STDF PROJECT GRANT APPLICATION FORM

The Standards and Trade Development Facility (STDF) offers grants for projects that promote compliance with international SPS requirements. Eligible organizations can apply for STDF project funding using this form. Applicants can request up to a maximum of US$1,000,000 for projects that have a duration of three years or less.

The STDF Working Group makes decisions on requests for STDF funding. The following types of projects are given favourable consideration:

- Projects relevant to the identification, development and dissemination of good practice in SPS-related technical cooperation, including projects that develop and apply innovative and replicable approaches;
- Projects linked to STDF work on cross-cutting topics of common interest;
- Projects that address SPS constraints through regional approaches; and
- Collaborative and inter-disciplinary projects focused on the interface / linkages between human, animal and plant health and trade, and benefiting from the involvement of two or more partners or other relevant organizations.

Complete details on eligibility criteria and other requirements are available in the *Guidance Note for Applicants* on the STDF website (www.standardsfacility.org). Please read the *Guidance Note* before completing this form. Completed applications should be sent by email (as Word documents) to STDFSecretariat@wto.org.

Project Title	Implementation of the International Standard on Phytosanitary Measures, ISPM 15 (*Regulation of wood packaging material in international trade*): an empirical analysis of how the regulation affects the economy of a group of countries in Africa.
Objective	The project objectives are to: i) Study the effects that ISPM 15 has had on the value/amount of exports and imports in the past 15 years and predict future trends; ii) Run a cost benefit analysis of ISPM 15 implementation; iii) Review which procedures/legislations/controls each of the 4 countries have put in place in order to implement ISPM 15; assess the challenges faced by the countries to implement the standard; iv) Evaluate if ISPM 15 has overall generated losses or benefits within each of the assessed countries and to further measure if those benefits/losses have been evenly spread or have been concentrated for few stakeholders; v) Build awareness in the countries involved in the project

	about the best procedures/treatment to fully and successfully implement the ISPM 15 and advise them on the most cost/effective procedures needed for the implementation; vi) Help other countries which are about to implement the standard to understand the problems and barriers related to the standard implementation as well as the economic consequences and disseminate good practices of the ISPM15 implementation.
Budget requested from STDF	282,860 USD (the project will be 2 years long)
Total project budget	306,321 USD (the project will be 2 years long)
Full name and contact details of the requesting organization(s)	International Institute of Social Studies (ISS) – Erasmus University Rotterdam – The Hague – The Netherlands
Full name and contact details of contact person for follow-up	Ph.D. Lorenzo Pellegrini, Associate Professor *E-mail:* pellegrini@iss.nl *Phone:* +31 70 4260776 *Address:* International Institute of Social Studies (ISS) Erasmus University Kortenaerkade 12 2518 AX The Hague, Netherlands Ph.D. Luca Tasciotti, Research Affiliate *E-mail:* lucatasciotti@gmail.com *Phone:* +39 328 6141138 *Address:* International Institute of Social Studies (ISS) Erasmus University Kortenaerkade 12 2518 AX The Hague, Netherlands

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EXECUTIVE SUMMARY

In recent years the international trade arena has witnessed the growing use of non-tariff barriers to trade (Hartzenberg, 2011). The importance of non-tariff barriers has increased over time paralleling the decline in tariff barriers; in this context many observers have noted that international standards, guidelines and recommendations which are set by the standard setting bodies recognised by the SPS Agreement, aimed at protecting human, plant and animal life or health, appear to be the new critical issue in the international trade agenda (Burgiel and al., 2006).

The increase in global trade observed in the last 20 years (in particular, growth of global trade has been attributed to the increased commercial relationship between the United States and China – Harding, 1992; Lieberthal, 2006; The US China Business Council, 2009), has been accompanied by an increase in the movement between countries of wood packaging materials which have become a significant pathway by which pests, such as bark- and wood-boring insects, move between countries. Wood packaging materials -e.g. pallets, crating, dunnage, packing blocks, drums, cases, load boards, pallet collars, skids- have been recognized world-wide to represent a pathway by which pests can move between countries (Haack 2001, 2006; Brockerhoff et al. 2006; McCullough et al. 2006; Zahid et al. 2008; Haack and Petrice 2009).

Recognizing this threat, an international standard for the treatment of wood packaging materials, ISPM 15, has been adopted under the framework of the International Plant Protection Convention (IPPC) and it has been implemented by many countries around the globe (currently there are 178 contracting parties to the IPPC, with well over 50 countries which have implemented this standard).[1]

The rationale of ISPM 15 is to facilitate the trade of commodities associated with wood packaging materials while limiting the risk of introduction and the spread of pests. The adoption of ISPM 15 is considered to have greatly reduced the risk of infestation, resulting in the reduction of quarantine inspections of such materials, therefore avoiding delays in shipping. [2]

The purpose of this project is to evaluate the impacts of the ISPM 15 on the exports and imports flows of a selected group of countries located in Africa Region [3] and to assess which are the main economic/ecological/logistic consequences of its adoption and consequential implementation; the main researchers will directly work with the NPPOs of Botswana, Cameroon, Kenya and Mozambique. The ultimate objective of this project is to provide an economic analysis of the standard implementation to those countries and to help them understanding which are the best practices and their economic/distributional effects. In addition, this analysis will be used by other countries which are about to implement the standard to weight the benefits/costs of the standard implementation. FAO-IPPC will benefit from this analysis as to our knowledge there is no clear understanding of the problems and barriers related to the ISPM 15 implementation in less developed countries nor of the economic consequences of the standard implementation.

[1] For more information, please visit the web page http://www.ippc.int/?id=1110520&no_cache=1&type=ispm , accessed on the 3rd of January, 2014. The number of countries which have implemented the standard is not yet clear; another source gives complete different numbers, mentioning that ISPM 15 "[…] has been adopted by over 177 countries to date in order to regulate movement of WPM in international trade […]" (European Commission, 2012).

[2] For more information, please visit the web page http://www.fao.org/docrep/X5019E/x5019E01.htm , accessed on the 3rd of January, 2014.

[3] IAPSC is 'the resource and information center for Phytosanitary and plant protection activities in Africa with a view of improving human livelihoods, food and feed security and rural economy' (http://www.au-iapsc.org/index.php/en/vision lastly accessed on the 3rd of January, 2014). Members of the IAPSC are African Union (AU) members, i.e. all African countries, except Morocco (https://www.ippc.int/?id=14599 lastly accessed on the 3rd of January, 2014).

I. BACKGROUND & RATIONALE

1. Relevance for the STDF

Why is this project relevant for STDF funding? Explain how the project is related to one or more of the following: (i) the identification, development and dissemination of good practice in SPS-related technical cooperation, including the development and application of innovative and replicable approaches; (ii) STDF work on cross-cutting topics of common interest; (iii) the use of regional approaches to address SPS constraints; and/or (iv) collaborative and inter-disciplinary approaches focused on the interface / linkages between human, animal and plant health and trade, and benefiting from the involvement of two or more STDF partners or other relevant organizations. See Qn. 9 and Qn. 15 (a) of the Guidance Note.

The current project is of world-wide interest as it will deliver relevant conclusions for the NPPOs, both the ones involved in the project as well as the other NPPOs mainly located in Africa, and for the Food and Agriculture Organization (FAO) of United Nations. The project builds on micro and macro-economic analysis as well as on qualitative and qualitative analysis and intends to:

1. Identify and disseminate good practice of SPS-related standard, the ISPM 15, in a number of African countries. The correct understanding of the policies and regulations put in place by those countries, as well as the problems faced when implementing the standard, will be important at 4 different levels:

i. For the countries whose NPPO is involved in the project, as the project outcomes will help them better understanding their decisions -in terms of treatment choices, procedures that have been set up, and the economic consequences of their choices. In addition the NPPOs will benefit as they will understand the practices, regulations, laws and procedures put in places by other countries and this will help them in seeking alternatives and better practices. This project will be used as a capacity building tool for the NPPOs of the countries involved in the project; there is a clear intention of extending the reach of the project outputs and outcomes into the whole African continent in order to promote best practices at a regional level and to make sure that a degree of awareness about the all spectrum of economic consequences is reached;

ii. For the FAO-IPPC which will be then able to fully grasp the difficulties and the whole spectrum of problems in implementing SPS related standard that less developed countries have faced and will face in the future. At the time of the project submission there is not clear indication, read available reports, that FAO-IPPC has a full understanding of all the processes needed to implement the standard and the costs involved;

iii. For other countries which are still in the process of implementing the ISPM 15 to understand the major problems related to its implementation as well as its economic consequences. There are no studies presenting the type of necessary actions to be put in place by a country when implementing the standard. An indication of all the costs, difficulties, overall burden and implementation plans of the standard does not emerge from the literature review on the ISPM 15;

iv. For the international community, as the cost/benefit analysis of ISPM 15 implementation has not been done before, the analysis will help the technical cooperation among countries, including the development and application of innovative and replicable approaches. Government will be able to define ad-hoc policies to contrast the economic effect of the ISPM15 implementation and to re-distribute the welfare gains/losses among the main stakeholders;

2. Relate to STDF work on cross-cutting topics of common interest. ISPM 15 is a standard for trade which has been implemented by a number of countries (the correct number of countries which has adopted the standard is still disputable as it will be discussed later); yet economic analysis which aims at studying the effect of the ISPM 15 implementation on a number of micro, macro and qualitative indicators are still few and mostly focused on developed countries. It is still not clear to the international community –Government bodies, FAO, academics, industry representatives- whether the standard implementation produces economic effects, whether the sign and the magnitude of these effects are well understood and if best practises are put in place by the implementing country;

3. Relate to the use of regional approaches to address SPS constraints. Studying all the procedures and legislations which have been put in place by a number of African countries and relating the procedures to the economic consequences caused by the ISPM 15 implementation will help understanding which approach is most likely to produce positive outcomes for the country. This aspect has a particular importance and it might be used as a decision making tool by the government of those countries which are considering implementing the Standard.

2. SPS context and specific issue/problem to be addressed

Provide an overview of the SPS situation in the country/region including details on: (i) food and agricultural trade flows and relevant SPS issues; (ii) the institutional framework for SPS management; and (iii) any SPS priorities or issues identified in SPS-related capacity evaluations, the Enhanced Integrated Framework's (EIF) Diagnostic Trade Integration Study (DTIS) for least developed countries, or other relevant documents. See Qn. 15 (b) of the Guidance Note.

Also describe and analyse the key SPS issue to be addressed by the project. Explain the causes and effects of this issue, notably for animal/plant health, food safety, market access and/or poverty reduction. See Qn. 15 (c) of the Guidance Note.

As a result of the increasing volume in trade among countries, weaknesses in the sanitary and phytosanitary measures may result in a significant and severe impact on human, animal and plant health. The rationale of the ISPM 15, set by one of the International Standard Setting Bodies recognized in the World Trade Organization's Sanitary and Phytosanitary (SPS) agreement, the International Plant Protection Convention (IPPC), is to reduce '[…] the risk of introduction and spread of quarantine pests associated with the movement in international trade of wood packaging material made from raw wood. […] Wood originating from living or dead trees may be infested by pests. Wood packaging material (WPM) is frequently made of raw wood that may not have undergone

sufficient processing or treatment to remove or kill pests and therefore remains a pathway for the introduction and spread of quarantine pests'.[4]

This standard requires that wood packaging materials associated with exports has to be heat-treated or fumigated with methyl bromide and marked as being appropriately treated in order to kill pests in the wood at the time of treatment (IPPC, 2009). WPM are mostly represented by pallets, used in the majority of economic sectors for the shipment of goods (this sector nowadays comprises single use and reusable pallets; the latter ones are continuously moved and repaired if damaged, reaching an estimated lifespan of five to seven years on average).

