and implementation of a policy, legal and regulatory framework [dependent on country legal system] for SPS management [in accordance with the appropriate level of protection]	• Stakeholder engagement in development of laws and regulations • Existence of SPS Policy, Strategy and/or Action Plan that takes into account SPS risks faced and market opportunities • Roles and responsibilities of stakeholders (i.e. SPS Enquiry Point, Notification Authority, food safety agencies, NPPO, veterinary authority, etc.) are clearly defined, understood and budgeted for • Accountability and management system established • National standards harmonized with international standards (Codex, IPPC, OIE) • Publication of laws and regulations • Stakeholder engagement in development and review of implementation mechanisms		

	Intervention logic	Objectively verifiable indicators	Sources and means of verification (examples – to be completed)	Assumptions and risks (examples - to complete)
	3. SPS decision-making is coordinated, collaborative and transparent	• Existence of SPS coordination mechanism • Active participation of SPS stakeholders (public and private) in coordination mechanism • Decisions on allocation of SPS resources are prioritized based on evidence of risks and market opportunities • Mechanism to receive, analyse and act on SPS notifications of trading partners	• Meeting reports • TORs for coordination mechanisms • Documents analysing costs and benefits of different options • Tools for dissemination of SPS notifications to national stakeholders • etc.	
	4. Stakeholders (including government, enterprises, SMEs, small-scale producers, suppliers, traders, etc.) have capacity to carry out their roles and responsibilities[40] (as articulated in legislation) including international obligations where relevant	• Work programmes • Standard operating procedures or procedural documents • Continuity of operational funding • Available qualified technical and managerial staff • Information management systems for food safety, animal diseases and plant pests • Up-to-date lists of animal diseases / plant pests for quarantine (as well as regulated non-quarantine pests) • No. of samples collected • No. of diagnostic tests • No. of disease / pest survey carried out • Accountability, management and budgetary monitoring systems in place • Private sector application of good practices, guidelines, etc. • No. of producers / farms certified in good practices		

[40] Including diagnostic capacity, inspection, monitoring and surveillance, certification, etc. for food safety, animal and plant health

	Intervention logic	Objectively verifiable indicators	Sources and means of verification (examples – to be completed)	Assumptions and risks (examples - to complete)
	5. Relevant national agencies are able to engage with trading partners, international standard-setting bodies, relevant regional bodies, WTO, etc.	• Participation in international standard-setting bodies and SPS Committee • Knowledge and confidence to contribute to development of international standards (Codex, OIE, IPPC) • Existence of national stakeholder consultations and reporting mechanisms • Knowledge and confidence to comment during SPS Committee meetings • Knowledge and confidence to submit and comment on SPS Notifications • Publication of SPS measures • Market access agreements for new products and in new countries		

Impact indicators

65. As indicated in the logical framework above, impact indicators attempt to measure the ultimate goal of a national SPS system in achieving progress towards shared higher-order objectives such as economic growth, poverty reduction or sustainable development. Much more work needs to be done on measuring SPS performance and on use of indicators to understand the impact of SPS capacity on market access and development. However, there are obvious challenges, not least since both development and the measurement of SPS capacity are multidimensional, highly complex processes and it is often difficult to identify causal relationships.

66. Some initiatives – including the SPS Action Plan for the Greater Mekong Sub-Region, financed by the Asian Development Bank – have taken steps to identify the possible benefits of addressing deficiencies in SPS capacities and performance for producers and consumers in the country and its trading partners. These are presented in Table 3.

Table 3. A possible set of SPS impact indicators[41]

Criteria	Possible indicators	Discussion
(1) Higher ***income from agriculture*** and related enterprises through lower losses of production, specifically:		
➢ reduced incidence of plant pests will lower losses of production	Amount of income gains; income gains per dollar of product	Estimation of gains may be difficult, given the limited readily available agronomic and phyto-pathological information
➢ reduced incidence of contagious animal diseases will result in lower mortality and morbidity of animals and reduced loss of animal products	Amount of income gains; income gains per dollar of product	Estimation of gains may be difficult given the limited readily available animal husbandry and veterinary information
(2) Higher ***income and wellbeing for consumers*** through reduced incidence of food-borne diseases and related reduced morbidity and mortality, specifically:		
➢ reduced loss of productive time and improved healthy life	Amount of income gains; income gains per dollar of product	Previous WHO work on DALYs or similar studies could be used for estimation of incidence and reduction of incidence. A valuation for healthy life could be used.
➢ lower cost of medical treatment and drugs	Amount of income gains; income gains per dollar of product	A survey study is needed to assess the treatment cost per case of disease.

