STDF PROJECT GRANT APPLICATION FORM[1]

Project Title	**Strengthening the Phytosanitary Capacity of the Floriculture Sector in Uganda**
Objective	To strengthen phytosanitary capacity in Uganda and to increase market access of Uganda's flowers.
Budget requested from STDF	US$ 348,632
Total project budget	US$ 392,154
Full name and contact details of the requesting organization(s)	Ministry of Agriculture Animal Industry and Fisheries (MAAIF)[2] Department of Crop Protection (DCP) P.O. Box 102, Entebbe, Uganda E-mail: ccpmaaif@gmail.com Tel.: +256 414 4320115 Fax: +256 414 320642
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I. BACKGROUND

1. SPS situation and issues

(i) EU requirements for flower imports

All cut flowers exported to the European Union (EU) have to comply with EU Directive 2000/29/EC2 and Annex IV A1 and the lists of harmful organisms mentioned in Annexes 1A1 and 1A2. The most important phytosanitary requirement for cut flowers exported to Europe specifies that all consignments are accompanied by an official Phytosanitary Certificate. The Phytosanitary Certificate

[1] This application is a redrafted version of the August 2011 application, based on comments by members of the Working Group and (telephone) discussions with the IPPC Secretariat and STDF Secretariat.
[2] The list of abbreviations is given in Appendix 8.

should state the absence of a number of quarantine pests[3], of which *Spodoptera littoralis* and *Helicoverpa armigera* were the most important ones, but presently it applies only to *S. littoralis*.

The EU Phytosanitary Directive furthermore states that all consignments of roses and other cut flowers imported into Europe need a phytosanitary import check. Such an import inspection comprises a document check followed by a phytosanitary inspection. Only when both are found in compliance, a consignment can be released. However, to reduce the number of import inspections a system of 'reduced checks' is applied on the percentage of the consignments being inspected at import in the EU. The percentage of cut flower consignments to be checked is determined by the European Commission in Brussels on an annual basis for each of the exporting countries on the basis of; (a) the number of consignments over the past three years, and (b) the number of notifications by phytosanitary services in EU Member States on the presence of quarantine pests. Reduction in the number of checks for a particular commodity from an exporting country is only possible in case a sufficiently large number of consignments are sent without any notified presence of quarantine organisms.

Over the years the non compliance to EU phytosanitary requirements of rose consignments have led to an increased percentage of sampling from 10%, to 100% of the consignments imported in the EU. This led to increased inspection charges of the imported roses. However, due to lower interceptions in the years 2009 and 2010, the EU decided on a reduced inspection level, which has been set at 25% for roses from Uganda for the period 01.01.2011 – 01.01.2012.

(ii) IPPC Standards and phytosanitary legislation

The International Plant Protection Convention (IPPC) is an international treaty that aims at preventing the introduction and spread of pests of plants and plant products, and to promote appropriate measures for their control. The IPPC was established at the sixth Conference of the Food and Agriculture Organisation of the United Nations (FAO) in 1951. The Convention was updated in 1997 primarily to introduce a mechanism for developing and adopting International Standards for Phytosanitary Measures (ISPM). In this way the 1997 revision aligns the Convention with the Agreement on the Application of Sanitary and Phytosanitary measures ('the SPS Agreement') of the World Trade Organisation (WTO). Uganda is a signatory to the IPPC and therefore Uganda is obliged to comply with the requirements, especially while engaging in international trade. Thus compliance with the IPPC standards harmonises the phytosanitary systems and facilitates the international trade of plants and plant products from Uganda. The Phytosanitary Quarantine Service of the Crop Protection Department (DCP) of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) of Uganda is the official National Plant Protection Organisation (NPPO), thus the official service established by the Government of Uganda (GoU) to discharge the functions specified by IPPC. Furthermore the Phytosanitary Quarantine Service of DCP is a member of the Regional Plant Protection Organisation, the Inter-African Phytosanitary Council (IAPSC).

DCP of MAAIF is responsible for general (plant) pest control, including the formulation and enforcement of phytosanitary regulations and those around pesticides. The new National Sanitary and Phytosanitary (SPS) Implementation Plan for 2011/12 – 2015/16 is expected to create a conducive environment for implementation of phytosanitary measures. The SPS plan was created under the responsibility of the Ministry of Tourism, Trade and Industry (MTTI), with DCP involved for phytosanitary issues, while DCP will be responsible for the implementation of the phytosanitary procedures of the Policy.

To minimise impediments to the exports of flowers - and other horticultural produce - from Uganda to Europe, it is important that the Phytosanitary and Quarantine Division of the DCP has adequate capacity to fulfil the responsibilities of an National Plant Protection Organisation (NPPO) as described in the IPPC general provisions for national plant protection arrangements (see text box 1). In relation

[3] The word pest is used in the IPPC/FAO-sense, being "any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products", while a quarantine pest is "a pest of potential economic importance to the area endangered thereby and not yet present there, or present but not yet widely distributed and being officially controlled" (ISPM No.5, IPPC/FAO, 2010).

to the export-oriented horticulture, meeting the IPPC standards pertaining to the issuance of export certificates (see paragraph a of text box 1) is the greatest priority for the Ugandan NPPO. A second priority would be the compliance with the IPPC regulations for phytosanitary surveillance (see paragraph b of text box 1).

In order to facilitate the compliance and harmonisation with the IPPC standards the Commission for Phytosanitary Measures developed a series of International Standards for Phytosanitary Measures (ISPM). As per May 2010 the list of ISPM's includes a total of 34 guidelines which may be used as an important benchmark by the DCP in Uganda to check the level of compliance with the required international phytosanitary standards. In relation to the phytosanitary inspections and certification of export consignments, there are a number of differences between the current implementation of the phytosanitary measures in Uganda and the IPPC standards (see further below under paragraph 4.). A specific phytosanitary survey and monitoring system for the export-oriented floriculture is not well developed in Uganda.

Text box 1. General provisions relating to the organizational arrangements for national plant protection[4]

Article IV-2. The responsibilities of an official national plant protection organization shall include the following:

a) the issuance of certificates relating to the phytosanitary regulations of the importing contracting party for consignments of plants, plant products and other regulated articles;

b) the surveillance of growing plants, including both areas under cultivation (*inter alia* fields, plantations, nurseries, gardens, greenhouses and laboratories) and wild flora, and of plants and plant products in storage or in transportation, particularly with the object of reporting the occurrence, outbreak and spread of pests, and of controlling those pests, including the reporting referred to under Article VIII paragraph 1(a);

c) the inspection of consignments of plants and plant products moving in international traffic and, where appropriate, the inspection of other regulated articles, particularly with the object of preventing the introduction and/or spread of pests;

d) the disinfestation or disinfection of consignments of plants, plant products and other regulated articles moving in international traffic, to meet phytosanitary requirements;

e) the protection of endangered areas and the designation, maintenance and surveillance of pest free areas and areas of low pest prevalence;

f) the conduct of pest risk analyses;

g) to ensure through appropriate procedures that the phytosanitary security of consignments after certification regarding composition, substitution and re-infestation is maintained prior to export; and

h) Training and development of staff.

It has to be observed that there should be a differentiation between two groups of harmful organisms and to the tasks assigned to the NPPO. In many countries NPPO's have sole tasks related to quarantine pests (import and export) and pests of national importance. In other countries the task of the NPPO is much wider covering plant health in very general terms. The latter is the case for the role DCP wants to play. For the first mentioned situation, if a pest is not listed on the national quarantine list or of quarantine lists of importing countries, governmental intervention is not needed. Only in exceptional cases there is a governmental responsibility for harmful organisms that do not appear on

[4] Source: IPPC. 2011 Procedure Manual. FAO, Rome 2011.

a national or on an export quarantine list. Therefore as a first priority it would be logical that DCP implements the phytosanitary measures which include the performance of inspections, test[5], surveillance and/or treatments of regulated pests. The wider role in plant health that DCP plays - or tries to play - includes for example advice to flower farms on IPM implementation and pre-auditing for MPS[6]-GAP. Obviously the latter would not be a priority to be included in a proposal for strengthening phytosanitary capacity, like this proposal.

(iii) Relevant SPS priorities and issues as identified in studies and capacity evaluations

The IPPC also developed a Phytosanitary Capacity Evaluation (PCE). This PCE is a standard used by the IPPC for establishing the level of organisation of a plant health service. Such an evaluation is very useful for the Ugandan phytosanitary authority to assess the level of organisation and harmonisation in relation to the international standards.

In 2005 and 2006, the PCE tool was applied in Kenya, Tanzania and Uganda. Under the Integrated Framework (IF) - as part of the Diagnostic Trade Integration Studies (DTIS) - the World Bank (WB) also carried out background studies on SPS in Tanzania and Uganda. In the latter the SPS capacity was again assessed, not using PCE, but using a hierarchy framework as shortly described in the field mission report (in 3.1). In the document of the DTIS, in which DCP was consulted for the SPS chapters, it is mentioned that "Uganda has apparently implemented the IPPC's PCE, yet the conclusions and priorities remain unclear" (World Bank, 2006).

In the follow-up and implementation of the DTIS action matrices, Uganda benefits from the Enhanced Integrated Framework (EIF). The EIF action matrix includes a number of floriculture topics, indirectly relevant to this project proposal. Based on observations and discussions during the field mission it can be concluded the foreseen actions related to the floriculture sector and SPS are not yet implemented. Actually, the EIF Tier 1 project, the Second Trade Capacity Enhancement Project ("TRACE II") contributes to the fulfilment of the EIF objectives and programmes in Uganda and supports the Government's trade development agenda. Uganda submitted Tier 2 project proposals, but these proposals do not have a link with the floriculture sector and/or SPS.