The costs of implementing the ISPM 15, as well as the other ISPMs, have been estimated to represent a relatively large share of the total exports values of each country as they include all the measures necessary for adjusting various components of the supply chain, for putting in place legislation and / or regulations, setting the proper inspections and finally treating, testing, certifying and marking the wood packaging materials. On the one hand, the investment costs are in some cases exceeding the total annual food exports of a country (e.g. Mozambique – Shafaeddin, 2007) and for these precise reasons many countries do not have the capacity to implement this standard as well as other SPS measures. On the other hand, the loss of export markets related to the lack of compliance could be enormous; the immediate loss in export earning, prospect of slow export expansion, a decrease in the national and farmers income are just some of the severe consequences which might materialize. In addition, the lack of compliance will have negative impact on education, health and well-being of the country's citizens as the decrease in government revenues will lower its provision of social services. Further long-run effects are related to the difficulties in regaining credibility and reliability in world markets after a failure to meet importing countries requirements even when the sources of the problem are tackled and solved. Food security of the citizens as well as poverty reduction programmes might be affected in the medium and long term and represent important aspects each country should consider when making decision affecting the volume of exports.

The ISPM 15, whose primary objective is to avoid the introduction and spread of pests associated with the international movement of wood packaging material (IPPC, 2009), involves a mix of requirements and procedures which are very complex to disentangle. This generates a very demanding challenge for the economists studying the economic impact of such standard. The following study, the first of its kind done in a group of African countries, aims at filling in a gap and attempts to tackle this challenge using a quantitative perspective as well as ad-hoc qualitative analysis. We intend to develop a model for evaluating the impact that ISPM 15 have on the value of exports, and hence on the growth, of the above mentioned countries located in the African region and we aim at describing the main problems and challenge that implementing countries have to face.

The econometric analysis, explained in details in the following text, will be run using an extremely original dataset which combines the usual macroeconomic indicators, explaining the export performance of a country, as well as indicators of ISPM 15 implementation. The window of analysis, 22 years in total from 1990 to 2012,[5] will allow us to see how the implementation of this standard has affected the trade performances of countries located in the African region. Our study will primarily estimate whether the above mentioned phytosanitary measure has negatively or positively

[4] For more information, please visit the webpage https://www.ippc.int/file_uploaded/1285321495_ISPM_15_Revised_2009_E.pdf , accessed on the 3rd of January, 2014.

[5] The period of analysis depends on the data available for the countries considered but it will be long enough to conduct a robust econometric analysis.

affected the trade performance of each of the countries taken into analysis and indicate the magnitude of these effects. The econometric analysis on the trade performance will represent one of the multiple investigations on which our impact evaluation study will rely on.

In order to gain a clear picture of all the effects related to the ISPM 15 implementation, the analysis will include a rigorous study of the costs each country has to face in order to comply with the standard. Costs will be compared to the benefits deriving from the compliance to the standard: the potential costs of eradication of pest spread against the increased or maintained accessibility to export markets, capacity building, appropriate jobs creation and all the procedures that have been put in place by each country will be analysed to gain a better understanding on how the implementation of the standard have influenced the entire trade market.

The final step of the study will be an analysis of how the benefits / losses deriving from the standard implementation have been distributed over the main participants in the countries; this will further help the local governments to understand if the implementation process have favoured or not all the stakeholders and might constitute the basis of *ad-hoc* policies aimed at redistributing the welfare among the citizens / businesses.

These results will be used by the countries involved in the analysis for better understanding the economic consequences of their decisions, by other countries still in the implementation phase and by FAO-IPPC for the definition of other standards or the improvement of this one.

Standards for trade interventions, as ISPM 15, can theoretically contribute to the economic growth of the country and can sensibly reduce poverty rates when and if the country promptly implements the standard and when the gains are redistributed among the population. On the other side, problems in terms of decrease in growth and increase in poverty rates may arise when the country does not have sufficient access to scientific/technical expertise or when the country experiences difficulties in the standard implementation. In this regard, some developing countries are aware that ISPM 15 implementation is a required step to being able to export, but they may lack the resources required to comply. This situation is exacerbated when standard requirements conflict with domestic production/marketing methods and the period of time permitted for compliance is relatively short (Henson and Loader, 2001). For the time being, the lack of previous studies in the African region does not allow us to predict the magnitude of the ISPM 15 implementation effects. Previous analysis have shown that estimating a proper economic analysis will impact the quality of the decisions made and will help understand how the gains / losses are distributed among the main actors / population.

Although the studies of the economic impacts of sanitary and phytosanitary measures are still in a relatively early stage, a number of countries and organizations have already tried to make an economic analysis on issues related to this topic. As an example, New Zealand has a long history of cost-benefit analysis as part of a structured and well defined SPS decision making framework (Mumford, 2002). Belize has analyzed the costs and benefits of investing in the control of the 'Pink Hibiscus Mealybug', an exotic plant pest, to justify the continued financing and support (Kairo *et al.*, 2000). Thailand has assessed the financial returns on Foot and Mouth Disease control as have other countries in the Middle East where the disease is still considered a threat for the livestock (Perry *et al.*, 1999).

Other case studies have been done. In general, these studies tend to focus on the compliance costs imposed by the sanitary requirements more than on the impact on trade flows. Cato (1998) assessed the costs of upgrading the sanitary conditions in the Bangladesh frozen shrimp industry in order to

satisfy the European Union and the United States food safety standards. It has been calculated that approximately 17.6 million USD had been overall spent to upgrade the production system (the average expenditure per plant amounts to 240 USD); 2.2 million USD are spent yearly in order to maintain the control and monitor all the industries.

Finger and Schuler (1999) estimated that the costs of achieving the disease-free and pest-free status to enable Argentina to export meat, fruit and vegetables amounted to a total of 82.7 million USD distributed over the period 1991-1996.

Henson *et al.* (2000) analyzed the impact of the European Union hygiene requirements on Kenyan fish exports and computed that the expected costs for modernizing the entire infrastructure and upgrading laboratory facilities for chemical and microbiological would cost a total of 6.9 million USD. These costs, they argue, will be amortized by the increasing trend of exports.

Herath (2001) analyzed the impact of SPS requirements on drinks and spices in Sri Lanka finding out that, due to the lower domestic standards as compared to the international ones, the yearly loss of potential export due to non-compliance would be in the range of 30 percent of the total exports of spices and beverages yearly.

Overall, the previous examples, although limited in numbers, show that making systematic use of economic analysis in trade standards decision-making, as well as in other decision-making processes, has three main benefits. First, by helping to avoid the risk of inefficient and ineffective decisions as the use of economic analysis guarantees a more efficient use of resources and limits the waste of money. It can also help to determine at which point/year the investments would start generating the greatest returns (the so called break-even point). Secondly, the use of economic analysis contributes to making objective, consistent, transparent and accountable decisions. Lastly, by indicating the potential returns on investment and/or cost-savings involved in addressing SPS problems, economic analysis can provide compelling evidence in support of SPS capacity building.

3. Links with national/regional development plans, policies, strategies, etc.

Explain how the project supports national/regional development plans, agricultural/trade/SPS policies and strategies, and any other relevant priorities. If a national/regional SPS strategy exists, indicate how the project supports this strategy. See Qn. 15 (d) of the Guidance Note.

An empirical analysis of how the implementation of ISPM 15 affects the economic growth of the countries under analysis has never been done before in the African region, not by the national Governments nor by international agencies or academics. To date, the number of studies on this topic amounts to a handful and those studies are focused on assessing the impacts of such a standard in the developed areas of the globe, such as Europe, New Zealand and United States of America (Cook *et al.*, 2011; European Commission, 2012). Despite the fact that assessing the consequences at the economic, ecological and organizational levels of standards is relevant at the macro and micro level, developing countries do not have the resources nor the knowledge to run a sound and rigorous impact evaluation assessment.

The NPPOs of the countries under analysis have confirmed the importance of estimating the impacts of the standard implementation as a national and a continental SPS strategy is completely lacking in the region.

On one hand, the NPPOs do recognize the significance and the advantages of having implemented such a standard; as an example the NPPOs of Tanzania acknowledge the role played by the standard in avoiding the *Prostephanus trancutus* to be spread again in the country as happened few years before the ISPM 15 implementation (the ecological 'disaster' had been prevented in that case by the 'casual' interception of packing material coming from India to Dar es Salaam harbor and the following destruction of the wood). The Kenyan NPPO as well admits how the standard implementation has been a necessary step required to be able to export worldwide without restrictions; nevertheless the NPPO still does not fully grasp all the implications deriving from the standard implementation: additional costs for the exporters have been observed but their burden has not been measured yet; the effects for the infrastructure are still unknown and the regulations/laws required are still not available in the country. This is the case for the NPPOs in Cameroon and Mozambique as well, which claimed to have had problems in the standard implementations as very few guidelines were received. In this situation they did not know whether the decisions taken were the most cost effective or not. On the other hand, the NPPOs complain about the lack of support by the FAO, the lack of capacity building activities, the total absence of economic studies aiming at studying which are the effects of the standard implementation. At the same time the NPPOs do not fully grasp the economic difference of treating wood pallets, which is the best strategy to implement and which strategy better suit their situation.

Previous examples stress the fact that, although the countries under analysis do understand the importance of implementing the standard, its economic, ecological and logistic consequences are not fully understood yet.

4. Past, ongoing or planned programmes and projects

Provide detailed information about relevant past, ongoing or planned national or donor funded projects and programmes related to SPS, food safety, animal and/or plant health in the country or region, as appropriate, as well as any SPS components of broader agricultural or trade capacity building programmes. Explain how lessons learned from previous projects have been taken into account in the design of this project, and clarify how the project will complement these related initiatives. Where applicable, explain how the project relates to the EIF and/or Aid for Trade process. See Qn. 15 (e) of the Guidance Note.

To our knowledge, there is a complete lack of analyses having this type of focus and being undertaken in the study area –i.e. the African continent. The NPPOs of the countries involved in this study have confirmed the lack of rigorous cost/benefit analysis and have stressed in their support letters how their countries will greatly benefit from the current study.

Concerning the other areas of the world, there are very few published and on-going studies most of them focussing on the European countries, on New Zealand and on the United States of America. Given the many differences among those areas and the countries located in Africa (the focus of our analysis) most of the already known suggestions and conclusions cannot be taken into account in our study area. On the other hand, we do believe that previous studies will help us in defining the correct statistical analysis to employ, always keeping in mind all those micro and macro differences between African countries and countries located in other areas.

Previous studies conducted in US show how welfare, real GDP and real trade impacts of ISPM 15 are small. Despite the small overall impacts on welfare, real GDP and trade level, ISPM 15 implementation brought some major changes such as a shift in the horticultural imports and other food preparation products away from South and Central America and mineral products from southern Europe, to Mexico, Canada and to a lesser extent China. Such shifts in trading partners could have extremely interesting implications for the United States pest risk analysis. For example, horticultural imports from Mexico to the United States have previously been identified as a high-risk pathway for pests. The reduction in United States imports of mineral products from southern Europe should result in fewer borers being intercepted in United States given tiles and quarry products (e.g., marble and slate) from southern Europe have traditionally been a significant pest pathway (Haack, 2001 and Haack, 2006).