[41] Provided by Kees van der Meer and based on *Action Plan 2010-2015 for Improved SPS Handling in GMS Trade*. ADB. 2010.

Criteria	Possible indicators	Discussion
(3) Higher ***income*** for producers, trading enterprises and consumers through lower transaction and mark-up cost, especially:	Amount of income gains; income gains per dollar of product. (Gains are the sum of cost reduction of sub-indicators below.)	This will require baseline studies estimating handling costs invoked by SPS measures throughout the supply chains, and reductions in cost that can be achieved:
➢ reduction of unnecessary SPS measures	Amount of cost; cost reduction per dollar of product	Assessment of unnecessary measures and their costs
➢ more efficient implementation of SPS measures	Amount of cost; cost reduction per dollar of product	Assessment of costs involved in implementation of measures and achievable savings
➢ reduction of informal payments	Amount of cost; cost reduction per dollar of product	Survey among stakeholders to assess costs incurred.
➢ reduced risks for private investors	Amount of cost; cost reduction per dollar of product	A survey can touch upon some perceived risks, but quantification of related costs ("insurance premium") will be difficult
(4) Increased ***economic growth, employment and income*** through improved competitiveness, lower cost of doing business, improved market access and import substitution, specifically	Net value added (=increased sales-incurred cost) (Gains are sum of gains from sub-indicators below)	
➢ more investment because of increased competitiveness and lower cost of doing business	Net value added (=increased sales-incurred cost)	Measurement of increases in competitiveness, investment and supply response will be necessary but difficult.
➢ improved market access and market opportunities because of compliance with importing country requirements	Net value added (=increased sales-incurred cost)	Predictability of increased market access varies between product market combinations (countries and products), but specialists should be able to design output and outcome targets in terms of market access. However, supply response and attribution will remain difficult, in part since factors outside the SPS domain may sometimes play dominant roles, such as volume, quality and consistency of supply.
➢ import substitution of tier 1 and tier 2 products.	Net value added (=increased sales-incurred cost)	In particular in food safety a larger part of purchases in tier1 (if any) and tier 2 markets may be procured from domestic sources. Supply response will be difficult to assess in part since volume, quality and consistency of supply may in some cases be of dominant concern to buyers.

67. While indicators to measure the "economic" impact of SPS performance are clearly important, there may be scope to further develop social, environmental and governance indicators linked to SPS performance, particularly in terms of linkages to the Millennium Development Goals, and this should be further explored during the pilot testing work.

VI. Common challenges in the development and/or application of SPS indicators

68. A number of common challenges are faced in the design and use of SPS indicators in practice. Attribution and causality are key challenges. It is extremely difficult, as discussed above, to clearly identify the links between activities to strengthen SPS capacity and their long-term impact on economic growth or poverty reduction. Similar challenges exist in trade-related technical cooperation more generally; there is increasing recognition that trade-poverty linkages require more comprehensive analysis and conceptual underpinning.[42]

69. Quantifying long-term impacts is complex for a number of reasons including: (i) the number of interventions (with and without donor support), as well as the linkages and interdependencies between them and resulting problems of attribution; (ii) the time required to observe results; and (iii) the importance of other factors outside the scope of SPS (e.g. transportation or financial infrastructure). Reflecting these challenges, the European Commission, one of the largest donors in the area of SPS and Aid For Trade, has decided to focus its monitoring and evaluation activities on measuring outputs and possibly outcomes, noting that it is not "realistic to monitor trade impacts of specific aid programmes because of the important number of external factors influencing trade".[43]

70. Availability and reliability of data, including the frequent lack of baseline data, is another important challenge. Many countries lack capacity to produce and report the data necessary to track and measure progress in the SPS area, as well as to adequately interpret available data. Limited knowledge about the theory and practice of results-based management, including the logframe's output-outcome-impact model and the terminology used, poses another difficulty.