As a component of its co-ordination mandate, the Standards and Trade Development Facility (STDF) held a series of workshops as part of the Regional Reviews of Aid for Trade in September 2007. These workshops were part of a larger project aiming to strengthen the link between the supply and receipt of SPS-related technical co-operation in three pilot regions: Central America, the East African Community (EAC)[7] and a sub-group of South-East Asian countries. The East African STDF workshop was held in Dar es Salaam, Tanzania (in collaboration with the African Development Bank). Each workshop was based around an overview of existing SPS capacity evaluations and an inventory of SPS-related technical co-operation provided to each region in the period 2001-2006. The SPS Balance Sheet for Uganda (Abegaz, M., 2007)[8] provides an overview of needs and ongoing activities. SPS Priority needs for Uganda (2008) are described in the following table 1[9], including the timeframes (< 1yr, 1-2yrs and > 3-5 yrs).

Details	**Time frame**		
	Short term: <1yr	**Medium:** 1-2yrs	**Long term:** >3-5yrs
DEVELOPMENT OF NATIONAL SPS POLICY			
1. Stock taking – establishment of existing gaps and Policy development following a consultative	X		

[5] "Official examination, other than visual, to determine if pests are present or to identify pests." (ISPM No.5, IPPC/FAO, 2010).
[6] MPS ('milieu project sierteelt') is an international certification scheme for the ornamental crop production sector. Environment, quality and social aspects are main topics covered by MPS, but crop protection guidelines are relatively speaking the most important elements of the certification scheme.
[7] The research was concentrated on Kenya, Tanzania and Uganda.
[8] The references are given in chapter 5 of the field mission report.
[9] Only the Priority needs related to the flower sector are indicated.

Details	Time frame		
	Short term: <1yr	**Medium:** 1-2yrs	**Long term:** >3-5yrs
approach			
2. Policy implementation – include regulations development, legal reforms, institutional development and rationalisation, awareness creation		X	X
3. Training on Pest risk analysis		X	
4. Monitoring & Evaluation- for the SPS policy			X
HORTICULTURE			
1. Creation of awareness amongst the farmers	X		
2. Creation of export groups/critical mass of small scale exporters		X	
3. Standard pack houses		X	
4. Training quality controllers	X		
5. Improvement of the cold chain infrastructure		X	
CROSS CUTTING ISSUES			
1. Bolstering the enforcement capacity including training of responsible enforcement agencies		X	X
2. Strengthening of national notification systems/information flow		X	
3. Building capacity for sustained compliance with SPS/sustainability.	X		X
4. Awareness of SPS issues by policy makers and politicians	X		
5. Development of Codes of Practice	X		

Table 1. SPS Priority Needs for Uganda (2008).

The main issues on SPS capacity in Uganda as summarised in the above table and observations made during the Field Mission and the Validation Workshop, including wishes of DCP, are reviewed in the Field Mission Report (chapter 3) and formed the basis of the first proposal. Based on observations made by the IPPC Secretariat, this first proposal has been redrafted. In this redrafted proposal the phytosanitary priorities to be addressed in relations to the Floriculture Sector are reviewed below under chapter 4.

(iv) Flower trade and phytosanitary issues

The Uganda floriculture sector grew from a one hectare farm in 1992 to 25 farms exporting cut roses or propagation material covering about 190 ha by early 2009. The export in volume and earnings rose over the last eight years, but faced, for example, a drastic decline in the period 2005 – 2006 (23% in value and 9% in volume). This decline was partly attributed to power shortages, storm damages on several farms and problems around quality control and freedom from quarantine pests as required for export to the EU. In the period 2007 – 2008 the export of roses increased 6% by value and 7% by volume and to decrease again respectively to 9% and 11% in 2008 – 2009. Over the period 2007 –

2009 average yearly revenue of US$ 30 million was earned by the export of cut roses. In the same period interceptions in the EU due to non compliance by the presence of quarantine pests *Spodoptera littoralis* and *Helicoverpa armigera* accounted for about 17% of the export yearly, thus resulting in an estimated loss of US$ 4.3 million on average per year. Due to a smaller number of interceptions of about 5% in the EU and a smaller trade volume, the estimated loss for the year 2010 was US$ 1.1 million.

In the Ugandan floriculture sector the cost of controlling pests in each flower farm is estimated at about US$ 10,000 per year on average. Thus for all the 17 Uganda Flower Exporters Association (UFEA) rose producing farms this would total to about US$ 170,000. How much of this amount relates directly to the control of quarantine pests is not known.

(v) Institutional framework for phytosanitary management

The DCP of the MAAIF, based in Entebbe, is responsible for (plant) pest management, including the formulation and enforcement of phytosanitary regulations and those around pesticides. As mentioned before, DCP has a section on Phytosanitary and Quarantine. DCP is responsible for and carries out inspections of imports and exports of planting materials and plant based products, mostly checking for pests to determine compliance with phytosanitary regulations. In cases that interceptions due to quarantine pests are made at the airport and when the identity of the pest is not clear, diagnostic tests should be conducted at the so called Namalere the post-entry quarantine facilities (acts as quarantine station as per IPPC terminology). The Department issues Phytosanitary Certificates when these are required for exports. Crop protection officers, who work as inspectors, are located at MAAIF headquarters, at zonal stations, and at border/entry posts. DCP is the National Plant Protection Organisation (NPPO), thus DCP is the competent authority responsible for the inspection and regulation of all plant commodities for local and international markets.

A Plant Protection and Health Bill that updates legislation according to new views of the IPPC is still waiting approval by Parliament. The Control of Agricultural Chemicals Act 2006 separates the regulation of pesticides and fertilisers in order to ensure pesticide related food safety along the food chain. The drafted regulations are with the solicitor general.

The phytosanitary inspections are constrained due to limitations in capacities and facilities. At DCP headquarters, Entebbe, four staff members are involved in quarantine issues including inspections, while early 2010 two inspectors were based at the airport, where all the flowers are handled and exported on a 24-hours basis. In the last part of 2010 four inspectors were appointed to strengthen the export inspection capacity at the airport. All airport inspectors need to strengthen their specific required capacities as inspectors. These need to be further strengthened, while additionally at the airport facilities to inspect flowers for export are lacking. There are 28 border posts with 20 inspectors under MAAIF. Of these 20 are recently appointed, leaving three border posts with experienced inspectors. The other border posts are staffed by delegated officers from local governments.

In order to minimise impediments to the export of flowers from Uganda to Europe it is important that DCP has adequate capacity and facilities to fulfil the responsibilities of an NPPO as described in the IPPC general provisions for national plant protection arrangements (as described in text box 1) and maintains procedures of the certification system (see further below under chapter 4.).

(vi) Plant protection measures in export floriculture

The control of pests and compliance with phytosanitary regulations and standards is primarily the responsibility of the growers themselves. As part of the control of pests some of the Ugandan rose growers deploy crop scouts, who oversee the plant health situation in a specific part of the greenhouse and notify the farm management when a certain pest is spotted in the crop. Other rose growers have only a general manager for crop management or a specific one for pest management. Pest management is predominantly implemented using chemical control in a combination of preventive and curative applications. A few growers apply biological control measures, also as a part

of an Integrated Pest Management (IPM) approach, needed for meeting the requirements for MPS-GAP certificate.

2. Links with national development strategies and policies

The proposed project would diminish the number of interceptions due to the quarantine pests of exported flowers in the EU and thus would increase the export volume of flowers. This is in line with the National Trade Sector Development Plan (2008/09 – 2012/13), in which Plan Uganda aims to increase the volume of its agricultural exports. These exports take care, or should take care, of about 90% of the foreign exchange earnings. To meet the target, the agro-food / flower chain has to comply to plant health requirements imposed by the trading partners, not only the public standards, but as well the private standards like MPS-GAP or Global Good Agricultural Practices (GLOBALGAP).

The foreseen improved exports, the related diminishing costs due to decreasing number of interceptions and preferably combined with improved pest management strategies, will keep the flower companies in the market. The flower companies employ a labour force of about 6,000, of whom roughly 80% are women. An estimated additional number of six persons are depending on each employee of a flower farm. Consequently some 42,000 persons are depending – directly or indirectly - for their living on the employment in flower farms. By the implementation of this project, the families' household income remains guaranteed, thus eradicating the risk of poverty for those families and other dependents. Consequently the project will support the livelihoods of the families.

Till 2008 Uganda's over-arching national planning document was the Poverty Eradication Action Plan (PEAP), signaling poverty eradication as the fundamental goal of the Government. Afterwards the National Development Plan 2010/11 – 2014/15 (NDP) was developed based on the lessons learned from PEAP. Under the NDP poverty eradication receives continued attention. Employment generation is considered necessary condition for poverty eradication. The flower companies contribute to this condition.

