

*Standards and Trade Development Facility*

**Ex-Post Evaluation of STDF Project 20:  
Country-Based Plans for SPS Development**

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## **Ex-Post Evaluation of STDF Project 20: Country-Based Plans for SPS Development**

### **1. Executive summary**

This report provides an evaluation of the project Country-Based Plans for SPS Development supported by the Standards and Trade Development Facility (STDF). The purpose of the project, as laid down in the tender documentation, is: “To demonstrate in selected countries an integrated approach for planning and executing SPS capacity-building, with special emphasis on enhancement of export market access for agricultural, food, fishery, horticulture and forest products of developing economies.” The project consisted of the construction of an analytical framework for identifying SPS-related issues and challenges faced by agro-food exports and undertaking cost-benefit analysis of capacity-building options, and the application of this framework to two study countries – Peru and Uganda- with the ultimate aim of developing national action plans for SPS capacity-building.

The task for the consultant was evidently considerable given the time and resources available. While a coherent framework was developed, with a number of practical tools for related data collection, the evaluation highlights a number of weaknesses in the framework and in its application to the two study countries. Most notably of these is the rather general level of the cost-benefit analysis, that focuses on the SPS capacity investments needed to maintain and/or enhance exports of particular study products in their entirety and balances these against the total flow of exports into the future, over a five year period. No attempt is made to evaluate the costs and benefits of investments in particular elements of SPS capacity, or to estimate the incremental impacts on export flows of these investments. Given the generality of the analysis, the utility of the framework for formulating prioritised action plans for SPS capacity-building is limited. Thus, while the outputs from the project are probably reasonable given the time and resources available, there is an evident need for more work, building on the framework that has been produced and considering alternative approaches, notably cost-effectiveness and multiple-criteria decision analysis. The STDF is encouraged to pursue these.

The project was variously successful in supporting the development of national action plans for SPS capacity-development in the two study countries. In Uganda, it is not evident that any such plans were developed. In Peru, plans were developed and adopted stakeholders, although it is yet to be seen whether these plans result in greater and more appropriate resources flows to SPS capacity-building. The STDF is currently involved in an Aid for Trade activity in Peru, aiming at examining the need for and provision of specific SPS-related technical cooperation. Taking into consideration the issues identified in the action plan, an independent consultant is

preparing a balance sheet on outstanding SPS needs and also targeting a list of concrete technical assistance activities of interest. This report will be presented to donors at a national Aid for Trade event on 3 March 2009, aiming at agreeing ways to address the outstanding needs through future SPS related assistance.

## **2. Introduction**

Sanitary and phytosanitary (SPS) measures are applied by nations, and agro-food value chain actors therein, to control food safety, plant health and animal health risks, and to prevent incursions of exotic pests and diseases. In turn, such measures act to protect human health, promote agricultural productivity and facilitate the international marketability of agricultural and food products. It is recognised, however, that SPS measures can also impede trade, through their illegitimate application or limitations in exporting country capacity. The SPS Agreement aims to prevent the discriminate use of SPS measures and to facilitate flows of technical assistance that support capacity-building efforts, notably in developing countries.

The SPS Agreement and allied institutions and facilities, such as the Standards and Trade Development Facility (STDF), have served to heighten recognition of the need for developing countries to augment their SPS capacity, both within the public sector and along agro-food value chains. In low and lower-middle income countries, in particular, this task is onerous and there is a recognised need for technical assistance. While there is some evidence that flows of technical assistance towards the development of SPS capacity have increased over time, such assistance is often uncoordinated and supply-driven. All too frequently, there is duplication of capacity-building efforts in some areas, while other elements of capacity attract little or no attention. There is an evident need for developing countries to define prioritised actions plans towards the development of SPS capacity, that contribute to enhanced efficiency and a shift towards demand-driven modes of assistance.

The WTO and STDF have made efforts to enhance the transparency of flows of technical assistance, to provide a 'voice' for developing countries that recognise a need for technical assistance and to facilitate priority-setting and coordination of capacity-building efforts. Thus, the WTO has compiled and disseminated a standard form through which WTO Members can make requests for technical assistance, while the STDF has funded a number of evaluations and projects directed at enhancing the effectiveness of SPS-related technical assistance. The project that is evaluated here - Country-Based Plans for SPS-Related Development - provides one example of the work of the STDF in this area.

The purpose of the project, as laid down in the tender documentation, is: "To demonstrate in selected countries an integrated approach for planning and

executing SPS capacity-building, with special emphasis on enhancement of export market access for agricultural, food, fishery, horticulture and forest products of developing economies.” The project is envisaged as having four phases, as outlined below.

In the first phase a methodology was to be developed for evaluating SPS capacity at the national level, identifying key economic sectors, examining private/public interaction relevant for these sectors, studying the state of SPS legislation and enforcement and drawing conclusions on the SPS capacity of the country in both the public and private sector. The methodology was supposed to provide a single generic planning tool, building on existing IPPC, Codex and OIE frameworks (among others), employing cost-benefit analysis, with maintaining and/or expanding export market access as a primary evaluative parameter. Thus, the terms of reference laid down quite specific guidance on the approach to be employed.