71. Inadequate financial resources for monitoring and evaluation of individual SPS projects – as well as the combined effects of SPS programmes and projects at the macro level – often exacerbates the challenges in applying results-based management. Results-based management requires technical capacity and financial resources to establish baseline data, monitor implementation (for instance through data collection, reporting and/or surveys), interpret and analyse data, and make recommendations to adapt activities accordingly. The STDF/OECD research on good practice acknowledged that managing for results requires a minimum level of capacity to formulate and implement SPS-focused policies and manage public resources to achieve goals. However, it also highlighted that qualified and experienced managers are scarce in the SPS services of many countries.[44][45]

72. Many of the challenges faced in the SPS area in implementing results-based management also apply in agricultural development and trade-related assistance more broadly. This has been highlighted by an OECD review of the key findings, lessons learned and recommendations emerging from evaluations of trade-related assistance undertaken by several bilateral donors and multilateral agencies (Box 6), as well as in recent work by the OECD/WTO on Aid For Trade indicators.

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[42] Federal Ministry for Economic Cooperation and Development, Germany. Shaping German Aid for Trade – Past Experience, Lessons Learnt, and the Way Forward. Discourse 013. June 2009.

[43] EC response to OECD/WTO Donor Questionnaire on Aid for Trade 2008. http://www.oecd.org/dataoecd/2/52/43039136.pdf

[44] STDF/OECD. 2008. Good Practice in SPS-Related Technical Assistance. An Overview and Synthesis of the Findings of STDF/OECD Research. G/SPS/GEN/875.

[45] Gascoigne. 2007.

Box 6. Challenges with results-based management from the perspective of trade-related assistance

- Designing realistic and measurable objectives for trade-related assistance agreed upon by donors and the partner country and in line with, or linked to, national development and poverty reduction objectives.
- Developing adequate quantitative and qualitative indicators to measure performance at output, outcome and impact levels.
- Difficulties in evaluating cost-efficiency due to lack or inaccessibility of financial information.
- Complexities in isolating the contribution of one activity from other possible contributing factors (e.g. other donors activities, national reform, external change, etc.).

Source: OECD 2007. Trade-Related Assistance. What do Recent Evaluations Tell Us?

73. Lastly but not least, as with Aid For Trade more generally,[46] there is recognition that measuring the impact of SPS capacity building interventions will never be easy given the difficulty in establishing the counterfactual (i.e. testing the opposite hypothesis). The key question is: "Would the change have occurred anyway or is it due to the (set of) capacity building intervention(s)?" This question may be answered by identifying and estimating causal effects through counterfactual methods. However, this is complex. The challenge for quantifying effect is finding a credible approximation to what would have occurred in the absence of the intervention, and to compare it with what actually happened. The difference is the estimated effect, or impact, of the intervention, on the particular outcome of interest (e.g. per capita GDP, export volumes or incomes).[47]

74. Defining the counterfactual against which impacts are estimated is difficult, especially where other influencing factors vary unsystematically with the state of SPS capacity. For example, how to separate out the impact of enhancements in SPS capacity on exports flows from other plausible influencing factors, for example transport costs or shifts in world market prices. Further, how to estimate wider spill-over effects that may represent a significant part of the impact, for example effects on small-scale producers or the environment.[48]

VIII. Some initial recommendations to support the identification and use of SPS indicators

Adapt these provisional indicators for use at the country level

75. Some degree of adaptation will be required in order to apply this set of indicators at the national level. It may also be possible to adapt this set of indicators to generate different sets of indicators for particular types of countries (e.g. least developed, middle-income, higher-income, etc.). Choosing indicators is ultimately a political process in that it reflects priorities and induces accountability. On the technical side, the choice of indicators depends considerably on the types of data available. The availability of baseline data will be of critical importance to effectively use and track these indicators. However, in several countries, data availability is likely to be limited and efforts to use SPS indicators will need to be accompanied by work to gather and/or manage relevant data.