As mentioned in the above, the MTTI published the above mentioned National Policy SPS Implementation Plan for 2011/12 – 2015/16 which provides a framework for the implementation of the SPS Policy. The SPS Policy development was one of the components of the Quality Infrastructure and Standards Programme (QUISP). The policy was developed by different ministries involved in SPS in a committee under MTTI chairmanship. DCP was part of the committee. The vision of the National SPS policy is "*to transform Uganda into one of the world's leading producer, consumer and trader of safe and quality animal and crop products on a sustainable basis"*. In summary, some of the specific objectives of the Policy are to:

(i) reduce diseases in plant populations;
(ii) create an enabling business environment that promotes public private partnerships;
(iii) develop and improve (as appropriate) on the SPS infrastructure along the value chain;
(iv) strengthen the conformity assessment infrastructure in areas of testing laboratories and inspection;
(v) foster coordination and collaboration between and among SPS related institutions;
(vi) strengthen the skills and technical capacity of those handling SPS issues; and
(vii) Strengthen inspection and approval procedures.

This proposed project would support partly some of the objectives of this National SPS Plan, either directly or indirectly through its various relevant activities and lessons learnt. For example above points (iii), (vi) and (vii). The foreseen interventions of this proposed project are too small and cover a limited period of time in order to support fully all the foreseen actions under this very useful, but rather ambitious, National Policy SPS Implementation Plan for 2011/12 – 2015/16 (see for these actions Table 1 of the National SPS Plan).

3. Past, Ongoing or Planned Assistance

Over the years, the floriculture sector, particularly the UFEA, received donor support, sometimes partly related to plant health issues. The support was aiming at the development and strengthening of the floriculture sector in order to improve market access. The support focussed at segments of flower value chain. The various projects had some synergy in the sense that each project took another critical issue in the floriculture sector or was building on previous activities, as was done with various floriculture short courses. As described in the following in some more detail, the floriculture sector related support included mainly:

(i) Training on MPS-GAP certification scheme for DCP staff;
(ii) Various types of short courses / study tours on plant health systems for MAAIF staff, some dating back almost ten years ago;
(iii) Various short courses on floriculture for farm managers, crop specialists and crop protection specialists of flower farms, partly through or in cooperation with UFEA;
(iv) diploma and certificate courses in floriculture;
(v) support on implementation of IPM and biological control to some companies through UFEA;
(vi) research support to UFEA on practical aspects of floriculture;
(vii) various types of investment and technical support to Fresh Handling Ltd (FHL);
(viii) support to phytosanitary and diagnostic laboratories and its construction; and
(ix) up-dating of legislative frameworks.

Quality Infrastructure and Standards Programme (QUISP)
Presently the only project in its implementation phase is the earlier mentioned QUISP. The programme seeks to develop a market-driven, holistic and coordinated institutional framework for the Ugandan Quality Infrastructure and Standards, through which it supports trade, industry, health, safety, consumer protection and a sustainable environment while at the same time promoting use of best practices in the productive and service sectors. Two of the many outputs of the programme are a National SPS Policy and the enactment of relevant legislation. As mentioned before, the National SPS Policy is in place, but the enactment of the legalization and related activities will have to wait in order to be in line with other relevant components of QUISP. This will be done by the relevant departments, as for phytosanitary issues this will be implemented by DCP.

Projects recently terminated

Three projects recently implemented, but presently terminated are:

(i) Centre of Phytosanitary Excellence (COPE);
(ii) Capacity Building in the Floriculture Sub-Sector in Uganda; and
(iii) The Uganda component of WSSD Partnership Programme in East Africa.

(i) Centre of Phytosanitary Excellence (COPE)

The Centre of Phytosanitary Excellence (COPE) was established to enhance the capacity of national phytosanitary systems to protect national agriculture as well as increase the ability of African countries to compete in international markets by meeting international phytosanitary standards. The Centre was financed through STDF funds, with contributions of the national Governments from 2008 - 2010. The Centre was based on the principle that any capacity development is most effective when it builds on and uses existing capacity. Thus the COPE was developed by a team of experts from several African countries, the African Union's IAPSC, the Secretariat of the IPPC, CABI, and the Netherlands Plant Protection Service (NPPS). The COPE has a secretariat in Nairobi hosted at Kenya Plant Health Inspectorate Service (KEPHIS) and the University of Nairobi. DCP was collaborating and involved in COPE's activities.

Part of COPE's activities included the development and organization of training courses. The Centre developed and continues to develop tailor made courses specific to customer needs. The short term in-service courses, of which some would be relevant to the phytosanitary flower project, are:

- Certification and import verification procedures for inspectors and technicians;
- Phytosanitary systems improvement and management for phytosanitary managers and senior technical staff; and
- Phytosanitary skills enhancement course for subject matter specialists and technicians.

One of the activities of COPE was strengthening of pest risk analysis (PRA) in the collaborating countries, in which two DCP staff participated for Uganda.

ii) Capacity Building in the Floriculture Sub-Sector in Uganda

The project on Capacity Building Floriculture Uganda aimed at strengthening the capacity for education, research and training in the floriculture sector in Uganda. The project was funded by the Netherlands Government and implemented in the period 2006 – 2010. The Ugandan partners were: (a) Bukalasa Agricultural College (BAC), (b) Mountains of the Moon University (MMU), and (c) UFEA.

Major activities of this project were:

- curriculum development for Diploma course floriculture and implementation by BAC and MMU;
- curriculum development for a Certificate course in floriculture;
- short practical courses in floriculture based on the preceding successful Applied Tropical Floriculture Course of UFEA; and
- development of training courses for small scale farmers and entrepreneurs in the flower sector.

The graduates from these Diploma and Certificate courses are employed by the various flower companies and their performance is highly appreciated. The opinion on the short courses varied. For some of the flower specialists, these short courses were too general, while for others these were interesting. Basically the courses (or modules of the courses) related to pest management were very useful for understanding the general principles on crop protection, Integrated Pest Management (IPM), and safe handling of pesticides, but not specific enough for the very detailed pest problems of flowers, their recognition, scouting and specific control measures within an IPM approach.

(iii) WSSD Partnership Programme in East Africa

The Uganda component of this World Summit on Sustainable Development (WSSD) programme consisted of six components related to vegetables, fruits and flowers. The Uganda part of the programme ran from 2005 to 2009 and was co-financed by the Netherlands Government: The following components related to floriculture:

- local market survey to identify possible products that can be commercially produced in Uganda for local and export markets, and to identify potential buyers for Uganda's flowers produced by smallholders;
- training programme for the flower industry on compliance with MPS-GAP regulations and linked to this training programme;
- set-up and implementation of a quality management system in 18 flower farms;
- implementation of an effective plant health and chemical inspection for MPS-GAP; and
- Improving cold chain management in the horticultural sector.

Especially the last four components are distantly related to the proposed phytosanitary flower project. Meanwhile it is understood that presently not all flower farms are anymore MPS-GAP certified. In 2010 six flower farms were MPS-ABC certified, which certification is related to the judicious use of pesticides. Eleven flower farms were MPS-GAP certified. The advisory on MPS and pre-inspections were implemented by DCP and/or UFEA, but have been hampered by lack of qualified staff. UFEA pre-inspects for MPS only on request by companies, while DCP faces the problem that most of MPS trained staff resigned from MAAIF. A part of new DCP staff to be employed by MAAIF will focus on phytosanitary issues and plant health, while DCP intends to include MPS related activities as well. As

the new staff lack MPS related experience, they need to be trained in this field. As these private standards, like MPS, are outside the scope of a phytosanitary project, these topics will not be included in this project proposal.

An external evaluation of the WSSD Partnership Programme concluded, among others, that insufficient IPM poses a problem for many East African flower farms. In all five partnership countries there was, moreover, a lack of industry-driven training institutions. For Uganda it was observed that collaboration within the private sector improved, but public – private sector relations did not improve. Obviously a lesson learned that should be taken on board of this proposed project through a strong and equal partnership of both public and private sector.

Projects terminated a couple of years ago

A number of projects in the flower sector, which were implemented a couple of years ago, were related to phytosanitary or plant health issues and. These projects are described into some more detail in the field mission report. In the following a summary is given:

- *Investment in Developing Export Agriculture (IDEA)*. This project was financed by the United States Agency for International Development (USAID) from 1995 - 2004. IDEA tried to commercialise non-traditional agricultural exports in Uganda. Initially flowers (roses) were among the target crops. UFEA received two grants for among others: (a) identification and (on-farm) testing high-performing varieties, (b) creation of a manual, and (c) support to develop a national Code of Practice protocol for floriculture linked to the Dutch MPS-GAP scheme in which four farms were working towards compliance. FHL received some support as well in the form of technical advice and materials.

- *Agribusiness Development Centre (ADC).* As part of the IDEA project, the ADC was set up to assist agribusiness growers to expand output and marketing of non-traditional agricultural crops. In line with IDEA's activities ADC provided assistance to the firms by (a) training their staff, (b) sponsoring overseas visits, (c) providing market research, (d) technical assistance and supporting trials, and (e) support and strengthening the UFEA.

- *Agricultural Productivity Enhancement Programme (APEP)*. APEP was one of the major undertakings by USAID/Uganda aimed at expanding rural economic opportunities in the agricultural sector by increasing food and cash crop productivity and marketing. It covered the period 2003 – 2008. UFEA was supported with more or less the same type of activities as under IDEA. Moreover Real IPM (Kenya) was hired to provide advice to Uganda flower growers on implementation of biological control. As a result two farms started to mass rear predatory mites.

- *Agriculture Sector Programme Support (ASPS)*. The Danish International Development Assistance (DANIDA) financed ASPS from 1999 – 2009. ASPS focused on poverty reduction and food security in a broad agricultural sector approach, providing assistance to a diversified number of activities. In phase II this included an Agri-business Development Component that had, among others, the following activities (a) support to MAAIF for seed legislation and testing, phytosanitary laboratory and capacity, pesticide legislation and variety protection legislation, and (b) general agricultural policies, planning and capacity development. No specific activities related to the flower sector.