FAO-IPPC has previously organized a workshop on the practical application of the ISPM 15;[6] although this issue will be shortly discussed later we would like to mention that the aim of this project is to take example from that workshop and focus our attention to a very limited area of the globe. A very similar workshop has been recently organized by the FAO Regional Office for the near East in cooperation with the Ministry of Environment of Qatar. The workshop focused on 'the application of the international standard for phytosanitary measures (ISPM-15) on regulation of wood packaging material in international trade […].The workshop provided an overview presentation on the IPPC and standard setting process, and a comprehensive presentation on the ISPM-15: its scope, requirements, approved treatments methods, application of the ISPM-15 mark and status of the registration of the ISPM-15 mark. Around 15 participants from the Plant Protection and Quarantine Department attended the workshop. During the workshop, a visit took place to some wood treatment facilities to assess their compliance with the requirements of the ISPM-15. In addition the manual on standard operating procedures (SOPs) for application of the ISPM-15 at national level, prepared by the Plant Protection and Quarantine Department in Qatar has been reviewed and discussed'.[7]

To our knowledge a very same activity is missing and absolutely needed for the sub-Saharan countries. The involvement of the IASPC in this current project will guarantee that all the countries in the sub-Saharan area will benefit from this study. As a further remark, we would like to stress the fact that this project is not constituted by pure research analysis; it will be based on qualitative and quantitative data in order to grasp the main problem faced by the involved countries in implementing the standard and it will indicate a number of procedures and best strategy to make implementing countries fully understand the economic consequences of their actions.

5. Public-public or public-private cooperation

Explain how the project promotes cooperation between government organizations involved in managing SPS issues and/or with the private sector. See Qn. 15 (f) of the Guidance Note.

As we previously stressed, this project aims at studying the impact ISPM 15 implementation has on a number of micro and macro indicators. Furthermore, we will study which have been the major

[6] For more information on the meeting, please refer to the following website: https://www.ippc.int/core-activities/capacity-development/ippc-workshop-practical-application-ispm-no-15vancouver-canada-28-february-4-march-2005 , accessed on the 3rd of January, 2014.

[7] For more information on the meeting, please refer to the following website: http://www.asplantprotection.org/PDF/ANEPPN/NEPPNEL60En.pdf , accessed on the 15th of February 2014.

problems the countries faced when implementing the standard and how the benefit/losses directly and indirectly related to the standard has affected the local economy and has been distributed among the stakeholders. We believe that this study will greatly promote cooperation between international organizations, local government, NPPOs and private sectors:

1. The outcomes we intend to measure will help to shed some light on the main problems regarding ISPM 15 implementation. FAO, and in particular the IPPC, will benefit from this study as, to our knowledge, the main pitfalls related to ISPM 15 are still unknown and available evidence is based on studies conducted in few developed countries. This aspect will be useful if additional phitosanitary standards will be defined. FAO must then take into account the peculiarity of each country, in terms of economic endowment and legislation present. The various resources available as well as the capacity each country has to implement a world-wide standard must be taken into account as well;

2. Furthermore our analysis will help understanding whether ISPM 15 is pro-growth or whether it rather represents a barrier to the economic growth of a given country? Are those effects only visible in the short run or even in the longer period? Who are the actors mainly benefiting from the standard? Are the losses/benefit equally distributed among all the stakeholders or some category benefit more than others? This aspect is particularly relevant as the Central Government of each country may take some political and economic actions aimed at adjusting the distortion caused by the standard implementation. Ad-hoc policies might be created to favour the portion of those actors on which the burden of the standard mainly manifest. In addition, this study will increase consultations among local government, NPPOs and private sector representatives with the objective to deliver more effective policies;

3. The final report of this project, which will be presented in a meeting with all the NPPOs representatives, will serve as a capacity building document as it will point out all the main challenges faced by the implementing countries and the ways those challenges have been overcome. The main researchers will point out to the meeting participants which have been the main economic consequences of the ISPM 15 and this will serve as a policy document to be presented to the Central Governments to seek for ad-hoc policies. To date, the countries involved in the project still do not know the exact economic impacts the standard has in the short and long period and hence did not create policy to counter-effect those impacts. In addition, the countries involved in the project do not always cooperate with each other to overcome problems. The final meeting will serve as a way for them to show different procedures and a way to face challenges;

4. The results of this project might be used by the FAO when defining other standards of trade. This project will highlight which have been the main difficulties and problems faced by the African countries involved in this study and will help the United Nations bodies to take into consideration whether implementing standards require more assistance for those countries which do not yet possess of all the capacity needed to implement it. To our knowledge, the IPPC in FAO has organized an 'implementing meeting' on ISPM 15 in 2005 (International workshop Practical application of ISPM No. 15: Guidelines for regulating wood packaging material in international trade –Vancouver-Canada). [8] The meeting brought the idea of sharing experiences on ISPM 15 implementation from various areas of the globe; while many countries presented to the audience their concerns, plans,

[8] For more information on the meeting, please refer to the following website: https://www.ippc.int/core-activities/capacity-development/ippc-workshop-practical-application-ispm-no-15vancouver-canada-28-february-4-march-2005 , accessed on the 3rd of January, 2014.

challenges in the implementations, no presentations from African countries have been recorded. After that meeting, no further workshop has been scheduled and there is no information whether the FAO-IPPC have assisted developing countries in correctly implementing the standard.

5. Lastly, the outcome of this study will definitely help other countries still thinking about the standard implementation whether ISPM 15 implementation will be the right decision to take. If the standard implementation causes major economic problems, the country might decide to postpone its implementation. The same decision might be taken if the country believes the standard implementation will be too costly for the economy. On the other hand, if the outcome of this study will demonstrate that the burden of the standard implementation in terms of capacity building, distribution of losses and overall costs is bearable, the country might opt for a quick standard implementation.

6. Ownership and stakeholder commitment

Which stakeholders (e.g. government agencies, private sector organizations, relevant local coordination mechanisms on SPS, trade, agriculture, environment and/or private sector capacity building) actively support this project? Explain how these stakeholders would be involved in the project. ***Attach letters of support*** *from each of these organizations. See Qn. 15 (g) of the Guidance Note*

This project proposal has the ambition to bring together the experiences of a group of four countries located in the African continent - Botswana, Cameroon, Kenya and Mozambique - which have implemented ISPM 15. This project studies the micro and macro impacts that such a standard has manifested in these countries via the exports trend, the jobs creation, the reduction in pest spread in order to fulfill the SPS new requirements, the development of the capacity in order to meet the requirements, the distribution of gains/losses among the main countries' actors. For this reason, in the context of this project, we will contact the main implementing agencies in each of the countries we aim to analyze to ensure we have access to the best data possible.

In addition, our objective is to involve the main trading partners of the analyzed countries in order to gain a better understanding and a clearer picture of the economic consequences of the ISPM 15 implementation as well as of all the challenges/problems the countries had to face to implement the standard. In order to do so, the main trading partners will be approached and they will share their experiences in this context.

Their experiences will help us to shed some light on issues such as i) the trade competitiveness of the country (bullet points from 1 to 3 down below), ii) the system of inspections set up as part of the ISPM 15 implementation and the frequency of interception (bullet points from 4 to 5 down below), and iii) which treatment facility has the country set up in order to comply with the ISPM 15 regulation and being able to export to countries adopting the standard (bullet points from 6 to 8 down below):

1. The trade competitiveness of the analyzed countries: has it changed as a consequence of the ISPM 15 implementation and how much? Which countries have gained a better foreign visibility and why?

2. Which countries are going to get the major benefits in the medium and long run?

3. Have the analyzed countries gained a bigger share of the trade market and why did that happen?

4. Which system of inspection procedures has been put in place and who is paying for the inspections? How are the inspections done? Which is the frequency of those inspections and which goods –or which type goods from which countries- are more inspected? What happens if live pests are intercepted? How many interceptions have been observed in the last years?

5. How do the countries report the non-compliance to the ISPM15 and what happens next (treatment, disposal or refused entry)? Are there companies involved in the quarantine treatment?

6. What is the treatment put in place for the wood-pallets producers? And what treatment facilities have been put in place by the countries and at which costs?

7. Is the NPPO directly supervising the whole treatment process or has the NPPO authorized another public/private company to supervise the entire process?

8. Which organization is in charge of the mark registration process? And who can apply for a registration number?

Support letters from the implementing agency –Erasmus University of Rotterdam – International Institute of Social Studies (ISS)- from the beneficiary region (via Inter-African Phytosanitary Council of the African Union) and from the NPPO's of the interested countries are attached.

Below you find a list of the support letters included in the Project Preparation package:

1. ISS support letter
2. IAPSC support letter
3. NPPOs support letters (NPPOs from Botswana[9], Cameroon, Kenya and Mozambique)
4. FAO – IPPC support letter[10]

II. PROJECT GOAL, OBJECTIVE, OUTPUTS & ACTIVITIES (LOGICAL FRAMEWORK)

7. Project Goal / Impact

What is the overall goal of the project? The goal should describe (in one statement) the expected longer-term impact or positive change to which the project will contribute, particularly in terms of market access, the SPS situation and poverty reduction.

The objectives that this Project Proposal intends to reach are:

i) To study the effects ISPM 15 has had on the value/amount of exports of some selected African countries to the main trading partners;

ii) To run a cost benefit analysis of ISPM 15 implementation in each of the analysed countries (including when their trading partners implemented ISPM 15) to see if the overall implementation costs have been compensated by the reduction of pests spread and by the increased trade power;

iii) To assess which procedures the countries under analysis have put in place in order to fulfil the implementation of ISPM 15 in terms of appropriate jobs creation, control of procedures, installation

[9] Dr. Hendrik Modiakgotla, the IPPC official contact point in Botswana, has confirmed his support for the Preparation of Project grant. The support letter from Botswana will be sent shortly.

[10] Dr. Ana Peralta, with the IPPC secretariat, has confirmed her support for the Preparation of Project grant. The support letter from FAO will be sent shortly.

of treatment facility; a particular emphasis will be given to how each country has developed the capacity to implement the Standard;

iv) To evaluate if ISPM 15 generated losses or benefits within each of the assessed countries and to measure if those benefits/losses have been evenly spread or have been concentrated in few industries/actors. This aspect will shed some light on how the Standard implementation influences poverty reduction and will help participating countries in understanding if viable alternatives to the compliance exist;

v) To help other countries which did not implement the standard to fully understand the problems related to the standard implementation and the economic consequences related to it and to serve as a capacity building tool for the countries involved in the project to understand how other countries have faced the very same challenges;

vi) To illustrate the main results of the above bullet points to the NPPOs' representative in order to build capacity, show which are the main procedures which have been put in place, and to elaborate future recommendations and plans for capacity development.

In detail:

i) The quantitative analysis will mainly use data collected, processed and published by FAOSTAT and/or other leading agencies in collecting macro-economic data. The gravity model[11] (Bergstrand 1985; Bergstrand, 1989), particularly suited for *ex-post* analysis of trade impacts of phytosanitary regulations (Disdier *et al.*, 2008; Otsuki *et al.*, 2001b), is the classical model used for estimating bilateral trade flows. This model has the advantage of having intuitive economic foundations, as originally proposed by Tinbergen (1962), Pöyhönen (1963) and Linneman (1966), and it could also be formally derived either from both the Heckscher-Ohlin model (Deardoff, 1998) and from the model based on imperfect competition (Helpman, 1987).