In the second phase, the developed methodology was to be employed in two pilot countries – Peru and Uganda – that were selected on the basis of responses to the technical assistance questionnaire distributed to WTO Member States and on requests for project funding made to the STDF. The methodology was to be applied in order to identify SPS needs in these two countries, to evaluate these needs and to prioritise them, using a participatory approach that draws on expertise from the public and private sector. The results of the methodology were to then be used to report on SPS capacity and to develop an action plan for each of these countries.

In the third phase, resources were to be sought for national action plans. The consultants employed to undertake this project were to provide assistance to the SPS authorities in both countries in drawing-up these action plans, that make use of national budget resources and in identifying where international donor support was necessary. In turn, it was envisaged that these reports would be presented by the national authorities in Peru and Uganda to donors, both in-country and on the margins of meetings of the SPS Committee.

In the fourth phase, the consultant was to revise the methodology in the light of the experience gained during the project, and prepare a guidance document to facilitate the use of the methodology in other developing countries.

In October 2004, the STDF awarded the project to Agra CEAS Consulting Ltd. The project was completed in 2007, although the field study report for Peru was only finalised in March 2008.

The objectives of the evaluation, as specified by the STDF, are as follows:

- Verify whether the project achieved the objectives set out in the project document.
- Critically examine the generic cost-benefit analysis methodology developed by the project and utilised for the pilot research in Uganda and Peru and recommend changes, as appropriate, which would assist in its broader utilisation. In the examination of the methodology, references should be made to the higher-level objectives of the Facility (for example, a measureable impact on market access, an improved domestic, and where applicable regional, SPS situation and poverty reduction).
- Identify key lessons learned for the benefit of both recipients and donors and for future STDF programme development.

The evaluation has been undertaken by Spencer Henson, Professor in the Department of Food, Agricultural and Resource Economics, University of Guelph, Canada and Visiting Fellow, Institute of Development Research, University of Sussex, UK. Professor Henson has no direct conflict of interest in undertaking the evaluation. He has not worked with the contractors, CEAS, and has no immediate plans to do so. Although he has worked with the STDF on previous occasions, and hopes to do so again in the future, including relating to economic analysis of SPS capacity-building, it is not evident that this presents a direct conflict of interest in the context of this evaluation.

### **3. Methodology**

The evaluation primarily took the form of a desk study that used as its primary inputs the project terms of reference, project proposal submitted by CEAS and the draft core methodology and draft country study reports. These were all provided by the STDF Secretariat. The review of these documents, and the evaluation of the project, was framed in the wider literature and the evaluator's experience on cost-benefit analysis and other potential approaches, needs assessments of SPS capacity, etc. A draft of the evaluation was provided to the STDF Secretariat, which provided feedback and requests for revisions.

In addition to project documents, the evaluator met Conrad Caspari, the Managing Director of CEAS, and stakeholders from Peru at a meeting on the STDF in October 2008. The Peruvian stakeholders were also invited to provide inputs to the evaluation through email.

### **4. Findings and analysis**

The key findings of the evaluation are outlined below. Particular attention is given to the relevance of the project, as directed by the terms of reference of the evaluation.

### ***Relevance***

The project terms of reference indicate that the purpose of the framework is: “To allow officials to establish the relative merits of different policy and resource allocation options”, directed at SPS capacity-building in the public and private sectors, with special emphasis on enhancement of export market access. In thinking about what such a framework might look like it is instructive to consider the choice variables that decision-makers might have to consider. Clearly, they may need to decide between investments in distinct areas of SPS management capacity, for example controls on food-borne pathogens or pesticide residues, or on plant pests. In turn, they may face choices between alternative ways of addressing a particular SPS problem. Take fumigation requirements in export markets for fresh vegetables because of an endemic plant pest. Here, investments could be made to establish pest-free areas or in the construction of cost-effective and efficient fumigation facilities. There may be options to establish enhanced such capacities in the public and/or private sectors. If the focus is on boosting exports, choices may need to be made between SPS capacities that are specific to, or have the greatest impact on, particular product exports. For any one product, choices may have to be made over which elements of SPS capacity to address first. These scenarios are not meant to be exhaustive, but merely to illustrate the complexity of decision-making in the area of SPS capacity enhancement that an analytical framework must address in order to be of utility in the establishment of coherent and prioritised national actions plans in a world of constrained resources.

In order to support prioritised decisions regarding SPS capacity-building, the framework needs to provide a coherent approach to ‘making sense’ of identified weaknesses in SPS capacity, the costs of ‘plugging’ the identified gaps in capacity and to linkages with changes in the volume of exports over time, both generally and for specific products. This requires answers to a series of questions:

1. What specific SPS measures act to curtail exports and/or preclude access to particular markets?
2. What elements of SPS capacity in the exporting country prevent compliance with these identified SPS measures?
3. What alternative investments would act to curtail the identified weaknesses in SPS capacity?

4. What are the costs of these alternative investments?
5. To what extent will exports be enhanced over a defined time period if these investments are made, and by how much?