- *Business Services Marketing Development (BSMD) Project*. From 2002 – 2005 the UK Department for International Development (DFID) funded this project, implemented by the International Labour Organisation (ILO). It focused on the enhancement of supply chains where rural, small enterprises were providing (or could provide) substantial inputs. By enhancing these supply chains, it was anticipated that major benefits would accrue to those rural enterprises, in terms of increased market access, and the provision of various supporting services. The project conducted several supply chain and other related studies. No specific studies on topics in the floriculture sector were implemented.

- *Phase-out of Methyl Bromide in Cut Flowers.* The project aimed at the complete phase-out of methyl bromide in the cut flower sector by the year 2005. This sector represented 100% of total Methyl Bromide consumption of Uganda. Research was carried out to find alternative methods by the United Nation Industrial Development Organisation (UNIDO) and UFEA. These included use substrates, IPM combined with specific pesticides and steam sterilization (pasteurisation). The project was implemented between 2001 and 2005.

Summary observations on past, ongoing or planned assistance

Generally it can be observed that the support to certain critical issues in the floriculture sector assisted the development of a relatively strong, but small, sector, even surviving to some extend the economic recession of the last couple of years. In this respect, it should be noted that the sweetheart roses are not the most preferred ones in the EU and thus not fetching the highest prices, but might have a competitive advantage during a recession period as customers may buy cheaper flowers.

The efforts to enhance capacity related to plant health appear to have been driven to some extent by donor activities. As concluded in the SPS Balance Sheet for Uganda (2007), it is not evident that the attempts followed a planned strategy to improve the institutional setting, capacity and facilities according to a kind of master plan aiming to achieve a certain set of goals in a certain sequence. On the other hand these projects fitted within Government Policy priorities such as the previous PEAP, the present NDP and the National Trade Sector Development Plan.

With DCP, as NPPO, it is expected that the enrolment of the National Policy SPS Implementation Plan for 2011/12 – 2015/16 will streamline various phytosanitary activities in the future. This STDF project would support the National Policy SPS implementation Plan starting implementation of a number of phytosanitary measure geared to the flower sector. Later when DCP has to execute the phytosanitary part of the SPS National Policy, DCP will benefit from the activities and lessons learnt in this phytosanitary flower project. Particularly as the flower sector is rather small, the flower value chain very short, in a way, this proposed STDF project could act as a pilot activity.

A hindrance in the sustainability of some of the activities was the turnover of Government staff, for which reason capacity development goals were not achieved as foreseen in some of the projects. As mentioned before, for example, DCP staff trained on the MPS-GAP certification scheme resigned meanwhile. It has to be observed that for specialists with the same type professional profile, NARO offers better salaries than MAAIF does.

II. RATIONALE, JUSTIFICATION & OBJECTIVE

4. Specific problems to be addressed

The description and analysis of specific phytosanitary problems in the floriculture sector in Uganda are based on (i) the available documentation (including those of the SPS-related capacity evaluations and the SPS Balance Sheet for Uganda, funded by STDF), and (ii) the information gathered in the meetings of the field missions (see for details, such as references and persons met, the Field Mission Report), and (iii) the Validation Workshop (see Field Mission Report, chapter 4.4 and annexes 5.1 – 5.3).

The awareness of decision-makers and politicians on the importance of SPS, if it existed, was mostly related to food safety and related direct and urgent problems with exports (e.g. fish). Initially the awareness created around these issues did mostly neither result in legislative or institutional reforms nor additional resources. However the private standards for the export of horticultural crops (GLOBALGAP or others) and flowers (MPS) have served to raise the awareness. The recently published and in the above mentioned National Policy SPS Implementation Plan for 2011/12 – 2015/16 – in which DCP was involved for phytosanitary measures - may have changed the awareness of decision-makers and politicians and should have a positive effect on the implementation of the SPS Policy, in which DCP will be involved in the implementation of the relevant parts.

Presently the capacity in the public sector on pest management and implementation of phytosanitary measures tends not to be fully developed and therefore DCP is constrained to play the role it would wish to play or should play as NPPO. The aforementioned capacity relates to number of staff, number of trained inspectors, diagnostic specialists in specific disciplines and last but not least the responsibilities of an NPPO (see also text box 1). In relation to the export-oriented floriculture, meeting the IPPC standards pertaining to issuance of export certificates (paragraph a of text box 1) is the greatest priority for the Ugandan NPPO. A second priority is the compliance with the IPPC

regulations for phytosanitary surveillance (paragraph b of text box 1). The earlier mentioned turnover of staff in MAAIF hinders to strengthen the involvement of the public sector in the floriculture plant health arena. The private sector is also constraint as a number of companies lack qualified staff that are able to scout and manage quarantine flower pests properly.

To comply with phytosanitary export requirements of flowers both the public and the private sector have to play their roles as it is in both their interest that the flowers are accepted without hindrance in the importing countries. It should be relatively easy as the Ugandan flower chain is short, while in general the producer is the exporter as well. The number of flower companies is limited, while there is a very supportive association, UFEA. The tasks of the public and private sector avoiding duplication have to be identified. Over time a cost recovery system needs to be developed in order to make the phytosanitary measures sustainable. The issue of cost recovery has been taken up by DCP with MAAIF, and will be included in the 2012/2013 budget plans

The issues and challenges related to plant health and phytosanitary procedures are described below. Some are specific for the flower sector; but quite a number have a more generic character.

a) Phytosanitary certification system

The implementation of the phytosanitary inspections is constrained while these are needed prior to issuing Phytosanitary Certificates. This is due to limited capacities and facilities. The Phytosanitary Certificates issued did not guarantee fully, the absence of quarantine pests, as shown by the interceptions of consignments of cut roses by the EU over the last couple of years.

Early 2011 the inspections at the airport had to be performed by two inspectors (or Agricultural Inspectors as these officers are called in Uganda) in a kind of 24-hours service, with often consignments arriving six hours before the plane departs in the late evening or night. The inspectors at the Airport work 24 hours as required by the East Africa Community common market protocol and customs union, although the normal number of MAAIF office hours is eight. Additionally they face some transport constraints in the evening and night. Meanwhile (mid-October 2011), DCP hired four more inspectors who are employed at the airport. The Phytosanitary Certificates are not only issued by inspectors based at the airport, but as well by staff at DCP in MAAIF Headquarters, Entebbe.

At the airport no simple laboratory with basic equipment and tools exists which is needed to support inspections and the consequent issuing of Phytosanitary Certificates. The inspectors cannot verify properly the nature of observed organisms in the consignments. An inspection table and facilities and arrangements for unpacking and repacking cut flowers and other tools like magnifying glasses are lacking and partly due to lack of space. A supportive operational manual with procedures of phytosanitary inspections exists, but it is rather general and needs an update and refinement to make it easy to be used by the inspectors and to be more detailed e.g. to provide a clear clue to the inspector on what grounds the consignment has to be rejected and consequently why the issue of a Phytosanitary Certificate is refused. The inspectors lack access to information on quarantine pests for floricultural produce in important market destinations. The manual should contain, in a simplified way through a commodity approach (like cut flowers), the phytosanitary import requirements of the EU (Directive 2000/29/EC), obviously in a kind of translated format of a set of simple instructions. Updates of the phytosanitary requirements of the importing countries should be made available as well. A database, or access to (and understand) databases with the phytosanitary import requirements would be required, provided a computer, preferably with internet connection, would be available at the airport for the inspectors.

Actually to execute properly export inspections, an export certification system should be in place that encompasses more than solely the issues around phytosanitary inspections at the end point, being the pack house at the airport. The export certification system should include inspections at other places in the system, like places of production and handling facilities of flowers and further in the chain to the airport. Obviously this includes throughout the flower

chain auditing by DCP of the work done by employees of the companies. Text box 2 and 3 describe the various functions and procedures for DCP to be implemented for an appropriate export certification system.

Text box 2. Export certification system[10]

To meet international standards it is important that the DCP's Plant Quarantine Team have adequate personnel and resources available to undertake as the NPPO the following functions:

- Maintaining and document information on importing countries' phytosanitary requirements for phytosanitary certification;
- Production and availability of operational instructions for staff to ensure that importing countries' phytosanitary requirements are satisfied;
- Perform inspection, sampling and testing of consignments for purposes related to phytosanitary certification;
- Detection and identification of pests found during inspection of consignments;
- Perform. Supervise or audit the required phytosanitary treatments;
- Perform surveys and monitoring activities to confirm the phytosanitary status attested in the phytosanitary certificates;
- Completion and issue of phytosanitary certificates;
- Verify that appropriate phytosanitary procedures have been established and correctly applied;
- Investigate and take corrective actions – if appropriate – on any notification of non-compliance;
- Produce operational instructions to ensure that phytosanitary import requirements are met;
- Archive copies of issued phytosanitary certificates and other relevant documents;
- Review the effectiveness of the phytosanitary certification system;
- Implement – to the extent possible – safeguards against potential problems such as conflicts of interest and fraudulent issuance and use of phytosanitary certificates;
- Training of staff;
- Verify the competency of authorized personnel; and
- Ensure through appropriate procedures the phytosanitary security of consignments after phytosanitary certification prior to export.