In the basic gravity model equation, trade between two countries, the exporting one and the importing one, depends on a set of determinants: size of trade partners, normally expressed in terms of their GDP (total/per-capita) and trade costs. The intuitive explanation of the model is that the size of the exporting country captures the exporter supply capacity while the size of the importing country captures the importer demand capacity. Trade costs can be imagined as an obstacle to trade. Various proxies have been suggested by the literature: geographical distance, cultural similarity and the adjacency variable. The rational of geographical distance can be found in the idea that a higher distance between trading partners, *ceteris paribus*, will lead to higher transport costs and to increased differences in preferences. The cultural similarity is normally captured by the use of common language which is expected to be reflected in lower transaction costs and closer preferences. The adjacency variable indicates that the two countries share a common border and this is expected to have a positive impact on trade. The basic model could be further sophisticated in order to increase its explanatory power including a number of other variables that influence bilateral trade flows: land for capturing natural resources, population for capturing economies of scale,

[11] Econometric approaches to estimate trade impacts include partial equilibrium models and computable general equilibrium models. The first one has proved to be particularly fruitful in predicting the effects of regulations to reduce the risk of importing pests; the second model is particularly suited for estimating cross-sectoral impacts of phytosanitary regulations.

remoteness of a country measured by the average distance of the importer from its exporting partners weighted by exporters' GDP share in the world GDP (Winters and Soloaga, 2001).

The resulting econometric model will highlight three possible scenarios. The first hypothetical scenario, supported by the result that the ISPM 15 adoption has led to a reduction in the value of exports, will bring us to consider the standard implementation as an obstacle to the flow of exports to countries which have implemented the standard in their import requirements. In this particular case, and only considering the amount of exports irrespective of other factors, the ISPM 15 adoption will be considered detrimental of those economies. The second hypothetical scenario might point out that the implementation of ISPM 15 has ameliorated the country's trade balance thus playing an important role in the rise of the export. The third hypothetical scenario will be a combination of the previous two; it might be possible that the implementation of the standard has had a detrimental effect on the trade position of the country in the short run (time needed to implement the standard) and a positive effect in the medium period (due to the gain in credibility).

For the analysis of point from ii) to iv), the researchers will interview, using structured and semi structured questionnaires local organizations/institutions/industries/people involved and/or affected by ISPM 15 implementation. The objective of those interviews is to gather data, information on common practises and statistics on how the standard's implementation has influenced the macro and micro economy of the countries.

The way the econometric model is set up and the results interpreted stresses the fact that the adoption and implementation of this phytosanitary measure, although playing an important role in the prevention of the spreading of plant pests around the world, might widen the income gap between transition and developed economies.

ii) There are very few studies available regarding topics related to the costs of SPS measures compliance in general and ISPM 15 in particular. Generally speaking, however, the cost resulting from the delay in exports, or the rejection of the product at the ports of the importing country, due to the lack of compliance are usually disregarded.

According to the existing literature, the cost of compliance is the sum of all the expenses which are directly and indirectly related to the standard's implementation and refer to both the public and the private sector, e.g. foresters and enterprises involved in the supply chain. Countries that export pay most of the costs of implementation, while importing countries only pay the costs of training officials, either customs or plant protection officials, to check whether imported goods comply with the country regulation. Exporting countries must meet import requirements set by importing countries and as each country implements the import requirement of the standard all exporting trading partners must comply and in some cases are forced to implement the standard. Even international companies may make it a requirement as so many countries have implemented it that they now just put it in their contracts, so there are multiple pressures to implement the standard.The costs include all the changes in the exporting procedures, the price for adjusting and reorganizing various components of the supply chain in order to conform to the standard, the administrative costs related to the control, inspection, testing and certification.

Other costs relate to the number of days/months of delay in exportation (e.g. interest charges) caused by the necessity of running all the procedures to be compliant with related import requirements. When the compliance causes a reduction of exports, the loss in the total value of exports as well as the reduction in the world trade power should also be taken into account. If

exports are reduced, there will be further costs in terms of income loss at the country, industries and firms levels, as well as the loss of employment and a substantial decrease in the overall household consumption and welfare.

The World Bank in a recently conducted study distinguishes between fixed and operational costs (World Bank, 2005)[12], and it gives the example of initial investment for new equipment, for training of laboratory personnel as well as for the cost related to the accreditation. The operational costs will include maintenance, salaries, and the cost of laboratory materials. The standard compliance with SPS measures might also involve opportunity costs. For example, the opportunity cost of investment in large firms to facilitate the standard's implementation may be related to the cost of reducing extension services for small firms which may result in a fall in their production and income.

When assessing the overall cost of standard's compliance it might be worthwhile to take into consideration the change in the exporting prices of goods as, most likely, the standard acts like an export tax with the results of making the price of exports going up.

On the one hand, if the cost of compliance has the effect of increasing the cost of the goods in the importing countries, it will most likely have negative impacts on demand. On the other hand, it is true that effective compliance with the standard could also contribute positively to gain markets or shares of markets. This happens as such products will be considered as differentiated goods for which the importing countries / consumers may be prepared to pay premium prices.

Although empirical studies are still scarce, the existing literature confirms that the cost of compliance is particularly high for less developed countries but the losses if there is no adoption of the standard could be even higher as it could result in exports' restrictions or prohibition. The most important costs related to the compliance are the need for the reorganization of the supply chain. For developing and transition economies, these costs could be very high if put in relation to their export earnings, and per capita income level. It might also happen that, as their capacity for the compliance is limited, such difficulties and costs would result in slow export expansion or in a decrease in the volume of exports in the absence of the compliance.

The overall costs will have to be weighted with the potential benefits associated to the ISPM 15 implementation. ISPM 15 aims, among other things, at reducing the risk of introduction and spread of quarantine pests associated with the movement in international trade of WPM made from raw wood. Pests associated with wood packaging material are known to have negative impacts on the environment and biodiversity of importing countries. Implementation of the ISPM 15 is considered to have significantly reduced the spread of pests and subsequently their negative impacts. The entry and the establishment of harmful organisms may seriously damage trees and forests and eventually disrupt natural ecosystems and habitats as, due to climate change, forests and natural ecosystems become increasingly susceptible to invading pests and pathogens. Massive forest degradation due to plant pests may damage local economies and accelerate climate change by changing forests from a carbon sink into a carbon source. While the costs associated to the spread of pests are particularly difficult to disentangle, this project aims at evaluating how ISPM 15 implementation has helped each country in defending their ecosystem.

[12] For more information, please visit the web page http://www.fao.org/docrep/W6864E/w6864e09.htm , accessed on the 3rd of January, 2014.

iii) The presence of small and scattered holdings, particularly in the rural areas of the countries analyzed (McPherson, 1996), the low degree of literacy (Michaelowa, 2001)**,** particularly in rural areas, the presence of poor infrastructure – i.e. transport system, processing and packing facilities – are among the features of less developed agricultural exporting countries. These features might pose a challenge to the implementation of the standard. To assess the relevance of these challenges, the project will study all the measures that have been put in place in order to comply with the standard, which jobs have been created and which have been displaced, which expertise has been hired from other countries and how long it took to set up the compliance mechanism. This represents an important set of information to understand the impacts of ISPM 15 regulations in each country. Creating a good reputation as a trust worthy exporting country is extremely important for continuing to stay in the market. If the importing countries discover deficiencies in a product originating from a specific country in their random inspections, they may put a ban on imports from that country. Even though, the aim of ISPM 15, as well as that of other SPS measures, is to protect health and life of human, animals and plant, past experience has shown that the discovery of a case of deficiency in compliance may result in a technically justified reason for banning imports from a country.[13] The potential loss of jobs following the introduction of such a measure is something that has to be taken into consideration; some previously conducted studies show that up to 50 percent of small companies may have to leave the sector. On the other hand, potential additional jobs may have been created from the equipment manufacturers sectors and for the supervision and management of the system.

iv) As the implementation of the ISPM 15 may establish new requirements, there might be industries or firms which might benefit or lose more than others as a consequence of this process. The idea here is to estimate whether both the losses and the gains directly and indirectly deriving from the implementation will be spread evenly across the main trade participants or if certain actors will benefit/lose the most. Even though the overall effect of ISPM 15 implementation might result to be mild, and the volume of exports won't be largely affected, the benefit or losses distribution might still represent an issue for the economy of the country. As an example, it might happen that main trade actors further explore the competition from alternative materials –plastic or metal- thus reducing the amount of earning for pallet producers. Another possible scenario would be the one in which it would not be profitable any longer for small pallets producers to stay in the market as the costs related to being compliant with ISPM 15 related regulations might be considered unbearable. A recent study on the effect of the ISPM 15 implementation in Europe has highlighted how the WPM sector is characterised by a high presence of micro and small enterprises and has been consolidating in recent years, with increasing concentration of production in larger enterprises. The above results suggest that the introduction of ISPM 15 would further favour this process, with micro-enterprises (less than 10 employees) particularly disadvantaged by the new rules.[14]

v) As there are not clear guidelines on how to implement the standard, the outcome of this project will help countries which are about to implement ISPM15 to fully understand the processes needed for the implementation. In addition this project will highlight all the main problems a given country might face when implementing the standard. To date, there is no clear indication on which are the best procedures, the less expensive or the most cost effective steps to be adopted to implement

[13] Although not related to the countries we are here considering, an example in that sense is the ban imposed by Saudi Arabia in 1998, and more recently by Egypt, on imports of live animals from some East African countries.