The methodology developed through the project defines a coherent and well-structured approach, as outlined in the methodology documentation and in Box 1 below, which in principle could address these questions. However, the chosen focus, at least of the application of the framework in the two study countries, is on a more general analysis that focuses on weaknesses in prevailing SPS capacity as a whole and the related costs of upgrading *en masse*. In turn, these capacity upgrades are seen as supporting flows of product exports into the future, with no attempt to estimate incremental effects on the value of exports. Thus, while the framework provides a quite detailed picture of the areas where investments are needed, and estimates of the associated costs, it does not enable the returns from these individual investments to be assessed. Instead the focus is on the entire cost of SPS upgrades and the total value of export flows for each of the case study products.

The ultimate aim of the methodology is to support the definition of national action plans for SPS capacity development and, more specifically, to guide choices between alternative investments in SPS capacity development, predominantly on the basis of impacts on exports. The parameters of such decisions include choices across elements of SPS capacity (for example laboratory testing versus inspection services) and where such capacity is situated (for example the public versus the private sector). Some SPS capacities may be specific to particular commodities (for example controls on specific plant pests) or more generally applicable (for example microbiological testing facilities). In the latter case there are significant problems with attributing flows of costs and benefits over time to particular products and exports thereof, as acknowledged in the project reports. Clearly, this is an enormous task, but one which is necessary in order to inform fully the definition of prioritised action plans for SPS capacity development.

The core methodological approach employed in the project – cost-benefit analysis – was specified in the original tender documentation and so, in this regard, the contractors had little flexibility. Cost-benefit analysis aims to support decisions between one or more causes of action, here investments in SPS capacity, by weighing the expected costs and expected benefits of each. In so doing, the aim is to include all significant costs and benefits, valued in monetary units at their ‘present value’, while avoiding double counting. The challenge in such an analysis is to identify the flow of costs and benefits over time and to place a monetary value upon these. Where market prices are available for the associated resources this may not

be problematic, at least in theory, although obtaining reliable estimates in practice is often difficult. An example of relevance here is the inability of exporters to identify and/or quantify the on-going costs of upgrades to food safety management capacity in their processing facilities. However, of greater concern is the valuation of impacts for which market prices are not available; a prominent example is the value placed on human morbidity and/or premature mortality that is associated with food-borne illness.

### **Box 1. Defined steps in SPS assessment methodology**

**Step 1:** Statistical and literature review of local SPS infrastructure, and to identify key stakeholders, products and markets.

**Step 2:** In-detail survey of national SPS capacity and capacity-building needs through stakeholder questionnaires. Output should be an overview report outlining existing capacity and enforcement as well as key challenges to overcome.

**Step 3:** In consultation with stakeholders, a further limited group of products and markets for further in-depth analysis and application of the cost-benefit analysis should be chosen. SPS requirements for specific products in particular markets and SPS constraints which need to be addressed should be investigated. Combining these two steps, the output from Step 3 will be the identification of market and product-specific SPS capacity building needs, and a list of SPS measures to which the cost benefit analysis can be applied.

**Step 4:** Validate findings at seminar – the results of the survey of SPS capacity as well as selection of products and markets will be presented to an in-country seminar of relevant stakeholders.

**Step 5:** The cost-benefit ratio for the SPS measures identified in Step 3 will be calculated. The results will be differentiated by market and the measure required to access that market. Sensitivity analysis will be applied to verify the results. Output will be a summary table comparing the different measures/products/markets in monetary terms. Within the cost-benefit analysis consideration will also be given to indirect, e.g. socio-economic, effects of upgrading SPS capacity.

**Step 6:** In-country seminars will be held to present the results generated at Step 5. Output from these seminars will be stakeholder recommendations on further actions which will form the basis for action plans to enact specific measures prioritised by stakeholders.

**Step 7:** The Action Plans will be presented to stakeholders and donors in-country. One objective element of project success will be the uptake of the action plans nationally.

Putting aside the utility of cost-benefit analysis versus other techniques, which is considered below, a key concern with the methodology is the very narrow definition of 'benefit' that is employed. Taking the value of exports over time as the single 'metric' of benefits provides only a partial analysis of the likely economic impacts of SPS capacity improvements. While the project terms of reference do indicate that there should be "special emphasis on enhancement of export market access opportunities in key sectors" and that a "key parameter [in the cost-benefit analysis]



will be the ability of the sectors selected to maintain or expand export market access”, this does not suggest a singular focus on the value of export flow over time. Indeed, in the Peru country study report the spill-over effects, for example on consumer safety in domestic markets and employment, are recognised. No attempt is made, however, to assess these wider impacts, which would generally be integral to a cost-benefit analysis.

There are a number of weaknesses in the pilot applications of the methodology in the two country studies, although at times it is difficult to discern how and where the defined cost-benefit methodology was followed. While the core methodology document outlines a clear and coherent process of seven steps (see Box 1), the two country case study reports do not outline if and how this process was followed.<sup>1</sup> Indeed, it is not altogether clear which elements of the methodology were employed. For example, were questionnaires based around the ‘samples’ in Tables A.17 and A.18 used to survey producers and/or agro-food firms? If so, how many producers/firms were interviewed? This makes it difficult to assess the extent to which the methodology works in practice and to identify areas where this methodology might be refined. For example: How well do the data collection instruments outlined in the core methodology document work in practice? To what extent were stakeholders involved at the various stages, what stakeholders did the project team most actively engage with and what problems were experienced in this regard? Further, it is rather surprising that there is little or no reflection in any of the documents on lessons learned, recommendations for further applications of the methodology, etc.