76. Additional modifications may also be needed to adapt the logframe and indicators proposed here so that they are contextually appropriate and fit with the approach to results-based management that is being used by government agencies and donors within a country.

[46] OECD/WTO. 2009. Aid for Trade at a Glance 2009: Maintaining Momentum.

[47] http://ec.europa.eu/regional_policy/sources/docgener/evaluation/evalsed/sourcebooks/method_techniques/counterfactual_impact_evaluation/index_en.htm

[48] Henson, Spencer. Guidelines on the Use of Economic Analysis to Inform SPS-related Decision-Making. Prepared for the STDF. November 2009. See: http://www.standardsfacility.org/files/EconomicAnalysis/STDF_Coord_291_Guidelines_22Jan10.pdf

77. The proposed STDF work to pilot test SPS indicators will explore these issues in more detail. The idea would be to take the indicators proposed here as a starting point and to work with selected national authorities responsible for SPS management to tailor these indicators to national circumstances and SPS objectives, ideally in such a way that comparison is still possible. In that way, concerned stakeholders in the country could discuss indicators for the SPS system in their country, possibly within the context of activities to develop SPS action plans, select indicators of most relevance, and identify baselines and targets for these indicators.

78. One recommendation from the technical working meeting focused on paying greater attention to the regional dimensions of indicators, particularly for countries that are working towards regional integration. This could be promoted by encouraging countries to share and exchange information on the SPS indicators they select in an effort to reach some degree of regional harmonization of SPS indicators, wherever relevant and practical.

Strengthen data collection, reporting and management

79. Improving the collection, reporting and management of SPS-related data and information is a prerequisite to strengthen results-based management and the use of indicators. Competent authorities responsible for SPS management in many developing countries need better capacity to collect and analyse data that can be used to measure SPS performance and results based on the hierarchy of trade-related management functions, and to support their work more generally (e.g. setting risk-based priorities for inspection), as has been recognized in the STDF work on the use of economic analysis to inform SPS-related decision-making.[49]

80. Improving data collection, reporting and management may require additional financial and human resources. In some cases, in order to ensure effectiveness of SPS data and information management systems and their use, it may also be necessary to review roles and responsibilities of the various stakeholders involved in data collection, reporting and management in the SPS area to avoid overlaps and duplication. This will also be important to ensure that any different information systems that are used are compatible with each other. Linking SPS data collection, reporting and management, if possible, to data collection for national development programmes and strategies (including Poverty Reduction and Strategy Papers) would further ensure that SPS systems are fully integrated into other relevant national reporting mechanisms.

Use some fundamental guiding principles

81. The World Bank[50] and OECD[51] have identified a number of principles to guide the selection of environmental and agro-biodiversity indicators, respectively. These principles are highly relevant for SPS indicators and should be used to guide their development and application.

- **Relevance**: The selection of SPS indicators should start from a precise understanding of national SPS objectives (or project objectives in the case of micro-level indicators) and the overall SPS situation. Use of the logframe approach provides a practical means to link output, outcome and impact indicators to objectives.

- **Limitation in number**: It is most effective to be selective and use smaller sets of well-chosen indicators. Using too many indicators risks diluting their usefulness.

[49] STDF. 2009. Using economic analysis to inform SPS decision-making. STDF Briefings. No. 3. See: http://www.standardsfacility.org/files/EconomicAnalysis/STDF_BRIEFINGNo3_10389_09_LR.pdf

[50] World Bank. 1999. Environmental Performance Indicators. A Second Edition Note by Lisa Segnestam. Environmental Economic Series. Paper No. 71.

[51] OECD Agri-Biodiversity Indicators: Background Paper. Prepared by Kevin Parris, Policies and Environment Division, Agriculture Directorate, OECD. http://www.oecd.org/dataoecd/9/13/40350839.pdf

- **Clarity in design**: It is important to define indicators clearly in order to avoid confusion in their development and use, and maintain the distinction between output, outcome and impact indicators as far as possible.