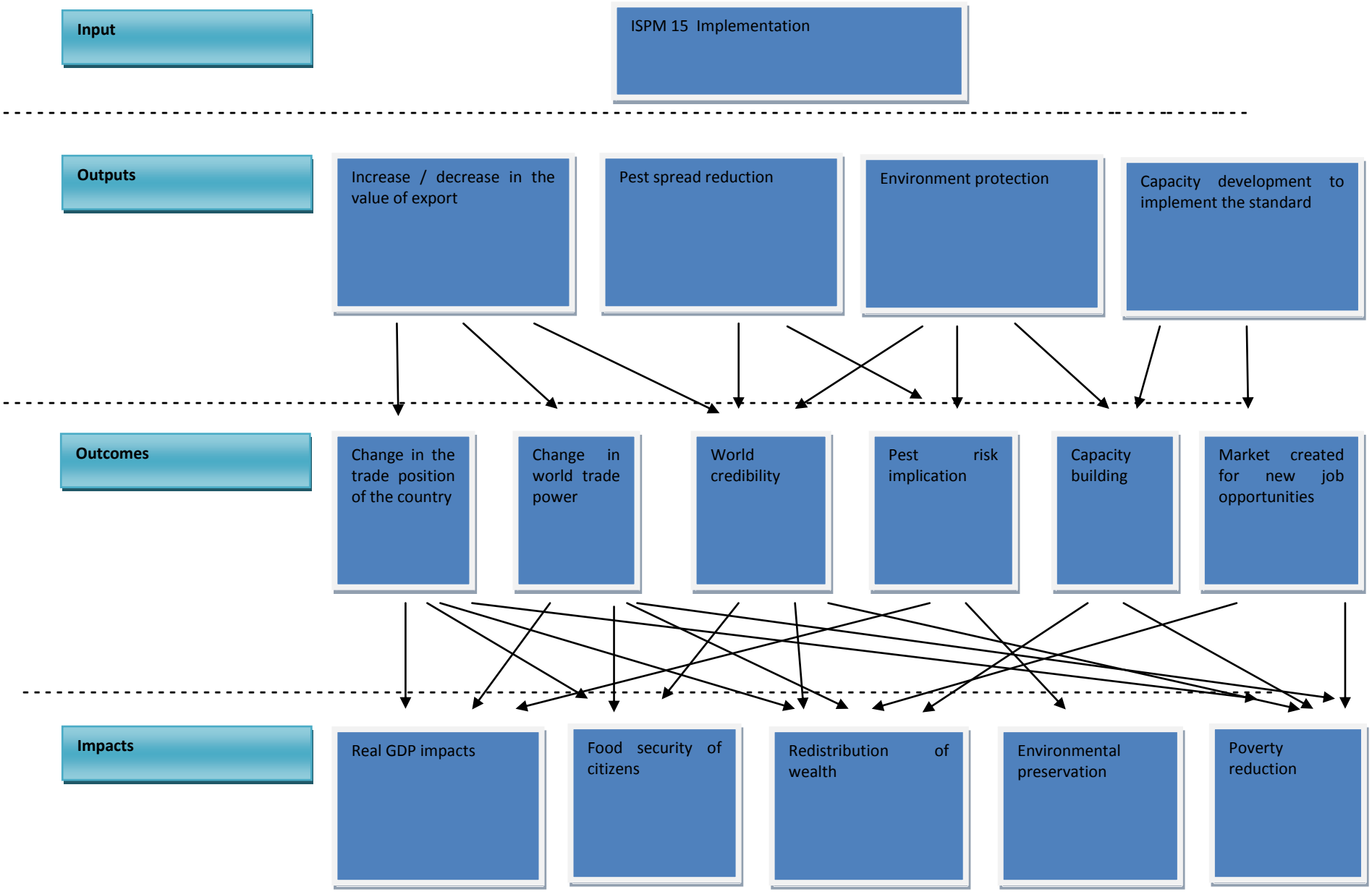
[14] A Portuguese based study has estimated that after the introduction of ISPM 15, nearly 60 percent of the national microenterprises have disappeared.

ISPM 15 and this might cause major problems to less developed countries. The project will deal with all this and, thanks to a de-brief meeting scheduled at the end of the project, will help countries to understand the best procedures and will guide them on how to fully implement the standard understanding all the economic consequences it embraces;

vi) To illustrate the main results of the above bullet points to the NPPOs' representative in order to build capacity, show which are the main procedures which have been put in place, and to elaborate future recommendations and plans for capacity development. According to our conversation with the NPPOs representatives, the countries under analysis still do not fully understand the impacts of the standard implementation or the best cost effective procedure. This project will help them to understand the economic consequences of ISPM15 implementation and it will guide them through all the possible options.

Notwithstanding the importance of the econometric results as a possible explanation of the economic growth of each country here considered, this project emphasises the fact that additional *ad-hoc* policies might be set up by each country in order to incite compliance with phytosanitary measures while reducing the costs associated with such compliance. Figure 1 helps the readers to understand the main outputs, outcomes and impacts of the project.

Figure 1: Result chain of the ISPM 15 implementation



8. Target Beneficiaries

Identify the final beneficiaries (e.g. small farmers, producers, workers, consumers, etc.) and explain how they are likely to benefit from the project, quantifying these benefits as far as possible. Wherever possible, the application should clarify how women (e.g. female producers, traders, workers in food business operations) are expected to benefit. See Qn. 15 (h) of the Guidance Note.

At the current stage of this project proposal, it would be very difficult to predict the final results of the analysis this project intends to pursue. We believe that all the stakeholders –industries, small farmers, households, government representatives- involved in different stages of the ISPM 15 implementation will benefit from this study. Although it has been already stressed in the previous text, the economic –either macro or micro- consequences of the standard implementation are still not known. For this reason we prefer not to make any speculation on the type of results we will get.
At the same time, we are fully confident that a number of actors will use our analysis as a policy making tool:

i) The Central Government will have a clearer view on the major effect the standard has created in the short, medium and long run. This might serve as a tool to define ad-hoc policies to redistribute the wealth among all the actors;

ii) The NPPOs will definitely benefit from this analysis as they will be able to gather information on a standard they directly relate to. The de-brief meeting scheduled at the end of the project will serve to illustrate the major results coming from the micro, macro and qualitative analysis to the NPPOs representatives and will serve as a capacity building meeting in which the main problems faced by the countries will be presented and solutions will be illustrated. This meeting will serve as a way to enhance cooperation among the countries participating in the project;

iii) Industries and producers might use the report following our analysis to better define their trade options and to re-define internal policies. Likewise, small farmers will understand if the standard implementation has had impacts on their business; most likely, as the standard implementation requires initial funds, small farmers are likely to experience a decrease in profit. The size of the decrease is difficult to predict at this stage though. Longer term results might show an increase of their profits;

iv) FAO-IPPC will benefit from this project's outcome as it will know the main problems faced by less developed countries. This might help FAO-IPPC in setting additional meetings with these actors to ensure that all the procedures are well understood and the economic consequences are known and in the definition of future standards.

Concerning the benefit for women from the project outcome, the way the project has been set up does not indicate any clear effect on women. Impact on female headed households and female producers might manifest but it would be very difficult to predict that effect at this stage.

9. Project objective, outputs and activities (including logical framework and work plan)

Describe the immediate objective (purpose or outcome) of the project, the outputs (measurable results that contribute to the objective) and the activities that will be carried out to achieve the specified outputs. This description should be based on, and consistent with, the logical framework for the project.

The implementation of the project proposal will take 2 years from the award of the grant; these two years will be needed for developing, implementing and executing the analysis previously described and to write, revise and submit country based and overall reports.

Table 1 highlights the main deliverables that will be sent to STDF as well as disseminated to the NPPOs (more details on the project deliverables are available in the text below); furthermore, progress reports will be submitted to the STDF Secretariat every six month according to STDF templates and procedures.

Table 1: Main deliverables of the project

Country	***Deliverable***
All the countries	Full project report with the micro and macro analysis and the full economic impact analysis of ISPM 15 implementation
Botswana	Pre mission report, post mission report, copy of survey instruments, full country report
Cameroon	Pre mission report, post mission report, copy of survey instruments, full country report
Kenya	Pre mission report, post mission report, copy of survey instruments, full country report
Mozambique	Pre mission report, post mission report, copy of survey instruments, full country report
De-brief meeting	Capacity building manual with the minutes of the meeting, NPPOs evaluation of the overall project, training material provided to the NPPOs and recommendations list

As Table 1 says, the deliverables accounts for:

1. a full project report, which includes the micro and macro analysis and the full economic impact of the ISPM 15 implementation in the 4 countries under analysis. This full report will serve as a manual on the standard operating procedures for the ISPM 15 implementation at the national level. It will highlight the main techniques, laws, rules and logistic procedures which have been set up by the country in order to implement the standard; a complete list of the problems encountered by the NPPOs in implementing the standard will be included as well. Furthermore the full report will make a comparison of all these adopted procedures, will show which the main economic consequences of each single procedure are and will indicate which procedures are most viable for the peculiarity of the country. Furthermore, the micro and macro quantitative analysis will describe which have been the main economic consequences of the implementation and how the main benefits/losses have been distributed among the population. Lastly, this project will make prevision of the export/trade trend in the future;

2. A country report, a pre and a post-mission report, a copy of the survey instruments –i.e. questionnaires and non- structured surveys- for each of the 4 countries which are taking part in this study. The survey instruments will be very similar across countries and will be appositively designed to reflect the countries peculiarities;

a. a pre-mission report will be an informal report in which we inform which the main objectives of the mission are, how we plan to organize the week of mission, which interviews are scheduled;

b. a post-mission report will serve to understand all the activities carried out in the country, the stakeholders met and the main topics covered with the interviews we had with them. It will explain the strategy adopted to select the firms to interview –sampling frame- and it will explain how the enumerators training has gone;

c. the country report will describe how the ISPM 15 implementation process has gone, which the main challenges and the main problems have been and the way the country/NPPO has managed to solve them. It will analyze the complete set of procedures the country had to set up in order to implement the standard, in terms of jobs creation and new laws that had to be emanated. The analysis of the data collected will help us understanding which have been the main challenges and which the main benefits of the standard implementation taking into consideration the firms point of view;

3. The deliverables described in 1. and 2. will be used as a capacity building tool during the de-brief meeting scheduled towards the end of the project. This meeting has the objective to broaden and enhance the expertise needed to facilitate the implementation of the ISPM 15 implementation by each country. This meeting will serve as a tool for the countries to improve their capacity to implement the ISPM 15in a more cost-effective way and to be fully aware of the importance of such a standard in reducing the risk of pests moving across countries through packaging materials and future costs to eradicate those pests within the countries. The presence of the IASPC representatives will guarantee that other countries in the African region will get to know the main results of this project. The main deliverables of this de-brief meeting include:

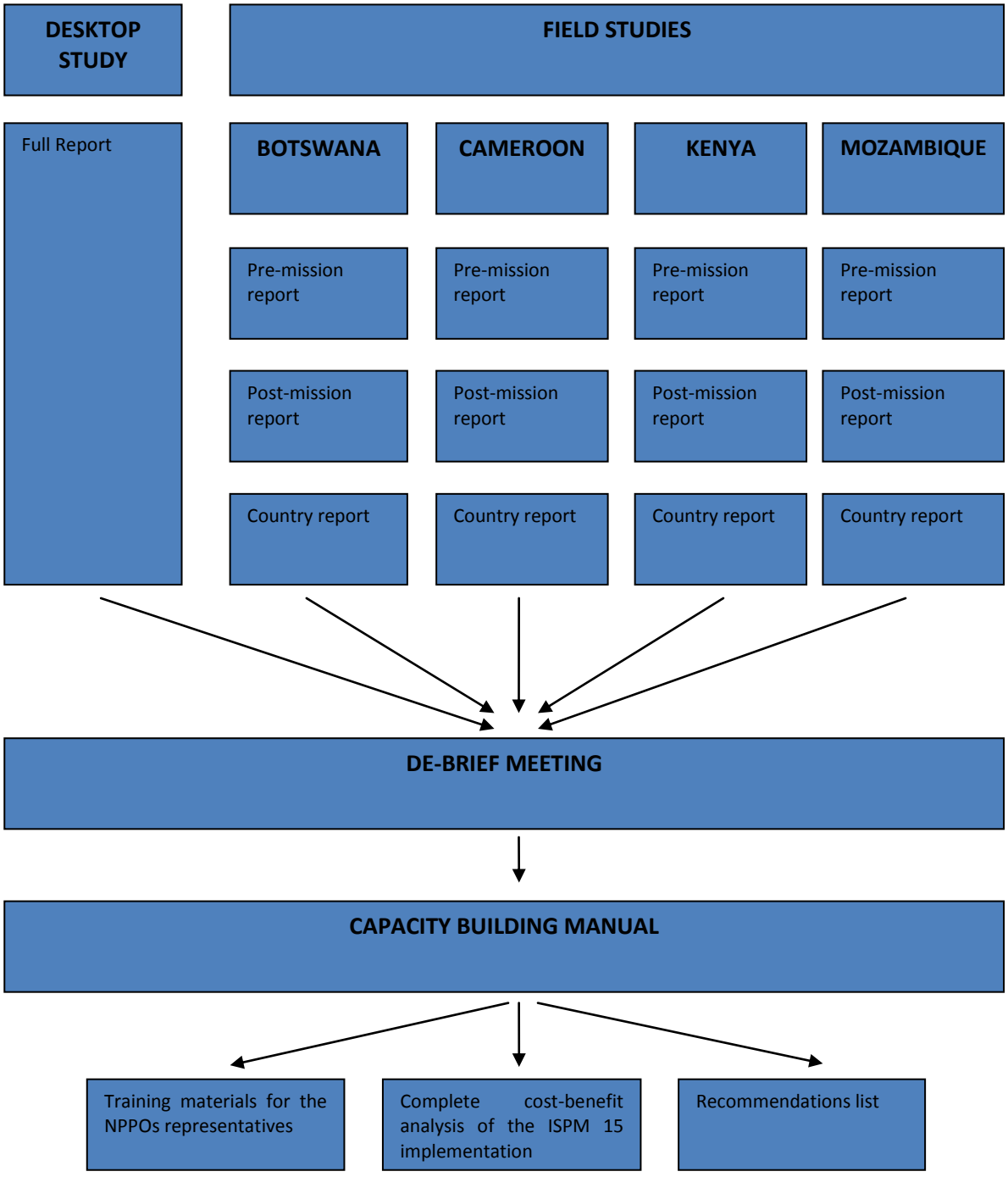
a. training materials for the NPPOs representatives on which are the main challenges in implementing the standard and which are the optimum solutions to overcome those problems and to avoid a skewed distribution of losses/benefits;