Text box 3. Procedures documentation of phytosanitary certification system[11]**.**

Key elements of documentation of procedures of export certification system include:

- Specific activities relating to phytosanitary certificates, as described in ISPM 12:2011, including inspection, sampling, testing, treatment and verification of the identity and integrity of consignments;
- Maintaining security over official seals and marks;
- Ensuring traceability of consignments, including their identification and phytosanitary security (as appropriate) through all stages of production, handling and transport prior to export;
- Investigation of notifications of non-compliance from the NPPO of an importing country, including, if requested by the NPPO of the importing country, a report of the outcome of such an investigation (this procedure should be in line with ISPM 13:2001); and
- Investigation of invalid or fraudulent phytosanitary certificates, when the existence of these has been brought to the attention of the NPPO by means other than a notification of noncompliance.

[10] ISPM No. 7. Phytosanitary Certification System. FAO, Rome 2011.
[11] ISPM No. 7. Phytosanitary Certification System. FAO, Rome 2011.

In order to strengthen the present phytosanitary certification system a number of related aspects requires attention:

- detailed analysis of the export certification system on the implementation of functions - as described in text box 2 - and related documentation of procedures – as described in text box 3 - and develop and implement corrective actions on weak functions, procedures and their documentation, which will include at least the following issues;
- improve inspection activities throughout the flower chain on quarantine pests listed by the country of destination; for which;
    - the inspectors need to be trained on procedures and auditing of relevant activities implemented by companies, first line diagnostics, and phytosanitary requirements of importing countries;
    - facilities, tools and basic equipment need to be provided, mainly for sample taking and first line diagnosis from cut flowers, including arrangements for unpacking and repacking, at the airport;
    - further development and improvement of the existing operational inspection manual, which manual has to be practical and geared to users, the inspectors;
    - access to information on (i) EU phytosanitary requirements and their changes and (ii) the quarantine organisms of floriculture produce in important market destinations, thus mainly the EU; and
- development of an effective specific survey and monitoring system for quarantine pests in floriculture (see section b below).

b) Institutionalised pest surveillance system

Phytosanitary monitoring and surveillance of important quarantine organisms in the floricultural sector will give the growers and the phytosanitary services in the importing countries clear information on the pest risks. Implementation of the phytosanitary monitoring and surveillance activities in line with ISPM No 6 (see text box 4) is essential in order to provide the importing countries with reliable data.

A number of plant pests such as fruit fly diminish agricultural production and hamper export possibilities. *Spodoptera littoralis* is an example of a quarantine pest in the floriculture sector that caused notifications in the EU. While the NARO has a national surveillance system for fruit flies, there is not yet a monitoring and surveillance programme operating in the floriculture sector to survey quarantine pest population(s) in order to back-up the export inspections. It should be noted that a distinction should be made between general surveillance and specific phytosanitary surveys. It is important to set up and implement specific phytosanitary surveys, not only for the most important quarantine pest in export floriculture, *Spodoptera* sp., but as well for the detection of other potential quarantine pests. These surveys are based on a plan (see text box 4) which is approved and based on its sampling design, and statistical basis in order to make conclusive statements on for example declarations on the pest status, early detection, etc.

Presently DCP staff visit flower growers very infrequent (according to the growers). It means that particularly new staff hardly gets acquainted with the flower grower's problems. Phytosanitary surveillance is not implemented while additionally support to the company scouts or pest specialists is limited. This is due to financial constraints and lack of staff with capacity in this field. The surveys need to be conducted by inspectors well trained in scouting and diagnostics of various quarantine pests and preferably as well with knowledge of the control options. Therefore DCP should develop its capacity to conduct specific phytosanitary surveys, while companies should develop the capacity to scout their crop(s) for quarantine pests, supervised and audited by DCP. To support surveillance first line diagnostic services has to be in place, while preferably access to specialised diagnostic services should be available. However, in discussions with the IPPC Secretariat it was suggested to give priority to solely the first line diagnostics.

Text box 4. Guidelines for specific surveys[12]
The **survey plan** should include: • A definition of the purpose (e.g. assurances for pest free areas, information for a commodity pest list) and the specification of the phytosanitary requirements to be met; • Identification of the target pest(s); • Identification of scope (e.g. geographical area, production system, season); • Identification of the timing (dates, frequency, duration); • In the case of a commodity pest list, the target commodity; • Indication of the statistical basis (e.g. level of confidence, number of samples, selection and number of sites, frequency of sampling, assumptions); • Description of the survey methodology and quality management including an explanation of o sampling procedures (e.g. trapping, whole plant sampling, visual inspection, etc.), the procedure would be determined by the biology of pest and/or purpose of the survey; o diagnostic procedures; and o reporting procedures.

Presently the Ugandan pest list is being updated but should include distribution maps. Stakeholders in the floriculture expressed also the need of a specific floriculture pest list.

The development and implementation of specific phyotosanitary surveys in the Ugandan export floriculture will only be feasible if the export growers fully cooperate with the DCP. Crop scouts working for the flower export producers, should be trained in the various scouting procedures and related diagnostics. Without the assistance of the export growers through UFEA, it will be impossible to undertake any serious surveillance activities. On the request of UFEA, growers and importers, the DCP should distribute reports derived from surveillance on pest presence, distribution or absence.

c) Pest diagnostic capabilities

In order to be able to support phytosanitary surveys (see text box 4) and its tasks as a NPPO (see text box 1) DCP should have capacity related to diagnostic services. Characteristics of such diagnostic services include:

- Expertise in disciplines relevant to quarantine pest identification;
- Adequate facilities and equipment;
- Specialists (or access to) for verification if necessary;
- Facilities for record keeping;
- Facilities for processing and storing specimens; and
- Use of standard operating procedures, where appropriate and available.

However, given the issues – as described in the above - needing urgent attention and the nature of the most important quarantine pest of the Ugandan flower exports, being insect pests, the further strengthening of diagnostic capacity will be limited to first line diagnostics (in all disciplines), while some more attention may be given to the field of entomology as presently it is the most important discipline for quarantine pests in flowers.

It should be noted that other groups of quarantine organisms may appear in the future, thus other disciplines may become more important. Presently the diagnostic facilities are insufficient, as the new Post Entry Quarantine Station in Namalere is not fully operational. This does not only have consequences for the diagnostic support of exit (and entry) phytosanitary inspections, but as well for supporting the surveys. As long as these laboratories are not yet fully operational, the back-up systems for the entire Plant Health system and specifically the implementation of phytosanitary measures will remain weak. As

[12] ISPM No. 6. Guidelines for Surveillance. FAO, Rome, 2006.

stated before, in consultations with the IPPC Secretariat it was suggested not to include strengthening the development of specific diagnostic capacities, as was the case of the previous draft of this project proposal.

As mentioned earlier, the staff turnover in MAAIF is an issue. The new staff to be appointed at various points in the plant health system, lack for a large part capacities on all kinds of issues related to the implementation of phytosanitary measures. Among others these include the capability for first line diagnostics to identify properly some of the quarantine pests or certain development stages of these organisms. For example the larval (caterpillar) stage of *Spodoptera* sp. are not very active, while the egg stage obviously is not active at all and thus these stages are not easy to observe. Apparently these stages often escape the attention of the inspectors as these are the stages of *Spodoptera* sp. that were intercepted in the EU.

Additionally not enough diagnostic specialists are around in the different disciplines of plant protection (Bacteriology, Nematology, Pathology, Virology and Weed Science) in the Post Entry Quarantine Station in Namalere to officially confirm diagnoses of quarantine pests intercepted at entry or exit points of the country. The staff at the Post Entry Quarantine Laboratory have access to an Insect Museum at the Herbarium at the National Agricultural Research Laboratories, Kwanda, about two km from the Post Entry Quarantine Laboratory. Actually, as the present interceptions of quarantine pests in exported cut roses are on insect pests full time entomologists with recognised authority on a number of insect families should be available for the confirmation of identifications. Only one entomologist is available with quite a number of other duties than diagnostics. Diagnostic specialists in other plant protection disciplines are not available and maybe required in the near future, as interceptions of roses exported to the EU may not be limited to insect quarantine pests.

As mentioned before an official list of prevalent pests and their distribution maps does exist, but it needs an update urgently and, pest hand books for reference are limited available. These are not available for the first line diagnostics of the inspectors at the airport.

Summary

In summary, presently, the phytosantary capability of DCP – as a NPPO - is not strong enough to implement in the whole flower chain all the phytosanitary measures properly. This is mainly due to:

1) insufficient staff capacity, in number and partly with relevant knowledge and skills; and
2) limitations of administrative facilities, insufficient supportive infrastructure (facilities / laboratories), procedures, documentation and resources.

Therefore the export certification system (see text box 2 and 3) is underdeveloped and all the functions are not fully executed and/or documented. This is particularly the case at production and handling sites of the flower chain. As a result consignments of flowers with a phytosanitary certificate, but with quarantine pests, are intercepted in the EU (see above under 1.(iv)). The viability of the Ugandan flower export and international market access is weakened and consequently the employment of the approximately 6,000 labourers (and their 36,000 dependents) is at risk as well. For these labourers and their households the earnings in the floriculture sector are essential for their livelihood.

In short, the STDF proposal needs to focus on the phytosanitary certification system related to the floriculture sector, specifically:

- to ensure that adequate number of staff and resources are available and retained;
- to strengthen the appropriate qualifications and skills of inspectors and other DCP staff involved in phytosanitary certification system;
- to improve available supportive documentation on EU phytosanitary import requirements and manuals/guides with quarantine pest descriptions for inspectors and flower companies;
- to update and improve operational documented procedures for phytosanitary measures in the whole flower chain to ensure that phytosanitary export requirements are met;

- to make appropriate facilities available for phytosanitary inspections at the airport/exit point;
- to perform phytosanitary surveys to confirm the status of quarantine pests;
- record keeping and archiving of issued phytosanitary certificates, other relevant documents and notifications by the importing country[13]; and
- advisory / supervision / auditing by DCP on scouting of quarantine pests by scouts and/or pest specialists of the flower farms.