- **Feasibility**: SPS indicators should be practical and realistic, in terms of current or planned data availability. They should also be cost effective in terms of data collection, processing and dissemination. This may lead to trade-offs between the information content of various indicators and the costs of collecting them.

- **Clear identification of causation**: Causal links must be clearly identified. Where causal links are not clear, it may be necessary to rely on indicators which are more general in nature, for instance, describing the state of SPS capacity and not the impact.

- **Quality and reliability**: Indicators, and the information they provide, are only as good as the data from which they are derived. Ideally an indicator should represent a reliable measure and should have a sound statistical and scientific basis. If the "ideal" indicator to measure an SPS problem is based on unreliable data, it may be best to use a proxy or alternative instead.

- **Appropriate scale**: SPS capacity building activities may have impacts that go beyond the area in which they are implemented. For instance, a programme to control fruit fly in one country may benefit producers in border areas of a neighbouring country. SPS indicators could therefore also focus on impacts beyond the national level and, in some cases, it may be beneficial to develop and use regional indicators.

- **Timeframe**: In many cases, there are substantial time lags before the effects of SPS capacity building activities become clear. For instance, it often takes several years for countries to establish surveillance and eradication programmes for plant pests and for their trading partners to recognize these systems.

- **Targets and baselines**: The purpose of SPS macro-level indicators is to monitor and evaluate the medium and long-term effects arising from SPS projects and programmes, as well as actions or initiatives (e.g. development and implementation of an SPS policy or strategy) led by national stakeholders. Baseline data providing a measure of particular SPS problems or capacity is required. For micro-level indicators, data is needed before the project or programme begins, during implementation and after the project or programme has ended (to compare baseline values to targets).

- **Easily interpreted**: Variations in the direction of change of the indicators over time should be clearly understood by concerned stakeholders in terms of an improvement or deterioration in SPS performance at the macro or micro level as appropriate.

Enhance capacity in the area of results-based management in particular, and management capacity in general

82. Increasing awareness and knowledge about results-based management, and equipping officials in developing countries with the skills to apply this approach, is also essential. Having knowledge about results-based management is important for officials responsible for SPS management, as well as those involved in the design and formulation of particular projects. The EIF and STDF are planning to pilot test joint training workshops on project design and formulation, including use of the logical framework approach, in selected countries in 2011. The training materials to be developed through this work will be of wider use to SPS experts more broadly.

83. Strengthen management capacity is also important. In the SPS services of most developing countries, qualified and experienced managers are scarce. Yet, management capacity is crucial for the

authorities responsible for operating the SPS system as well as those involved in SPS capacity building projects.[52]

[52] STDF. 2008. Good Practice in SPS-related Technical Cooperation in the Greater Mekong Sub-region. Prepared for the STDF by Kees van der Meer and Laura L. Ignacio. G/SPS/GEN/872. Sep. 2008. See: http://www.standardsfacility.org/files/GEN/GEN872.pdf

Annex 1

Components and variables used in the IICA PVS SPS Tool

1. Interaction among public sector institutions, and between the latter and the private sector

Capacity of the National Services to collaborate with other entities of the public sector and obtain the private sector's collaboration and active participation in the implementation of programs and activities.

Critical competencies:
1. Information
2. Communication
3. Official representation
4. Coordination mechanisms
5. Coordination between the Capital and the Mission in Geneva
6. Priority of the issue

2. Capacity to promote access to international markets

Capacity and level of authority of the National Services to support access to and retention of markets.

Critical competencies:
1. Compliance with regulatory norms
2. Setting of regulatory norms
3. Harmonization
4. Transparency
5. Technical cooperation and special and differential treatment

3. Human and financial capital

Institutional and financial sustainability based on available human talent and financial resources.

Critical competencies:
1. Updating (this refers to the capacity of the public sector to keep its personnel updated regarding information and knowledge on the application of the SPS Agreement. This is measured through performance and the existence and implementation of an annual training plan for the staff)
2. Technical independence
3. Financial and technical resources
4. Human resources assigned to the matter