b. a complete cost/benefit analysis for each of the participating NPPOs and a plan developed in order to overcome the costs and increase the benefits;

c. a list of recommendations for the FAO-IPPC secretariat on which have been the main challenges and what is needed next in order to improve the phytosanitary management in the country.

To reiterate the importance of the de-brief meeting, we would like to stress that main results of this project will be disseminated troughs the IASPC towards the other countries in the African region. In addition the NPPOs representatives will be able to understand the main problematic related to the standard implementation and will be able to replicate the analysis, or a part of it, for future standards. Lastly, these documents will further help the FAO-IPPC to fully understand the countries point of views, their main challenges in implementing the standard, their main considerations about the standard and possible ways to improve it.

Figure 2: Flow chart of the main deliverables of the project



Attach:

(i) **A logical framework** summarizing what the project intends to do and how, what the key risks and assumptions are, and how outputs and outcomes will be monitored and evaluated (Appendix 1). See Qn. 15 (j) of the Guidance Note and the template attached to this application form.

(ii) **A detailed work plan** indicating the start and completion date of the project, as well as sequence in which activities would be carried out (Appendix 2). See Qn. 15 (k) of the Guidance Note and the template attached to this application form.

(iii) **Terms of Reference** (TORs) for key national/international experts to be involved in implementation of activities included in the work plan. The TORs should include information on specific tasks and responsibilities, duration of assignments, number of missions (if appropriate), and required qualifications/experience (Appendix 6). See Qn. 15 (l) of the Guidance Note.

10. Risks

Briefly discuss the major risks identified in the logical framework and explain what actions will be taken to mitigate or manage them.

There are very limited risks related to this project.

The main researchers have already lead projects in African countries so they are familiar with the environment there.

All the deliverables described here are risk free. The macro analysis will use data directly downloaded from the web. Micro and qualitative data will be collected in the country using a questionnaire and with many interviews with all the stakeholders involved in the standard implementation. Again, the main researchers have gained experience to run a survey aimed at collecting quantitative/quantitative data, cleaning the data and analyzing them.

The only risk this project might present is the availability of pest spread data before and after the ISPM15 implementation. Despite the support that all the NPPOs have given to this project, those data might not be fully available or not available for a very long period of time.

We truly believe that all the deliverables enumerated in this project proposal are actually feasible in the time frame described and within the budget requested.

11. Sustainability

Explain how the results of the project will be sustained in the longer-term, addressing financial and institutional sustainability. See Qn. 15 (i) of the Guidance Note.

This project aims at assessing a cost-benefit analysis of implementing a standard for trade. This is the first study to our knowledge aiming at measuring such an outcome in less developed countries.
The purpose of this project is to present this analysis to the countries involved and make them aware of all the problems embedded in the standard implementation, the economic consequences of the implementation and potentially to make them redistribute any losses/gains among the main stakeholders. In addition we aim at building capacity at the NPPO level so that their representatives will be able to individuate the best practices to implement the standards and they will be able to foresee the economic/distributional implications of those decisions.
We believe that without this project the countries will not be fully aware of the ISPM15 implementing process; furthermore they do not have the capacity to understand all the potential impacts of its implementation nor the necessary capacity to understand which procedure is more

effective, which require more time and which is more suitable given the circumstances. In the longer term, the country might replicate our analysis in order to see the longer term impacts. Likewise, other countries located in the African continent might be willing to run the same type of analysis to fully understand the economic implication of the standard implementation.

III. BUDGET

12. Estimated budget

Provide a detailed breakdown of the total project budget (in US$) using the table in Appendix 3 for guidance. The budget may be prepared as a separate Excel chart or as a table in the project document. It should be prepared on the basis of the outputs identified above, and the resources needed to complete the specified activities. The budget may include expenditures for expertise, travel, training, workshops, minor equipment items, project management, general operating expenses, etc.

The budget should clearly specify: (i) the amount requested from STDF; (ii) the applicant's own contribution to the project, which may be in the form of financing or an in-kind contribution (e.g. staff time, use of premises, etc.) and is subject to audit (see Qn. 12); and (iii) the amount (if any) requested from other donors. See Qn. 10, Qn. 14 and Qn. 15 (m) of the Guidance Note for more information on the budget, and what the STDF funds (and does not fund).

A detailed budget is attached to this application (please note that for ease of calculations, the budget has been presented in excel and formulas are still visible).

13. Cost-effectiveness

Explain how the project may be considered a cost-effective contribution to addressing the SPS problem(s) identified above, compared to alternatives (including no action). See Qn. 15 (n) of the Guidance Note.

As we stressed before, there are no available studies of this kind involving less developed countries. The reason of this lack may lay in the fact that to run a cost/benefit analysis a certain amount of knowledge is required and less developed countries still do not have that. For this reason we believe that this project would be very cost effective in the sense that it will present a full economic analysis and, furthermore, it will help these countries to understand that all actions, read ISPM 15 implementation, have economic impacts. As it became clear from our conversation with the NPPOs, these countries do not have a clear understanding of all the effects ISPM 15 may bring nor do they know how the losses/gains are redistributed among the populations. Lastly, the NPPOs need to understand the basics of the economic analysis in order to be able to replicate it in the future, when other standards or policies may be adopted.
Without this project, the NPPOs and the Central Government will not be able to fully grasp the importance of this standard and will not be able to create ad-hoc policies to contrast its effect.

IV. PROJECT IMPLEMENTATION & MANAGEMENT

14. Implementing organization

Identify the organization(s) responsible for project implementation and attach evidence of its technical and professional capacity to implement the project (i.e. a list of achievements and record of financial probity). If an STDF partner or third party acceptable to the STDF is proposed to implement the project, attach written consent from that organization (Appendix 5). See Qn. 15 (o) of the Guidance Note.

The International Institute of Social Studies (ISS), founded in 1952, is one of the world's leading post-graduate schools of policy-oriented, social science teaching and research in global development studies.
The ISS has about 150 staff capacity. This is made up of about 70 academic and 80 support staff. 25 of the academic staff are specialists in institutional development of education and of the subject area. The project Office of Research, Projects and Advisory Services (ORPAS) is responsible for co-ordinating of all ISS projects. The annual budget of ISS is approximately Euros 21 million. This budget is used to pay salaries, and material and scientific costs.

The ISS's diverse activities include teaching, interdisciplinary research and advisory work in the field of development studies. As an international academic agency, ISS accumulates and transfers knowledge and know-how on human aspects of processes of economic and social change, with a focus on development and transition. ISS research is at the cutting edge of a range of development and development-related fields of enquiry, focusing on:

- Economics of Development and Emerging Markets
- Globalization, Governance and Social Justice
- Political Economy of Resources, Environment and Population
- Civic Innovation Research Initiative

ISS offers a range of high-quality teaching programmes in Development Studies, including a PhD Programme and an MA Programme with various areas of specialization. All courses are taught in English. There are five majors in the MA programme:

- Agrarian, Food and Environmental Studies (AFES)
- Economics of Development (ECD)
- Governance, Policy and Political Economy (GPPE)
- Human Rights, Gender and Conflict Studies: Social Justice Perspectives (SJP)
- Social Policy for Development (SPD)

Participants in the MA programme are expected to further specialize in any of the under-listed areas;

- Agriculture and Rural Development
- Children and Youth Studies
- Conflict and Peace Studies
- Methodologies of Research
- Econometric Analysis of Development Policies
- Environment and Sustainable Development

- Human Rights
- International Political Economy and Development
- Local Development Strategies
- Population and Social Development
- Poverty Studies
- Public Policy and Management
- The Global Economy
- Women and Gender Studies
- Work and Employment

The ISS MA-degree provides eligibility for admission to PhD Programmes in the Netherlands and throughout the world.

Furthermore, programmes of short post-graduate Diploma courses are offered (in the period January-June). These postgraduate diploma programs are *policy-oriented, issue-driven* and *skill-intensive*, and are comprised of coursework with exercises, case studies, and individual and group assignments, usually based on real-life experiences. In some programs, there will be study visits to relevant Dutch and international organizations.
They include:
Children, Youth and Development (CYD)
Governance, Democratization and Public Policy (GOVC)
Universalizing Socioeconomic Security for the Poor (USSC)
Sustainable Local Economic development (LED)

The Institute also offers various joint programs with academic partners all over the world. In some programs students take part of the program elsewhere and part of the program at ISS in The Hague. In other programs ISS staff travel to the partner institute to contribute to teaching.

- Degree in Economics of Development with the Universitas Indonesia, Jakarta
- Erasmus Mundus Master Programme in Public Policy
- Master in Public Administration with the FHR Lim A Po Institute in Surinam
- Transatlantic Master in International Security and Development Policy
- Double Degree with Ritsumeikan University, Japan
- Development Economics at the University of Economics in Ho Chi Minh City, Vietnam
- MA in Development Economics at the National Economics University in Hanoi, Vietnam
- Post Graduate Diploma Programme in Poverty Analysis in Tanzania

ISS's extensive published research output supports its profile as Europe's leading centre of development studies. Research at ISS on development issues has resulted in steadily expanding research networks, particularly in the South. Advisory work is one of the core activities of the ISS. Through its advisory services the Institute hopes to contribute to a better understanding of development processes and to support clients with its specific knowledge of global processes of transformation and change in the context of development cooperation. Advisory services offer ISS staff the opportunity to engage in fieldwork and to acquire practical experience in policy-related situations, which are used as inputs in teaching and enlarge the empirical basis for research. The Institute works closely with partners in developing countries and transition economies in long-term

cooperation programmes to strengthen capacity in training, research and policy analysis in institutions and government bodies. This work also maintains the expertise and experience of ISS staff and thus enriches the knowledge base for ISS teaching programmes and research.