The two country reports provide very general descriptions of the SPS-related issues and challenges faced with exports of the study products, while it is not clear how these issues and challenges were identified and validated, and the relative importance of different information sources. For example, the Peru country study report cites “need for a strong national food safety vision” and “building infrastructure to address SPS needs at various institutions.” Even the more specific issues and challenges in the country study reports are generally not delineated by export markets and/or value chains and there is no indication of how SPS requirements in export markets impinge on exporters; do they preclude exports altogether, generate inordinate rates of export market detentions or rejections, result in price discounts compared with competitor exporters, etc? While some of the wider challenges faced by exporters are identified, for example the increasing competition from China faced by Peruvian exporters of canned asparagus, there is

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<sup>1</sup> In the description of the methodology, unfortunately quite limited attention is given to the process by which the processes associated with the seven steps were defined, and in particular how the data collection instruments were designed.

no attempt to indicate the relative importance of SPS and non-SPS-related factors influencing export flows. In the case of Uganda, it is stated that: “Challenges in the honey sector include transportation, processing and exporting of honey; however, the biggest challenge in the honey sub-sector is quality assurance.” Recent events in Uganda, notably the bankruptcy of the major formal sector exporter, suggest otherwise. This is an area of the methodology that needs some attention. Too often, studies of the SPS challenges faced by developing countries present a lengthy listing of problems without providing specific information on where these problems exist - for example, across particular countries and/or buyers therein - and how they relate to specific weaknesses in SPS capacity in the exporting country, and across the public and private sectors. Perhaps more focus should have been given to analysis of export market detention data, consultation with export market buyers and interviews with study country exporters?

The methodology provides a series of highly structured instruments for the collection of information on SPS capacity across the areas of food safety, plant health and animal health. These appear to have been informed by the existing evaluation instruments of the IPPC, OIE and FAO, although the extent to which these existing instruments have been adopted and/or adapted is not always clear.<sup>2</sup> As is evident from the two country reports (and that for Peru in particular), these instruments have been successful at identifying areas where capacity enhancement is needed, although the benchmarks against which these capacity needs were identified are not apparent and it is not evident that attempts were made to validate these lists, for example through reference to other needs assessments, requests for technical assistance through the SPS Committee, etc. Further, linkages are not made between these areas of capacity enhancement and the identified SPS issues and challenges for each of the study products. As a result, the delineated areas of SPS improvement come across as a virtual ‘wish list’, with no clear indication of the alleviation of particular weaknesses in capacity might results in improvements in export flows. Indeed, the predominant focus is on quite general improvements in SPS capacity that may have very wide impacts across product sector, making it rather difficult to attribute reliably any benefits in terms of export flows over time. It should be noted that this is recognised in the core methodology and Peru country study reports.<sup>3</sup>

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<sup>2</sup> It should be recognised here that some of these instruments were under development and/or on-going review. More generally, the project was implemented at a time when there was a considerable amount of on-going thought and development of analytical approaches.

<sup>3</sup> Admittedly, such ‘spill-overs’ are likely to lead to under-estimates of the benefits associated with the defined SPS capacity investments. The Peru country study reports provides an indication of the study product for which these ‘spill-overs’ are likely to be greater, although no indication is given of how this assessment is made. At the same time, however, in some of the product cost-benefit calculations particular investments are duplicated, making it difficult to compare the estimated cost-benefit across products.

A further concern with the identified capacity-building needs is that alternative approaches to addressing the defined SPS-related issues and challenges are not considered. For example, we might think of two ways in which phytosanitary controls on exports of fresh asparagus from Peru to the United States could be addressed. First, the installation of fumigation facilities, which is the option considered in the country study report. Alternatively, the establishment of pest-free areas and related negotiations with the US Animal and Plant Health Inspection Service (APHIS) over having the fumigation requirement lifted and other alternative risk-based controls put in place. Indeed, arguably the most valuable use of a cost-benefit framework of the type developed through this project is to support decisions between alternative ways of addressing the SPS issues and challenges faced by exporters. Similarly, in the Uganda country study developments in laboratory capacity (for example to undertake tests for pesticide residues) in the public and private sectors are presented as parallel investments rather than alternative ways in which the identified weaknesses in capacity might be alleviated. An obvious question here is why Uganda, given the foreseeable growth of exports, needs multiple laboratories to undertake microbiological and/or chemical residue analysis and/or how these multiple laboratories could be sustainable? The counterfactual, for example using laboratory services in another country (such as South Africa or Kenya), is also not considered, but may conceivably have a superior cost-benefit outcome.

The two country cases present a rather partial analysis of the costs of implementing the identified SPS capacity enhancements. In the case of Peru, for example, the costs are dominated by investments within the public sector while, where private sector costs are examined, these tend to focus on the direct costs of implementing enhanced food safety controls (for example) rather than broader impacts on production costs. In Uganda, enhancement of food safety controls for fish in processing facilities are considered, but not upgrades in landing vessels. Overall, therefore, the estimates that are presented would appear to be biased towards public sector investments and to underestimate the total costs of the defined SPS capacity improvements. Further, because the flows of costs over time are not converted to a present value at some defined discount rate, it is difficult to make comparisons across these costs and to the flow of benefits, which are also not converted to a present value. Indeed, most of the cost estimates are significantly 'front-ended'.