Millennium Development Goals

The project will contribute to fulfilment of a couple of the Millennium Development Goals. This will specifically be the targets under Goal 1, being to eradicate extreme poverty and hunger, with the following sub-targets:

- "1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day",
- "1.B: Achieve full and productive employment and decent work for all, including women and young people", and
- "1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger".

5. Target Beneficiaries

Related to the development goal the final beneficiaries are the labourers in the flower companies, for whom employment is at risk if companies go bankrupt due to problems in the export of flowers. This applies to about 6,000 workers of whom approximately 80% are women. As mentioned before another estimated 36,000 people are depending on these labourers of flower farms.

Uganda, as a country, is a beneficiary as the export of flowers supplies the country with needed foreign exchange, being about some US$ 30 million yearly.

6. Ownership and stakeholder commitment

The following are the main stakeholders who actively support this project. Additionally there are a couple of secondary stakeholders who are expected to provide important services to the project or are more indirectly linked to the project. The contact details are given in table 2.

Main stakeholders[14]
The main stakeholders are:

1. *Main stakeholder and National Coordinator: DCP*. The requesting government agency for the project is DCP. DCP is the Ugandan NPPO and responsible for phytosanitary procedures, including inspections and issue of Phytosanitary Certificates, identification of quarantine pests, and surveillance. DCP would be responsible for the day-to-day implementation of the project including the provision of staff, undertake practical activities such as procurement of equipment, arranging meetings, organising training and a study tour in concert with UFEA, CABI Africa and organisations providing the requested services. A part of the staff will benefit from this project and some of the needed phytosanitary facilities will be improved or established. Appendix 4 provides DCP's letter of agreement with the project proposal.

[13] As per International Standards for Phytosanitary Measures (ISPM) No. 13 Guidelines for the Notification of Non-Compliance and Emergency Action. FAO 2006.
[14] In an earlier version of this project proposal the *Embassy of the Kingdom of the Netherlands* was indicated as a possible main stakeholder. It was expected that the new criteria for the development cooperation would include market access and/or development of agri-business. If that would have been the case there would have been possibilities for co-financing the project. However, it appears that the new development cooperation criteria do not include the earlier mentioned ones, and none of the new ones would match this foreseen project.

2. *Main Stakeholder: UFEA.* As the project involves a public-private partnership, the association will be the link between DCP and flower growers. UFEA will assist in identifying important growers who are willing to collaborate directly in a number of the foreseen activities. UFEA has a long experience in various projects with among others, the organisation of courses and workshops. UFEA will support DCP in the organisation and implementation of courses, particularly those. that are planned to be held in Uganda. UFEA will have a representative in the Project Management Committee (PMC). UFEA's support letter is included in appendix 4.

3. *Main Stakeholders: a couple of flower companies*, to be identified by UFEA. These companies are expected to participate by (a) making staff / scouts available for training (training of trainers) and study tour of the project, (b) implementation of quarantine pest scouting in their farms as a support to the phytosanitary survey by DCP, and (c) if needed apply - improved - quarantine pest control. One company will be represented in the PMC. One company provided a support letter (see appendix 4).

4. *Main Stakeholder and Implementing Agency: CABI Africa.* CABI Africa in Nairobi will take care of the project management. An external management organisation is required by STDF in cases that the project applicant is the main direct beneficiary and main agency involved in the day-to-day activities of the project, as in this application. CABI is a non profit organisation and has a wide international experience in project management and projects on phytosanitary issues. The STDF project COPE was supervised by CABI Africa, which was – according to the STDF Secretariat - well done. CABI Africa will be member of the PMC, while CABI will prepare the PMC meetings and take care of reporting. See further below in chapter 16 on Project Management. A support letter is included in appendix 5.

5. *Main supportive stakeholder:* Netherlands Plant Protection Service (NPPS)[15] will be involved by providing phytosaniary expertise, capacity building and as resource persons / technical support of the study tour to Kenya. The role of the NPPS will be to expose the project staff to the receiving side of the flower exports, their operational systems and provide inputs with very specific expertise. Additionally the personal contacts may enhance communication between both services. Particularly for operational phytosanitary procedures and their implementation and documentation their specialised expert advice will be required. A support letter is included in appendix 4.

	Name	**Designation / Organisation**	**Telephone**	**E-mail**
1.	Ephrance Tumuboine	Head, Phytosanitary Inspection and Quarantine, DCP, MAAIF	+256 414 320801	etumuboine@gmail.com
1.	Komayombi Bulegeya	Commissioner, Department of Crop Protection (DCP), MAAIF	+256 414 320115 +256 772 421132	ccpmaaif@gmail.com
2.	Juliet Musoke	Executive Director, Uganda Flower Exporters Association (UFEA)	+256 312 263320 +256 772 906198	ed@ufea.co.ug ufea@ufea.co.ug
2.	Jacques Schrier	Chairman UFEA	+256 39 2722031 +256 77 1765555	j.schrier@fiduga.com
3[16].	Ravi Kumar	Farm Manager, Rosebud Ltd	+256 414 343500 +256 39	ravi.kumar@rosebudlimited.com

[15] Presently the NPPS is under the New Food and Consumer Safety Authority of the Netherlands (newVWA).
[16] A couple of options for companies are given, but UFEA in concert with DCP will decide which flower companies will be invited to be involved in the first project activities, later all companies have to participate.

	Name	Designation / Organisation	Telephone	E-mail
			2733029 +256 752 711781	
3.	Dimple Mehta	Administration Manager, Rosebud Ltd	+256 414 343500 +256 39 2733029 +256 752 711780	dimple.admin@rosebudlimited.com
3.	Phillip Musore	Export Manager, Rosebud Ltd.	+256 752 711785	rosebud@rosebudlimited.com
3.	Shanmungan	Production and Propagation Manager, Rosebud Ltd	+256 711 384370	absshane@gmail.com
3.	Tushar Yvas	General Manager, (Xpressions flowers) African Agro Industries (U) Ltd.	+256 712 385068 +256 751 385068	tusharkvyas@yahoo.com xpressions@utlonline.co.ug expressionsuganda@yahoo.com
3.	Mahendra Godse	Production Manager, (Xpressions flowers) African Agro Industries (U) Ltd.	+256 712896913	godse81@yahoo.com
3.	K.K. Rai	General Manager, Kajjansi Roses Ltd	+256 414 200959 +256 752 722128	kkrai@kajjansi-roses.com
3.	Tobby Maddison	GeneralManager, Melissa Flowers Ltd.	+256 755 722270 +256 755 722262	Toby.maddison@melissa-flowers.com
4.	Roger Day	Deputy Director, Development, CABI Africa	+254 20 7224450 +254 20 7224462	r.day@cabi.org
4.	Florence Chege	Projects Manager CABI Africa	+254 20 7224450 +254 20 7224462	f.w.chege@cabi.org
5.	Marieke Janssen[17]	Economic and Fellowships Officer, Embassy of the Kingdom of the Netherlands	+256 41 4346000	marieke.janssen@minbuza.nl

Table 2. Contact details of main stakeholders.

Secondary stakeholders
The secondary stakeholders are:

- FHL, being the handling company of exported flowers at Entebbe International Airport with the cool stores. DCP's Inspectors inspect most of the flowers for quarantine pests at the premises of FHL.
- KEPHIS, through COPE, will be involved in capacity building, study tour and expert advice. KEPHIS/COPE role is important in view of the regional perspective and

[17] See footnote on **Main Stakeholders**.

experience with similar problems with interceptions of flowers in the European market. COPE/KEPHIS experts were involved in similar projects and exposed to the capacity building by the Netherlands Plant Protection Service (NPPS). A support letter is included in appendix 4.

- The International Centre of Insect Physiology and Ecology (ICIPE), Nairobi, Kenya, will be involved in first-line diagnostic training for insect pests and in capacity building and expert advice on scouting of quarantine pests in floriculture produce. A support letter is included in appendix 4.
- Uganda Floricultural Association (UFA), in case UFA will start to be involved in export of local flowers.
- A couple organisations that may provide expertise or participate in capacity development as required, such as (a) NARO, the Horticultural Programme, (b) MU, Crop Science Department, Horticulture, (c) BAC, (d) MMU, and (e) Real IPM, Kenya.
- Organisations and bodies with an interest in the objectives of the project, such as the Uganda National Bureau of Standards, the Uganda Export Promotion Board, and last but not least, MTTI.

7. Relevance for the STDF

The project will address STDF themes i. (partly) and ii.

In relation to theme i. the project will address, related to the Floriculture Sector, mainly subjects on:

a) Human resources on phytosanitary procedures, including first line pest diagnostic capabilities,
b) Facilities, equipment and references required for implementation of phytosanitary measures, including for first line pest diagnosis, while these two points include as well:
    - Development of quarantine pest surveys by DCP and scouting by companies, and
    - Strengthening inspections at point of exit (airport), the issue of Phytosanitary Certificates and needed facilities and tools.

In relation to theme ii, the project enhances or guarantees market access by support and capacity building of public and private organisations, being mainly DCP and private flower companies, including their export association, UFEA.