The Institute of Social Studies of Erasmus University (ISS) has been actively involved in a wide range of international research projects in the area of international trade, globalization, political economy, human rights, gender and labour rights, local and community development, governance, public administration, sustainable development, poverty alleviation, etc.
Some relevant research projects that the Institute have successfully completed include the project titled "The Rising Powers and Global Standards Research Network" that was sponsored by ESRC which focused on the ways in which countries like China, India and Brazil are challenging and recasting the global governance of international standards, and the consequences that arise from this for small producers, poor workers and their communities.
Another, titled "Global Governance, Regionalisation and Regulation: The role of the EU (GARNET)" that was sponsored by the European Commission examined the theory and practice of global regulation across the economic and security domains in Europe and how to come together in a coordinated and systemic process of dialogue.
Another major research project was "Unlocking potential: Tackling economic, institutional and social constraints of informal entrepreneurship in Sub-Saharan Africa' ,which was sponsored by the World Bank.
There was also another on "Tracking the outcomes of the international biofuel trade: exploring the distribution of social, environmental and financial resources in the globalized food-energy regime" sponsored by SSHRC Canada.
Till date, ISS have carried out over 98 capacity related projects in Africa. Many of these projects involved funded research, research collaborations with academic and research institutions to build and improve capacities through teaching, training, curriculum development and joint research collaboration. ISS capacity building effort spans all major regions of the African Continent. The details of some of these projects are attached in Annex 5 (See as attached).
The majority of ISS clients are public officials and academia from developing and transition countries; a wide range of governmental and non-governmental national, international and regional donor agencies.

15. Project management

Explain how the project will be managed, clearly indicating roles and responsibilities. If a Project Steering Committee is to be established for this purpose, specify its role, membership and meeting schedule, and explain how decisions will be made, etc. See Qn. 15 (p) of the Guidance Note.

The ISS project management team

Project Director of the project is Dr. Luca Tasciotti, who is an economist whose focus is on developing economics. He is an expert in impact evaluation analysis and he has extensive experience in developing projects in countries located in Africa, Asia and Latin America.

Role: He will be in charge of the day-to-day management of the project, responsible for technical inputs, communication and coordination of activities. He will be responsible for management and coordination of the project.

Project Director will be Dr. Lorenzo Pellegrini, who is an Associate Professor of Economics of Sustainable Development. His areas of expertise range from environmental economic to impact evaluation analysis. Prof. Pellegrini has more than 10 years' experience in developing projects in countries located in Africa, Asia and Latin America

Role: He will be in charge of the day-to-day management of the project, responsible for technical inputs, communication and coordination of activities. He will be responsible for management and coordination of the project.

Mr. David Wubs-Mrozewicz as senior **Project Officer** will provide project management support for the project and take responsibility for administrative and financial matters. He has managed numerous projects, which include projects in China, Vietnam, Bangladesh, Mozambique, Namibia and Burkina Faso with six years of experience in working at ISS-EUR as host institution and four years management experience as deputy head of the Office for Research, Projects and Advisory Services at the ISS. He has a track record in working in an international environment, with international donors, NGOs, and academic institutions; solid management experience and proven capacities in financial management, and managing complex international processes.

Steering committee: NPPOs' representatives, IAPSC representatives and external consultants (Prof. Luisa Corrado and other external consultants for a total of 36 working days; see the attached budget for the resources allocated to the external consultants)

V. REPORTING, MONITORING & EVALUATION

16. Project reporting

Provide information on the reporting schedule, including the type and number of reports (i.e. inception report, progress reports, final report) to be prepared. These reports will provide the basis for systematically monitoring progress and give recipients an opportunity to make substantive comments on any unanticipated issues that require attention. Progress reports should normally be submitted every six months unless an alternative reporting schedule is agreed. See Qn. 15 (q) of the Guidance Note.

We will provide an inception, a progress and a final report for each of the countries involved in the analysis. We believe that reports for each different country are needed in order to reflect the peculiarity of each single situation. Given the fact that we will consider a sample of 4 countries, we will submit reports at the beginning of the country mission (inception report) and at the end of the country mission (backstopping report). All the survey instruments –i.e. quantitative questionnaires aimed at measuring the economic effects of the ISPM 15 implementation and a qualitative questionnaire whose objective is to assess the main problems countries had in implementing the standard- will be sent to the STDF prior the mission for comments and after the mission.

Furthermore, a final report will be submitted when all the data have been analysed. The final report will summarize the findings of the analysis and will talk about the policy implications of the findings. The final project will be presented in front of the STDF committee and the NPPOs representative.

All the reports will be submitted for comments to the NPPO representatives of the country under analysis, to the IASPC and to external consultants. Before the reports are finalized and submitted to the STDF, they will be presented in front of all the NPPOs and IASPC' s representatives during a de-brief meeting where the major outcomes of the analysis will be highlighted and recommendations

will be drawn. A constant flow of information will be present in all the stages of the analysis between the main applicants and the NPPOs as stated in the support letter. We believe that this aspect represents a key point for delivering a successful product.
The final reports will be sent to STDF for consideration and they will be used by the main researchers for peer reviewed publications in order to disseminate the findings.

17. Monitoring and evaluation, including performance indicators

Describe how progress made in project implementation will be monitored and evaluated. With reference to the logical framework, provide information on the key indicators (quantified to the extent possible) that will be used to monitor and measure the success of activities carried out. See Qn. 15 (r) of the Guidance Note.

The main researchers will circulate the agenda of the missions and the survey instruments to both the STDF and the NPPO of the interested country. This process will guarantee that the instruments will be fine-tuned and changed accordingly.

For each country considered in the analysis, STDF and the interested NPPO will receive an inception report prior to each mission to know the main objectives of the mission, the meetings scheduled, what information we would like to acquire and the survey instruments we will be using. The main point of sending the report prior the mission is to inform both STDF and the NPPO, to evaluate the overall mission and to have feedback.

The 'after mission' reports will serve to inform our partners on the main activity scheduled during the mission. The final report will inform our partners on the main results of the analysis.

Regarding the key indicators, all the outcomes we intend to measure are fully measurable (see section 7 on 'Project Goal / Impact'; all the deliverables are further explained here).

Regarding the main questions we would like to address:

i) To study the effects ISPM 15 has had on the value / amount of exports of some selected African countries to the main trading partners: a gravity model will be estimated and the main results discussed (the way a gravity model works has been previously described). The gravity model analysis will discuss whether the amount of imports and exports have increased/decreased in the last 20 years and will offer explanation of this trend.

ii) To run a cost benefit analysis of ISPM 15 implementation in each of the analysed countries (including when their trading partners implemented ISPM 15) to see if the overall implementation costs have been compensated by the reduction of pests spread and by the increased trade power: a standard cost/benefit analysis will be implemented here. The benefits of implementing the standard will be measured against all the costs of its implementation. This analysis will shed some light on the short and long term impact of the standard implementation.

iii) To assess which procedures the countries under analysis have put in place in order to fulfil the implementation of ISPM 15 in terms of appropriate jobs creation, control of procedures: a particular emphasis will be given to how each country has developed the capacity to implement the Standard: here we would like to study the procedures, change in legislations, new laws, etc… that the country has put in place in order to proceed with the standard implementation. This step will have a critical

importance for the country, to fully understand all the changes required for the standard and to start thinking about new ad-hoc policies to counter the effects of those changes, for the United Nations body, as it will give them an idea of the amount of procedures a given country has to fulfil to be able to implement a standard, and finally for other countries who wish to implement the standard, to fully understand the complete procedure.

iv) To evaluate if ISPM 15 generated losses or benefits within each of the assessed countries and to measure if those benefits/losses have been evenly spread or have been concentrated in few industries/actors: this aspect will shed some light on how the Standard implementation influences poverty reduction and will help participating countries in understanding if viable alternatives to the compliance exist: this analysis, which will follow the cost/benefit analysis, will have the results of individuating which portion of the society/industry has benefited/lost the most from the standard implementation.

v) To help other countries which did not implement the standard to fully understand the problems related to the standard implementation and the economic consequences related to it: this deliverable aims at helping other countries to clarify all the challenges related to the standard implementation. To our knowledge, the FAO-IPPC body has not published a manual to instruct the adopting countries on all the procedures that have to be put in place when the standard is implemented. The fact that the ISPM 15 is a world-wide standard implies that some countries find the implementation easier than others. The burden of the implementation depends on the economic endowment of the country, the presence of adequate infra-structure and the ability of the country to invest resources. Despite the importance of such a feasibility study, there are no published studies measuring it. This project intends to fill in this gap, providing a 'manual' in which the major costs and difficulties related to the standard implementation are listed and commented.

18. Dissemination of the projects results

Describe how the project results will be disseminated within the country and/or more widely. Explain if, and how, the project may be replicated or its results used more widely. See Qn. 15 (s) of the Guidance Note.

The NPPOs of each country have been already informed on the outcomes the project intends to achieve and on the methodologies we use.
The NPPOs will be informed about each mission –two missions per country will be scheduled. The first mission aims at collecting all the required data for the analysis using the survey instruments above discussed. The second mission aims at informing the NPPOs on the main results of the analysis. In this way we would like to share all our results with the NPPOs to stimulate discussions and to receive comments.
The final report will be presented in a de-brief meeting where all the NPPOs' representative as well as STDF representatives will take part.
As a final remark we would like to stress the fact that all the reports –inception, after mission and final report- will be circulated to the NPPOs as a way to receive positive feedback.
The reports generated by this analysis will be used for peer-reviewed publications and thus will be sent to international journals for dissemination. This process will guarantee that the results will be known world-wide and that all the countries, academics, economic practitioners and FAO representatives will be aware of these projects results.

ATTACHMENTS

Appendix 1: Logical framework (see attached template)

Appendix 2: Work Plan (see attached template)

Appendix 3: Project Budget (see attached template)

Appendix 4: Letters of support from organizations that support the project request

Appendix 5: Written consent from an STDF partner that agrees to implement the project ***OR*** evidence of the technical and professional capacity of another organization proposed to implement the project.