The specific measure of 'benefit' flowing from SPS capacity investments in the country case studies is the total value of exports of each of the study commodities - fresh and canned asparagus and fish in the case of Peru and fish and honey in the

case of Uganda - over a defined future five year period.<sup>4</sup> No attempt is made to identify and/or to quantify the incremental impact of the identified investments in SPS capacity on the flow of exports over time, separating out the influence of other factors (for example transport costs). While such an analysis is certainly not easy, it is necessary to obtain a reliable measure of the benefits in terms of export flows that specific investments might bring. For example, it might be that exports of asparagus from Peru would likely grow at five percent annually with little or no investment in enhanced SPS capacity, while such investments would contribute to an enhanced growth rate of 10 percent annually. Conversely, exports of fish from Peru might decline if investments in SPS capacity are not made, but grow by five percent annually under conditions of enhanced SPS capacity. If we might expect exports to 'collapse' if the identified investments were not made, this needs to be articulated and supported evidence provided. Such 'nuances' are lost in the current analysis, but may bring about very different conclusions in terms of the balance of costs and benefits for the two commodities.

In the Uganda report, in particular, there are some concerns about the approach employed to estimate the anticipated flow of exports into the future for each of the study products. On the one hand, only one data point (for 2005) rather than a multi-year time series is used as the basis for the future projections. In the case of the estimate for honey, this value has clearly not been checked and validated; in fact, Uganda exported almost no honey in 2005 or in the period since. On the other hand, no attempt is made in either the Peru or Uganda studies to estimate the future flow of exports statistically, even through a simple time trend.

The core methodology report recognises the need to undertake sensitivity analysis to assess the impact of assumption and data uncertainties on the cost-benefit estimates. Further, on the benefit side, it is proposed that distinct scenarios are applied, for example "optimistic", "average" and "cautious", for the projected flow of exports over time. While at least two scenarios were applied in the Peru and Uganda studies for estimating future export flow, it is not evident that comprehensive sensitivity analysis was undertaken, despite the fact that there would appear to be considerable uncertainties over some of the inputs to the estimates. Such an analysis would serve to demonstrate the rigour of the methodology and to highlight critical data inputs that have a major bearing on the cost-benefit estimates. This is key information for potential future users of the methodology that the project defines.

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<sup>4</sup> On this point there is some confusion in the two country case study report. While both reports state that "cost data for upgrading SPS capacity ..... was combined with the 'benefit' data from potential additional exports to estimate cost-benefit ratios", in the analysis that is presented the total value of exports is taken as the measure of benefit.

The core methodology document suggests a need to prioritise products ahead of the cost-benefit analysis to reflect available time and resources. However, there is no suggestion in the documentation of how such a prioritisation may be undertaken, for example the 'metrics' that might be used. In the country studies, the case products were selected on the basis of export growth to date, potential future growth and/or the extent of 'SPS threat', although it is not clear how the separate criteria were reconciled in making the final selection of products, or what other candidate products were considered. It should be remembered that the whole purpose of the framework is to drive such processes of prioritisation. If up-front decision criteria can be applied to investment options that would clearly fail a cost-benefit test then these need to be made explicit. Decisions on the exclusion of investment options on the basis of any other criteria would undermine the entire purpose of the framework and should be avoided.

More generally, the fact that the application of the methodology in each of the two countries was confined to two study products arguably fails to provide a rigorous test of how the methodology performs in practice. Further, none of the products (at least as they were presented) tested the application of the methodology to 'new' exports and/or specific new or modified SPS requirements, rather they all considered the scenario of more general export expansion. In order to have more confidence in the utility of the framework and its practical application, a greater number and wider variety of pilot studies would be needed.

The terms of reference of the project put emphasis on the engagement of stakeholders and "making available a proven planning methodology which is responsive to economic objectives and which encourages a cooperative relationship between donors and private and public sector stakeholders in recipient countries." Further, a concrete outcome of the project was seen as: "With the assistance of the consultant that has reported on national capacity, the SPS authorities in both countries will draw up national action plans." In Peru, it is evident that efforts were made to engage with a range of stakeholders, including the National Codex Committee and private sector firms. An action plan was developed, stakeholder workshops were held and the action plan was subsequently revised. Taking into consideration the main issues identified, a report on outstanding SPS priority needs and also concrete technical assistance activities to facilitate market access for specific products and specific markets is being prepared under the Aid for Trade initiative. The report will be presented to donors in a meeting on 3 March 2009, aiming at agreeing ways to address the outstanding needs through future SPS related assistance. There is no evidence that a national action plan was developed

and/or implemented in Uganda. More generally, in Uganda there appears to have been only limited interaction between the consultant and local stakeholders.