Although the proposed project will tackle some of the key phytosanitary issues of the flower sector, it could have an indirect effect on the improvement of phytosanitary inspections of other products. An awareness raising for phytosanitary measures would have also an effect beyond the floriculture sector. The development and implementation of pest surveys by DCP and scouting in flower farms can be translated and adapted to other sectors in export horticulture. Ugandan export of fruits and vegetables is rather limited, but it needs to comply with phytosanitary import requirements of the EU. A DCP strengthened through the floricultural phytosanitary procedures would be in a better position to tackle phytosanitary measures in Uganda's export of vegetables and fruits to the EU or other destinations abroad.

The project may function as a kind of pilot for the implementation by DCP of the phytosanitary measures of the National SPS Plan.

Replication of the project would be feasible for countries with similar conditions. Obviously adaptations would be needed as blue-print copying of the proposed project would not be advised.

This project will re-visit few of the activities implemented in the projects described in the above chapter 3. This is needed as staff turn-over in MAAIF was an issue ending up with partly young staff and limited hands-on experience on implementation of phytosanitary measures. Additionally, non of the earlier mentioned projects focussed so specifically on improvement of the implementation of phytosanitary measures and their procedures and documentation. Most of the flower companies will need time to appreciate, for example, the importance of scouting to prevent problems around quarantine pests.

8. Development Objective

In line with the findings and issues discussed during the Field Mission to Uganda and shortly to Kenya (February 2011), the Validation Workshop (June 2011), various reports and documents (see Field Mission Report) and observations by and discussions with the IPPC Secretariat and STDF Secretariat and members of the Working Group, this project proposal was redrafted. Particularly part of the objectives, outputs and activities were adjusted compared to the proposal of August 2011. The Logical Framework (Appendix 1) was overhauled.

The proposed project will contribute to the following development objective;

- Development of phytosanitary services that will facilitate and support a strong export-oriented floricultural sector in Uganda with improved market access to EU and other markets without phytosanitary constraints. Through a strong floriculture sector the livelihoods of the labourers in the sector and their dependents will be secured.

Basically the proposed project will strengthen the phytosanitary procedures in the public sector, partly in concert with the private floriculture sector, through which interceptions of quarantine pests in exported flowers will be reduced. Consequently the flower companies will reduce the risk of financial losses and eventually bankruptcy. The employment of about 6,000 labourers and thus the livelihoods of their families and other dependents will be guaranteed.

Uganda would continue to earn foreign currency from exported flowers, amounting some US$ 30 million per year.

9. Expected End-of-project Situation and Sustainability of Project Results

The end of project will be that the flowers exported from Uganda will not anymore being intercepted in the EU or other international markets due to the presence of quarantine pests on the flowers. The floriculture sector will not shrink anymore and the employment of the approximately 6,000 labourers is guaranteed.

To achieve the above, the administrative and operational procedures of the phytosanitary system are effectively implemented in support of the floriculture sector and where relevant in concert with the private sector in a public-private-partnership facilitated by UFEA. The supervisory and auditing role of the public sector will be clear and formalised in relation to, for example the scouting activities as implemented by the private sector.

The results will be sustained as long as the public sector continues to employ the newly recruited staff who have been involved in the capacity development of this project, while the same applies for the flower companies. Additionally, after the project terminates, yearly a specific budget needs to be available for the running costs of the phytosanitary procedures related to the export of flowers. The development of a cost recovery system for inspections and issuing Phytosanitary Certificates will be needed in the (near) future. This issue has been taken up by DCP with MAAIF.

After termination of the project the private sector has to continue their quarantine pests scouting activities and the use of appropriate pest management techniques to control these quarantine pests.

III. IMMEDIATE OBJECTIVES, OUTPUTS & ACTIVITIES

10. Objectives, outputs and activities, including logframe and work plan (Appendix 1 and 2)

11. Public-public or public-private cooperation

The cooperation between the Government and its role in managing and implementing phytosanitary measures and the private sector is promoted by this project. An effective cooperation will be very essential for the outcome of this project. The private sector is involved in crucial activities of the project. A number of the company scouts / plant protection specialists / quality controllers will be trained, while scouting is the responsibility of the flower farms of the private sector. An effective phytosantitary service is clearly beneficial for the flower companies as it decreases the risk that the flowers are intercepted in the EU. UFEA will play a role as an intermediary between the companies and DCP / MAAIF.

The new National SPS Implementation Plan for 2011/12 – 2015/16 is expected to create a conducive environment for phytosanitary implementation. The SPS Implementation Plan was created under the responsibility of MTTI with involvement of DCP for phytosanitary issues. The implementation of phytosanitary issues will be the responsibility of DCP. This project will improve the phytosanitary system and could be considered as a kind of pilot implementation for the some of the phytosanitary components of the National SPS Implementation Plan. Therefore it is expected that the cooperation between DCP and MTTI will be further strengthened.

12. Risks

The key risks described in the logical framework (appendix 1) are the following:

a) Sufficient cooperation of the private sector. The private sector has to make staff available (their scouts and / or plant protection experts / quality controllers) for training and implementation of activities as described in the logical framework.

b) Failure to recruit new DCP phytosanitary staff, for inspections and first-line diagnostics, implementation of survey and monitoring system and supervision of company activities. For the sustainability of project results no or only a limited turnover of staff would be beneficial.

c) Availability at airport of a room / space that can be transferred into a simple laboratory and office where phytosanitary inspectors can inspect the exported produce.

d) Sufficient MAAIF budget to continue the implementation of the various phytosanitary measures after the project is over.

During the Validation Workshop the above identified risks were indicated as well, while two other risks were added:

e) Airport inspections based on 24-hours services, requiring four instead of two inspectors, which would use additional DCP funds that cannot be used for other activities in DCP.

f) “Misuse of resources”.

Considering the above risks the following additional information can be given to try to mitigate the risks.

Ad a). In the long term it is in the interest of the companies that the whole phytosanitary system improves, which starts at their farms with scouting and appropriate pest management approaches to control quarantine pests (and other pests). So in the short term it will cost them some staff time, but in the long term the private sector will benefit. At the onset of the project UFEA in concert with DCP need to spend some time to get support of a couple of the farm managers, while activity 1.2, 1.4 and 2.1, 3.2 and 4.1 are designed to support awareness raising and eventually full cooperation by the private sector.

Ad b) New DCP staff will be recruited with the appropriate qualifications. This will be done within the next few months, before the start of the project. DCP will make the jobs attractive enough for the staff in order that they do not start to look for alternative employment.

Ad c) This is also dependent on the transfer of the facilities used by FHL from the Civil Aviation Authority to FHL.

Ad d & e) In the (near) future a cost recovery system for phytosanitary inspections may alleviate the budgetary constraints. Actually informal payment to inspectors by flower companies may happen once in a while, but it is illegal. MAAIF is undertaking some steps to include fees in the regulatory system with a flow back into these regulatory services. This process is ongoing, but apparently not at a pace in the fast lane. DCP and UFEA should look into the possibility to start a pilot during the implementation of the project.

Ad f) Project budget supervision should be tight, which is a standard procedure in most internationally funded development projects.

IV. INPUTS & BUDGET

13. Inputs and estimated budget

Appendix 6 - specifies detailed breakdown of the various main budget lines of the total project budget in US$. The budget specifies:

(i) the amount requested from STDF;

(ii) the applicant's own contribution to the project, being MAAIF, UFEA and private companies in the floriculture sector, largely related to salary costs, while

14. Cost-effectiveness

With a successful implementation of the project it is expected that the consignments of flowers intercepted in EU, due to the presence of quarantine organisms, will reduce possibly to a few percents. The estimated losses were between US$ 1,1 and US$ 4,3 per year over the last three years, depending on the year. This would be on average per company roughly between US$ 55,000 to US$ 225,000 losses per year. Flower farms spend approximately US$ 10,000 per year for controlling pests. This could diminish slightly by early detection through (improved) scouting techniques. This could result in better pest management practices and reduced use of pesticides. The positive environmental effects (or better less negative effects) are difficult to calculate.

To solve the earlier described problems a properly functioning phytosanitary service is needed combined with implementation of appropriate phytosanitary survey and monitoring system implemented by DCP and enhanced scouting methods at the flower companies.

An alternative for phytosanitary procedures does not exist, as this is internationally agreed under the international treaty of the IPPC. The floriculture sector has to prevent that their export consignments do not receive an Ugandan Phytosanitary Certificate due to quarantine pests detected during the phytosanitary inspection before export of the flowers. This would reduce their export which is the

fundament of the profitability of the sector. Even worse would be the case that the consignments are intercepted at the other end, in Europe, which happened too often during the last couple of years, although interceptions diminished since 2010. So, strengthening the phytosanitary capacity of DCP and improvement of the implementation of the phytosanitary measures, partly in concert with the private sector, is the only way to tackle the earlier described problems in the export of floricultural produce to Europe.

V. PROJECT IMPLEMENTATION & MANAGEMENT

15. Implementing / supervising organization

The applicant will be the national coordinator and in charge of the day-to-day operation of the project.