Appendix 6: Terms of Reference for key staff involved in project implementation

APPENDIX 1: Logical Framework

	Project description	Measurable indicators / targets	Sources of verification	Assumptions and risks
Goal	*What is the longer-term goal (impact) to which the project contributes?* 1. Understand the economic effects of ISPM 15 implementation on micro and macroeconomic indicators; 2. Help the country in setting up the best procedures/regulation to implement the standards; 3. Study how the losses/gains due to the standard implementation are distributed among the stakeholders and suggest egalitarian policies	*How will progress towards this goal be measured?* Using 1. Macro econometric analysis; 2. Micro econometric analysis; 2. Qualitative interviews with stakeholders/organizations/industries directly related/influences by the standard implementation	*What are the sources of information (and methods to collect and report it) for these indicators?* 1. Macro data on the exports/imports flow are available on the web (FAOSTAT); 2. Micro data will be gathered using ad-hoc questionnaires; 3. Qualitative informations will be collected using structured and non-structured interviews	*What are the external factors and conditions necessary to sustain overall objectives in the long run?* 1. Significant change in the micro/macro- economic indicators after the standard implementation 2. Less egalitarian distribution of gains/losses as a consequence of the standard implementation
Immediate objective (purpose)	*What is the specific purpose or outcome of the project?* 1. Improve country's capacity to implement the phytosanitary standard; 2. Increase the country's capacity and understanding of the best procedures to set up in order to implement the standard in a more cost-effective way	*How will progress towards the project purpose be measured (quantity, quality and time)?* 1. Analysis of micro data collected during the field studies; 2. Analysis of the qualitative interviews with NPPOs and main stakeholders, e.g. FAO-IPPC, involved in the implementation process and in setting the standard	*What are the sources of information (and methods to collect and report it) for these indicators?* Econometric analysis and qualitative analysis of the data previously collected (micro data and qualitative information)	*What are the external factors and conditions necessary to achieve objectives? Which risks should be taken into consideration?* 1. The support of the NPPOs as already showed by the support letters will drastically limit the risks of this project objective; 2. The IPPC-FAO support will help us to gain a better understanding of the standard implementation process
Expected results (outputs)	*What tangible end-results will be delivered by the project to achieve its purpose?* To ensure the phitosanitary compliance of the country to the ISPM 15 and to helps the country gaining international credibility in the trade arena	*How are results to be measured (quantity, quality and time)?* 1. A guidelines report will be prepared for the de-brief meeting. The possible economic scenario are presented and best procedure in terms of cost/efficiency are explained; 2. A steering committee will review the quality and the content of all the deliverables of the project and make sure that the both the economic and the plant protection part of the reports meet the excellence standards	*What are the sources of information (and methods to collect and report it) for these indicators?* Analysis of the most cost-effective procedures and regulations to implement the ISPM. This information will come from the qualitative interviews with the NPPOs, IASPC, FAO-IPPC and other main stakeholders	*What external factors and conditions outside project control must be met to obtain the expected results on schedule?* A correct understanding of all the procedures needed to correct implement the standard is crucial for this task. The support from the NPPOs, IASPC and FAO-IPPC will guarantee that the risks related to this results will be minimal
Activities	*What are the key activities to be carried out, and in what sequence, to produce the expected results?*	*What are the work programme targets (milestones)? What are the means and costs required to implement these activities (provide*	*What are the sources of information to measure progress in implementation?* The donor organization will received pre and	*What external factors and conditions outside project control must be met to implement the planned activities*

	Keys activities will be: 1. Desktop studies to analyse the economic effect of the standard implementation. Run the econometric model using macro data; 2. Field studies which aim at collecting micro data and relevant information from the stakeholders. Run the econometric model using micro data; 3. De-brief meeting aimed at building capacity at the country level (for the NPPOs) and at a regional level (for the IASPC)	*summary for each)?* Please see the 1. budget -excel file attached- which accurately shows how the costs will be allocated among the key activities and 2. the work plan, which defines the programme targets, milestones and deadlines	post mission countries reports, final countries report, and final project report. These detailed reports will be annexed to the progress reports submitted to the STDF Secretariat every six month according to STDF templates and procedures	*on schedule?* The main researchers believe that a good communication between them and the NPPOs and IASPC will guarantee the success of the project.

APPENDIX 2: Work Plan

Activity	Responsibility	Year 1				Year 2			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Desktop study									
Collection of macro data on the flow of export/import for approximately 20 years	Pellegrini, L. Tasciotti, L.								
Literature review and desktop study	Pellegrini, L. Tasciotti, L.								
Analysis of the database and revision of the results	Pellegrini, L. Tasciotti, L.								
Preparation of the report with the analysis for all the countries	Pellegrini, L. Tasciotti, L.								
Revision on the report by NPPOs representatives and external consultant	Pellegrini, L. Tasciotti, L.								
De-brief and capacity building mission (related to presenting the report and the results, de-briefing of the counterpart and capacity building)	Pellegrini, L. Tasciotti, L.								
Final report sent for approval to STDF	Pellegrini, L. Tasciotti, L.								

Country 1: Botswana									
Mission preparation (collection of the information, data to be collected, preparation of the survey instruments, contacts with the NPPO, small sample to be surveyed)	Pellegrini, L. Tasciotti, L.								
Preparation of the inception report to be sent to STDF	Pellegrini, L. Tasciotti, L.								
First mission (related to the micro data gathering process, interview with the NPPO, industries and main stakeholders affected by the ISPM15 implementation)	Pellegrini, L. Tasciotti, L.								
Preparation of the survey backstopping report to be sent	Pellegrini, L. Tasciotti, L.								
Data collection and revision of data collected and creation of a database with the information collected	Pellegrini, L. Tasciotti, L.								
Data and information analysis	Pellegrini, L. Tasciotti, L.								
Preparation of the country based report	Pellegrini, L. Tasciotti, L.								
Country based report correction (after NPPO and external consultants revisions)	Pellegrini, L. Tasciotti, L.								
Final country based report sent for approval to STDF	Pellegrini, L. Tasciotti, L.								

Country 2: Cameroon									
Mission preparation (collection of the information, data to be collected, preparation of the survey instruments, contacts with the NPPO, small sample to be surveyed)	Pellegrini, L. Tasciotti, L.								
Preparation of the inception report to be sent to STDF	Pellegrini, L. Tasciotti, L.								
First mission (related to the micro data gathering process, interview with the NPPO, industries and main stakeholders affected by the ISPM15 implementation)	Pellegrini, L. Tasciotti, L.								
Preparation of the survey backstopping report to be sent	Pellegrini, L. Tasciotti, L.								
Data collection and revision of data collected and creation of a database with the information collected	Pellegrini, L. Tasciotti, L.								
Data and information analysis	Pellegrini, L. Tasciotti, L.								
Preparation of the country based report	Pellegrini, L. Tasciotti, L.								
Country based report correction (after NPPO and external consultants revisions)	Pellegrini, L. Tasciotti, L.								
Final country based report sent for approval to STDF	Pellegrini, L. Tasciotti, L.								
Country 3: Kenya									

Mission preparation (collection of the information, data to be collected, preparation of the survey instruments, contacts with the NPPO, small sample to be surveyed)	Pellegrini, L. Tasciotti, L.								
Preparation of the inception report to be sent to STDF	Pellegrini, L. Tasciotti, L.								
First mission (related to the micro data gathering process, interview with the NPPO, industries and main stakeholders affected by the ISPM15 implementation)	Pellegrini, L. Tasciotti, L.								
Preparation of the survey backstopping report to be sent	Pellegrini, L. Tasciotti, L.								
Data collection and revision of data collected and creation of a database with the information collected	Pellegrini, L. Tasciotti, L.								
Data and information analysis	Pellegrini, L. Tasciotti, L.								
Preparation of the country based report	Pellegrini, L. Tasciotti, L.								
Country based report correction (after NPPO and external consultants revisions)	Pellegrini, L. Tasciotti, L.								
Final country based report sent for approval to STDF	Pellegrini, L. Tasciotti, L.								
Country 4: Mozambique									

Mission preparation (collection of the information, data to be collected, preparation of the survey instruments, contacts with the NPPO, small sample to be surveyed)	Pellegrini, L. Tasciotti, L.								
Preparation of the inception report to be sent to STDF	Pellegrini, L. Tasciotti, L.								
First mission (related to the micro data gathering process, interview with the NPPO, industries and main stakeholders affected by the ISPM15 implementation)	Pellegrini, L. Tasciotti, L.								
Preparation of the survey backstopping report to be sent	Pellegrini, L. Tasciotti, L.								
Data collection and revision of data collected and creation of a database with the information collected	Pellegrini, L. Tasciotti, L.								
Data and information analysis	Pellegrini, L. Tasciotti, L.								
Preparation of the country based report	Pellegrini, L. Tasciotti, L.								
Country based report correction (after NPPO and external consultants revisions)	Pellegrini, L. Tasciotti, L.								
Final country based report sent for approval to STDF	Pellegrini, L. Tasciotti, L.								

Note: For convenience, we started the list of country based activities with the countries mentioned in alphabetical order. Depending on the organization of the project, on the availability of the data and on how long the gathering of necessary information process will take, we might change the order of the countries.

APPENDIX 3: Project budget (in US$)

Please find the budget in the excel file attached. The budget excel file is organized as follows:
1. the first sheet, 'Total Budget Summary', is a summary of the total budget and it represents the sum of all the other sheets from the third onwards;
2. the second sheet, 'Tot. Budget by activities-items', constitutes a summary of the total budget where the budget lines are grouped by activities and under all the activities the main items are listed;
3. the third sheet, 'Budget mission FAO', indicates the share of the budget that will be spent for meeting the FAO-IPPC secretariat staff and other relevant people working at FAO and professionally knowledgeable about the standard;
4. the fourth sheet, 'Desktop study', shows how the budget will be spent for the desktop study. The de-brief meeting expenses are listed here. Please note that DSA and flights are not budgeted for those people who are hosting the meeting;
5. from the fourth sheet onward, those sheets are called 'Budget country 'name of the country'', we list all the expenses related to the mission in that specific country and the costs related to the data collection process (we budgeted interviews with 30 business companies affected by the ISPM 15 implementation. The data collection will be done by an external company, therefore this expenditure has been budgeted.

APPENDIX 4: Letters of support from organizations that support the project request

Please find all the letters of support attached in the e-mail sent to the STDF in January 2014

APPENDIX 5: Written consent from an STDF partner that agrees to implement the project *OR* evidence of the technical and professional capacity of another organization proposed to implement the project

Not applicable

Appendix 6: Terms of Reference for key staff involved in project implementation

1. Project Directors

This role will be undertaken by Prof. Lorenzo Pellegrini and by Dr. Luca Tasciotti.

The Project Directors will lead the project activities and will be responsible for the entire project. Their activities and duties are listed below:

- Lead the project activities, manage the project and ensure its smooth and successful operation, including achievement of project milestones and objectives;
- Conduct the desktop study and run the quantitative analysis;
- Run the field studies, organizing the meeting with the stakeholders during the field studies, hire the companies in charge of collecting the micro data, analyse the data;

- Write and provide the STDF with all the deliverables, as listed in Section 9 (including progress reports and all the other reports);
- Identify problems with project implementation at an early stage and intervene in a timely way to manage or avoid any issues arising;
- Arrange financing of the project from the donor;
- Liaise with donor on any financial matters arising;
- Select the external consultants if needed.

Qualifications required

- Ph.D. in economics
- At least 6 years of professional experience in the micro and macroeconomic analysis, data collection and impact evaluation analysis
- Significant experience of leading projects involving research or capacity building in low and middle income countries
- Fluency in English

2. Project officer

This role will be undertaken by Mr. David Wubs-Mrozewicz.

The Project officer will provide project management support for the project and take responsibility for administrative and financial matters.

Qualifications required

- At least 6 years of professional experience in managing projects in developing and less developed countries;
- Fluency in English

3. Steering committee

This position will be filled by NPPOs' and IASPC representatives who have kindly volunteered to review the reports to assess their quality. Their participation will guarantee that all the main issues discussed during the consultations will be in the reports.

Furthermore, the steering committee will be represented by Prof. Luisa Corrado and by other external consultants –their time has been estimated to be in 54 days for the entire length of the project (10 days men for each of the country's report -40 in total- and 14 days men for the full report revision). The steering committee will revise all the deliverables and it will make sure that a very high quality will be met. The steering committee will receive all the documents to be revised from the Project Directors one month before the STDF submission date; it will revise the documents in two-weeks and send the documents back to the Project Directors to allow them to incorporate the

changes. This steering committee agreement has been previously used by the Project Directors in other projects and has guaranteed a very high quality of the deliverables.

Qualifications required

- At least 6 years of professional experience in writing and revising international reports. Knowledge of micro and macroeconomics or of plant protection and of the implementation of SPS measures;
- Experience in submitting reports/papers to peer-reviewed journals;
- Fluency in English

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