Having reviewed the methodology applied in the project and its pilot application to the two study countries, we now turn to whether there are more appropriate approaches than cost-benefit analysis to guide the definition of prioritised national action plans for SPS capacity-building. In principle, cost-benefit analysis is an appropriate methodology for identifying whether investments in SPS capacity yield a net benefit, and thus 'sifting out' those that should be dismissed from the outset, and which investments yield the greatest return, and thus providing an initial ranking of prospective projects. However, the project terms of reference envisioned a narrower definition of 'benefit' that is usually applied in cost-benefit analysis in that it specified that maintaining and/or expanding export market access should be the "primary evaluative parameter." The contractors interpreted these terms of reference rather strictly, taking the value of exports over time as the single 'metric' of benefit, rather than broader impacts on domestic food safety and/or agricultural productivity and not considering the impact, in turn, of growth in exports on employment, incomes, etc. In addition, cost benefit analysis is widely recognised to be highly data intensive, requiring relatively reliable estimates on both the cost and benefits side of the equation. In the context of many developing countries, where data are often missing and/or of limited reliability, this can be a challenge. We see evidence of these challenges in the two country studies.

So what alternatives are there to cost-benefit analysis that might be more appropriate? There are two obvious candidates; cost-effectiveness analysis and multi-criteria decision analysis. Cost-effectiveness analysis is quite closely related to cost-benefit analysis, in that it is a form of economic analysis that compares the relative costs and outcomes of alternatives courses of action. Unlike cost-benefit analysis, however, the benefit side of the equation does not have to be specified in monetary units; rather, the outcome of the action(s) can be incorporated as a discrete variable (for example whether entry to a new export market is achieved or not) or in terms of achieving a variable outcome that is specified in non-monetary units (for example a target percentage increase in the volume or value of exports). Cost-effectiveness analysis is usually employed where cost-benefit analysis is inappropriate (as with a discrete outcome) or where data limitations on the benefit side of the equation make such an approach problematic.

Because of the inherent data problems with undertaking full cost-benefit analysis of SPS capacity-building (some of which are well illustrated by the project being evaluated here) and also because the impacts of capacity-building tend to vary considerably and/or can be assessed at various levels – including achieving effective

controls on a particular SPS issue, gaining market access and maintaining and/or expanding the volume or value of current trade – cost-effectiveness analysis could present a more flexible approach to priority-setting. Indeed, one of the predominant issues in establishing action plans is the choice between alternative ways of achieving a particular capacity-building objective, which may vary considerably in their cost. Having a lower data intensity, cost-effectiveness analysis also tends to be less costly to undertake and requires lower levels of understanding and skills in economic analysis on the part of the analyst and of decision-makers. In presenting cost-effectiveness analysis as an alternative approach, however, there is a need for one word of caution. Before embarking on cost-effectiveness analysis there is a need to ‘sift through’ the alternative causes of action being considered to ensure they would pass a cost-benefit test in a qualitative sense; that is, the benefits are likely to exceed the costs. This perhaps suggests a hybrid of crude cost-benefit and cost-effectiveness analysis is required?

An alternative to ‘pure’ economic analysis as provided by cost-benefit and/or cost-effectiveness analysis is the use of some form of multiple-criteria decision analysis framework. Such an approach enables choices to be made between alternative courses of action, for example capacity-building investments, on the basis of multiple criteria (as the name suggests). Thus, the impact of investments in SPS capacity-building on the volume and/or value of exports, employment and domestic food safety (for example) could be explored. Further, given a multiple-criteria decision analysis framework implies trade-offs between defined choice criteria, the impact of variance in the relative weight given to each criterion can be explored. In practice, such an approach can be used to distinguish options that do or do not meet required minimum performance across the choice criteria and/or to select a single ‘most preferred’ option, implying considerably greater flexibility than either cost-benefit or cost-effectiveness analysis.

A further benefit of multiple-criteria decision analysis is that some approaches (for example out-ranking methods) do not require that decision variables are expressed in the same unit; this is one of the key disadvantages of cost-benefit analysis, in particular. Indeed, it is possible for decision variables to be incorporated into the analysis through a mixture of quantitative and qualitative ‘metrics’. This can make it easier to collect and incorporate a wider diversity of factors into the analysis, some of which may not be directly amenable to being ‘squeezed’ into monetary units. Further, because the ‘mantra’ of monetisation is not imposed, multiple-criteria decision analysis approaches tend to be more conducive to the involvement of stakeholders that differ in perspectives and interests. This is certainly the context in which SPS capacity-building decisions are made.

Given the nature of the project under review here, in particular the stipulation in the terms of reference that a cost-benefit be applied, these alternative approaches were not explored. This would certainly be a fruitful avenue of investigation for the STDF and is one of the key recommendations of the evaluation. In particular, it is recommended that efforts be made to explore how various multi-criteria decision analysis frameworks might aid the definition of prioritised national action plans and the involvement of stakeholders in this process.

***Effectiveness:***

As outlined above, the overall purpose of the project was: “To demonstrate in two pilot countries an integrated approach to identifying SPS capacity and designing national action plans which will enhance capacity in this area with special emphasis on enhancement of export market access opportunities in key sectors.” In pursuit of this purpose, the project terms of reference defined a set of performance indicators for the project, as outlined in Table 1 below. The assessment of the evaluation with respect to each of these indicators is presented in the table.

Overall, the project was successful in developing a methodology, although this was rather too general to make a substantive contribution to the more effective definition of national action plans for SPS capacity-building, at least as demonstrated in the two country studies. With some adjustment (for example making some effort to estimate the incremental impact on exports), however, the framework could potentially be used to demonstrate that investments directed at alleviating SPS constraints can yield a positive and significant return in terms of future export flows. Further, the framework has some utility in comparing the returns from investments in SPS capacity-building across products, although care needs to be taken here to attribute more carefully these investments to the specific SPS capacity needs of product exports. However, what is ultimately required is a methodology that will enable investments in distinct elements of SPS capacity-building and alternative approaches to the alleviation of SPS constraints to be compared and decisions made between these towards the definition of prioritised action plans. If the project is seen as a ‘first step’ towards this ultimate purpose, it can be considered to have made a substantive contribution, while admitting that considerably more work will be required.



**Table 1. Project performance against defined indicators**

Purpose	Key Performance Indicators	Evaluation
To demonstrate in two pilot countries an integrated approach for planning and executing SPS capacity-building	Overall evaluation of project is positive	The project was successful in developing a methodology, although this was rather too general to make a substantive contribution to the more effective definition of national action plans for SPS capacity-building.
<b>Outputs</b>		
1. Methodology established for systematic identification and prioritisation of SPS capacity-building needs in developing countries	1.1 Methodology developed for identification and prioritisation of activities to enhance market access	All the methodology has some weaknesses (as outlined above), this was achieved
2. Detailed SPS capacity-building plans prepared for two pilot countries	2.1 Establishment of local steering committees with appropriate representation  2.2 Preparation of country reports	It is not evident that local steering committees were established in each of the two study countries, although substantive stakeholder engagement was undertaken in Peru, although not Uganda Achieved
3. Development of national action plans	3.1 Government implementation of action plans  3.2 Donor engagement in national action plans	An action plan was developed and adopted by stakeholders in Peru. The status of the implementation of this action plan will be seen after the presentation of a report compiling outstanding SPS needs and concrete technical assistance activities to donors in an Aid for Trade meeting on 3 March 2009.. It is not evident that an action plan was developed in Uganda. There was substantive donor engagement in Peru, by no evidence of such engagement in Uganda.
4. Contractor's final report and revised methodology	4.1 Interest from SPS Committee and STDF Working Group in using methodology in further pilot countries	No evidence of this is evident.

**Efficiency:**

In terms of efficiency, the project probably delivered what could be 'reasonably' expected given the scope of the terms of reference and the time and budget

available.<sup>5</sup> Ultimately, the terms of reference could be seen as combining the development and testing of a methodology, and the provision of technical assistance (in the form of support for the definition and adoption of national action plans) in response to specific requests from WTO Member States. This is extremely ambitious and perhaps impractical given the time and resources available. In retrospect, it might have been more efficacious to allocate the resources available to the development of a more rigorous methodology, which ideally would have involved the comparison of alternative approaches. The 'mechanics' of this methodology could then have been tested in a variety of scenarios and, along the way, implementation challenges and problems identified and addressed. Instead, the methodology was tested through its first practical applications, such that it is perhaps reasonable that 'teething problems' occurred. In a second and separate stage, the tested and validated methodology could then have been employed to practical situations, notably Peru and Uganda, exploring a wider range of products and specific elements of SPS capacity.

It is evident that CEAS faced considerable internal challenges in fulfilling the project terms of reference, notably related to staff turnover, assembling a team with the required expertise and experience, and the performance of sub-contractors. These challenges contributed to delays in the progress of the work, most notably the finalisation of the core methodology, which resulted in the project being completed well behind schedule. Thus, the project came to an eventual conclusion in the first half of 2008, while it was originally envisaged to be completed in April 2006. The change in personnel, and in particular the use of sub-contractors, might also explain why there is some disconnect between the core methodology document and the two country study reports.

Overall, it would appear that the limited resources available for the project were spread 'rather thinly'. Thus, limited amounts of time were spent by CEAS in collecting data in each of the study countries, amounting to perhaps only two weeks in each. This is reflected in a number of the comments made above. Indeed, with further resources the consultants might have been able to develop further the framework and address some of the most pertinent concerns that are raised. The bottom line is that the resources available were far from sufficient given the scope of the terms of reference.

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<sup>5</sup> In this regard, in tendering for this project, the consultants clearly underestimated the resources that would be required, that was exacerbated by key staff turnover (in particular the loss of the staff members that drafted the proposal).

***Impact:***

Broadly, the project has made a limited contribution to 'higher-level' objectives of the STDF programme, for example market access, improved domestic/regional SPS capacity and poverty alleviation. In part this reflects the fact that the project predominantly involved, and focused on, the development of a methodology to support the definition of prioritised national action plans for SPS capacity-building. Beyond the two study countries any impacts are yet to be seen, reflecting the extent to which the methodology is employed and its demonstrated efficacy at supporting national decision processes. Within the two study countries, and notably Peru, there remains some uncertainty over the contribution made by the project. Certainly, a national action plan was developed and adopted by stakeholders, which might not have otherwise been achieved over the same time period and in the same form. However, we are yet to see how the implementation of the Peruvian action plan will proceed, which will ultimately determine the 'higher-level' impacts of the project. The impact in Uganda appears to have been minimal.

The STDF is currently involved in an Aid for Trade activity in Peru, funded by the Inter-American Development Bank, aiming at examining the need for and provision of specific SPS-related technical cooperation. Taking into consideration the issues identified in the STDF 20 report, an independent consultant is preparing a balance sheet on outstanding SPS needs and also targeting a list of concrete technical assistance activities of interest. This report will be presented to donors at a national Aid for Trade event on 3 March 2009, aiming at identifying ways in which outstanding needs can be addressed by donors and international organizations through future SPS related technical assistance.

***Sustainability:***

It is difficult to assess the sustainability of the benefits emanating from the project at this stage. In terms of the impacts on the two study countries, and most notably Peru, we have yet to see if the national action plan is implemented. Certainly a key factor here is the ability to attract donor support for the implementation of the plan. This was a key project performance indicator (see above), suggesting that attention was given to the sustainability of the project in the terms of reference. At the current time, this process would appear to be on-going in Peru and the ultimate sustainability of the project's impacts thus remains uncertain.

**5. Conclusions and recommendations**

The Country-Based Plans for SPS Development project has supported the development of a cost-benefit methodology for evaluating the SPS challenges faced by developing countries in export markets and assessing the returns on related capacity enhancement in terms of future export flows. It is evident that a

considerable amount of time and effort has gone into the development of this methodology, which presents a highly structured and coherent approach for gathering pertinent information. The applications of the framework in Peru and Uganda, however, present a rather broad assessment of the costs and benefits of capacity development, which exhibit a number of weaknesses and limit the utility of the analysis for the definition of prioritised national actions plans for capacity development. Most pertinent of these are:

- The assessment of SPS issues and challenges is rather general, while it is not clear how these were identified and validated. The identified issues and challenges are generally not delineated by export markets and/or value chains and their impact on export flows is not assessed relative to one another and to other export constraints.
- No attempt is made to link the identified SPS issues and challenges to weaknesses in prevailing SPS capacity. Further, alternative ways in which the prescribed weaknesses in SPS capacity might be overcome are not considered. In many cases, areas of weakness are rather general and not evidently specific to particular study products, making the attribution of costs and benefits problematic.
- The assessment of the costs of prescribed capacity improvements tends to focus inordinately on public sector investments and/or the direct costs to the private sector. No attempt is made to estimate impacts on production costs, for example, such that the costs analysis is rather partial.
- On the benefit side of the analysis, the total anticipated future flow of exports is attributed to the defined investments in SPS capacity. This ignores the fact that other factors influence export flows and that a certain level of exports is likely to continue even in the event that no capacity improvements are made. This tends to significantly over-estimate the returns on capacity-building investments.

These weaknesses raise questions about the reliability of the cost-benefit estimates and also fail to address the more pertinent questions faced in defining a national action plan. Thus, the framework as applied in the two study countries fails to throw any light on the returns from particular investments in SPS capacity – rather it focuses on an entire programme of capacity-development – and does not guide choices between alternative ways of ‘plugging’ the identified capacity weaknesses. While the framework could conceivably be applied to such a more disaggregated analysis, the two country cases fail to illustrate its utility in this regard.

The project applies cost-benefit analysis as prescribed by the project terms of reference. The project, however, fails to demonstrate that this approach is the most relevant and practical for supporting the definition of prioritised national action plans for SPS development. Rather, there is a need to explore also the use of cost-effectiveness and (especially) multiple-criteria decision analysis in this area and the STDF is recommended to support such work. There certainly seems to be considerable scope for these other approaches, both in terms of their ability to provide pertinent information and also their less challenging data requirements.

Overall, while the project provides only a 'first step' in designing, testing and validating a methodology to support the definition of national action plans for SPS capacity-development, it represents a 'reasonable' contribution given the time and resources available. The project terms of reference were perhaps over-ambitious in their scope, while not allowing the contractors to explore alternative analytical frameworks.

At the current time it is difficult to say how effective the project was at facilitating the development and implementation of national action plans for SPS capacity-development in the two study countries. In Uganda, there is little evidence of concrete progress. Conversely, in Peru a national action plan was developed and adopted by stakeholders. A report being developed under the Aid for Trade initiative, considering the main SPS issues identified in this project, will be presented to donors on 3 March 2009. The aim of this Aid for Trade event will be agreeing ways to address the outstanding specific SPS needs through future assistance. Thus, the longer-term impacts and sustainability of the project are, at the current time, uncertain.

## **6. Lessons learned**

The wider lesson to be learned relates to the project terms of reference and available resources. The wide scope and rather vague terms of reference suggest that the STDF Secretariat was not clear about the form the methodology might take, while the project was implemented at a time when numerous developments were on-going in the wider SPS capacity-building arena. In this context an initial scoping study might prove the best 'first step', perhaps with a concerted effort to assess critically the potential alternative approaches. The integration of methodology development and the provision of technical assistance, at least on the basis of this project, do not seem to work well.

The project evaluated here also illustrates well the challenges faced in working in this area related to blending the necessary skills and experiences. Thus, project

teams need to demonstrate that they can bring together expertise in both economic and technical aspects of SPS capacity-building. Rarely, do individuals bring all of these skills, requiring that consultants employ a team of specialists that has a demonstrated ability to work together. In this regard consultants should be required to demonstrate that they have, or can access, the range of skills and experiences required, and can adapt if key staff are not longer available.