Ministry of Agriculture Animal Industry and Fisheries (MAAIF)
Department of Crop Protection (DCP)
Ms. Ephrance Tumuboine
Head, Phytosantary Inspection and Quarantine
P.O. Box 102, Entebbe
Uganda
E-mail: ccpmaaif@gmail.com
Tel.: +256 414 4320115
+256 414 320801
+256 414 322458
Fax: +256 414 320642

The day-to-day running of the project will be coordinated with:

Uganda Flower Exporters Association (UFEA)
Ms. Juliet Musoke
Executive Director
E-mail: ufea@ufea.co.ug
Tel.: +256 312 263320
+256 772 906198

The proposed implementing organisation will be:

CABI Africa, Nairobi, Kenya
Dr. Roger Day
Regional Director
ICRAF Complex
United Nations Avenue
Gigiri
P.O. Box 633-00621
Nairobi
Kenya
E-mail: r.day@cabi.org
Tel: +254 20 7224450
+254 20 7224462
Fax: +254 20 7122150

The letters of support from each of the organizations to be involved in project implementation (DCP, UFEA one flower company, although more will be involved through UFEA, ICIPE, COPE / KEPHIS and NPPS) are attached in appendix 4.

CABI Africa provides in appendix 5 a written consent agreeing to manage and supervise implementation of the project.

16. Project management

In the beginning of the project a small Project Management Committee (PMC) will be set up, in order to:

- develop a management structure in which the practical management will be carried out by CABI Africa,
- oversee progress of project activities, and
- Intervene in the event of any problem.

The management and implementation by CABI Africa, in concert with the PMC, will include:

- handling, disbursement and monitoring of all the STDF project funds and expenditures;
- ensuring that work plans with milestones are in place;
- developing in detail the activities that should meet the expected outputs;
- support to DCP and UFEA to coordinate and implement activities;
- report to STDF Secretariat; and
- assist in dissemination of project results.

The PMC will be composed of one representative from each off the following stakeholders, with the exception of DCP having two representatives:

- DCP (2x)
- CABI Africa (1x)
- UFEA (1x)
- Flower company (1x)
- MTTI (1x)
- Makerere University or BAC or MMU (1x)

The PMC will attempt to reach all decisions by consensus. The PMC will meet in Entebbe six times during the two year's duration of the project. As indicated in appendix 2, this is foreseen for months 1, 4, 8, 13, 18 and 24.

VI. REPORTING, MONITORING & EVALUATION

17. Project reporting

Regular reporting, on the project progress in relation to the foreseen work plan (appendix 2) will be carried out by CABI Africa. The progress reports will include a financial report.

In month 1 an inception report will be prepared. Regular progress reports will be written in months 7, 13, 19 and a final report in month 24. The decisions of the PMC meetings will be included in these reports.

18. Monitoring and evaluation, including performance indicators

The PMC will be responsible for the overall monitoring of the project implementation and progress related to the work plan. During the first PMC meeting when an inception report will be drafted, a detailed and refined work plan will be further developed. Based on this one and the key indicators indicated in the logical framework (appendix 1) progress will be monitored by the representatives of the PMC and discussed and assessed in each PMC meeting.

19. Dissemination of the projects results

Through the organisation of a final seminar (activity 4.1) and publishing the proceedings (activity 4.2) the project results will be disseminated within the country. The dissemination of the results will be

geared to stakeholders in other sectors of export horticulture. The seminar should also aim at awareness raising towards decision makers and/or politicians on the importance of the floriculture industry and significance and benefits of a well-functioning phytosanitary system for the export of flowers and other export crops. The lessons learnt will be instrumental for the implementation of the phytosanitary issues of the National SPS Plan.

The results and lessons learnt of the various activities need to be published. This can be done on the UFEA and/or DCP website.

ATTACHMENTS

Appendix 1: Logical Framework

Appendix 2: Work Plan

Appendix 3: Terms of Reference for national key staff involved in the project

Appendix 4: Letters of support from COPE / KEPHIS, ICIPE, NPPS and national organizations to be involved in the project

Appendix 5: Letter of support from the implementing organization CABI Africa

Appendix 6: Detailed budget

Appendix 7: Lists of equipment

Appendix 8: Abbreviations and acronyms

APPENDIX 1: Logical Framework

	Project description	Measurable indicators	Sources of verification	Assumptions and risks
Overall objectives (goals)	Improve market access to the EU and other high end markets for Ugandan flowers.	Number of labourers employed by the floriculture sector remains stable or increases. Trade volume of the sector stays at least the same or improves. Total revenue from the sector remains the same or improves.	Export and financial data from FHL and/or UFEA. Survey among flower farms on number of labourers employed.	Growers are willing to cooperate and implement scouting under DCP supervision. Demand for flower cuttings and the sweetheart roses in EU (or other markets) does not decrease. The appearance of unexpected organisms that are on the EU quarantine list and difficult to control by the growers.
Immediate objective	Improved compliance with international phytosanitary standards for production and export of flowers for the European market.	Reduction of number of interception of cut flowers in the EU.	Notification reports from the NPPS EUROPHYT data base.	New pests can be controlled using the established capacity
Expected result 1	DCP's staff capacity developed in order to bring the implementation of phytosanitary inspections and certification of flower export consignments in line with international standards of export certification systems and the requirements of the EU market.	. Staff confidence in the way they deal with their phytosanitary activities and follow procedures. Implementation of phytosanitary measures according to agreed Standard Operating Procedures. Improved reference material and manuals.	Notification reports from the NPPS, EUROPHYT data base. Procedures documented. Progress reports. On-the-job assessments. Reference material and manuals.	Staff motivated to participate in training and to change the procedures and implement the changes.
Activity 1.1	**General Project Initiation Workshop.** Two day awareness creation and technical introduction / training workshop for participants representing key stakeholders (DCP staff, relevant policy makers, inspectors, UFEA representative(s), crop protection specialists / scouts / quality controllers from flower companies), with inputs from specialized consultants on: (i) responsibilities of a NPPO, (ii) functions	Number of participants from different stakeholders in the floriculture sector. At least 20 relevant persons trained. Proceedings of workshop written.	List of participants. Report of workshop and proceedings. Proceedings published. Workshop pre and post evaluation.	Representatives of different stakeholders are willing to participate actively.

	Project description	Measurable indicators	Sources of verification	Assumptions and risks
	and new developments of an export certification system (iii) EU phytosanitary import requirements, import procedures, notification systems of non-compliance, and its developments, (iv) difference between general surveillance and specific phytosanitary surveys and role in phytosanitary system. Participants: Approximately 20 Duration: 2 days Organised by: Experts from DCP, in concert with UFEA and CABI Africa, Technical inputs: Two experts, from IPPC and NPPS Location: Entebbe			
Activity 1.2	**Recruitment by MAAIF of about five new DCP staff members**1[18] to be deployed by DCP for activities as required implementing and sustaining the improved phytosanitary measures of this project.	Number of new full time staff (Five) available to implement phytosanitary measures.	MAAIF staff records.	No funds available to employ new staff. Applicants have the needed qualifications. New staff is motivated to be involved in various phytosanitary activities.
Activity 1.3	**Review and update of DCP's procedures, documentation and reference materials related to export certification system with technical assistance from NPPS.** This would include recommendations and improvements in procedures, arrangements related to relevant NPPO responsibilities and functions to be implemented in export certification system (in line with ISPM No.7). Develop a functional export certification system that will shift its focus away from end point inspection, to inspections of the whole flower chain, including production sites in the greenhouses and handling	Agreement on new operational procedures and updates of manuals and reference material. Advice on relevant staff capacity development.	Records / reports on various project activities. Report of NPPS expert. Outline of updated operational procedures.	Willingness of staff and other stakeholders to change phytosanitary procedures related to flower export. Inspectors and other DCP staff are willing and capable to work according to the new operational procedures.

[18] Recently four new DCP staff members were recruited who have been employed at the airport as inspectors in addition to the two old staff.

	Project description	Measurable indicators	Sources of verification	Assumptions and risks
	facilities of the companies all the way to dispatch after issuance of phytosanitary certificates. Streamline phytosanitary export inspection procedures and the issuance of Phytosanitary Certificates at Entebbe Airport Enhance cooperation between phytosanitary inspectors, export companies and Fresh Handling Ltd. and set-up simple inspection facilities at the airport. Streamline auditing by DCP of relevant activities done by employees of the companies and other relevant activities in the flower chain. Advise on phytosanitary operational manuals in the whole export certification system, including auditing procedures by DCP and other supportive documentation and additional staff capacity building. By: NPPS advisor, DCP staff and other relevant stakeholders. Duration: 7 days Location: Uganda			
Activity 1.4	**Study tour to Kenya supported by NPPS specialists** for DCP inspectors and other DCP staff involved in implementing phytosanitary measures and representatives from flower companies and UFEA, to visit and study practical aspects of the implementation of the various phytosanitary measures in Kenya related to the phytosanitary requirements of the importing country (the Netherlands). Issues to be included are: (i) responsibilities of KEPHIS as NPPO and compared with NPPS, (ii) procedures of export certification	Number of participants and representation of different stakeholders. Report on lessons learned for application in Uganda and an action plan.	List of participants. Study tour report. Study tour evaluation.	Delegates are willing to participate and are motivated to increase relevant knowledge and skills. Participants share experiences and views on possible improvements / changes of the Ugandan phytosanitary system.

	Project description	Measurable indicators	Sources of verification	Assumptions and risks
	system, (iii) phytosanitary export inspections, (iv) procedures for the notification of non-compliance, (v) specific surveillance by the NPPO, (vi) scouting by companies and role of the NPPO, (vii) use of central databases, and (viii) role diagnostic support services. Participants: Participants: 10: five to six from MAAIF (DCP), UFEA and one or two growers Duration: 7 days Organised by: DCP and CABI Africa in concert with NPPS, KEPHIS, ICIPE, and Kenyan flower growers. Location: Kenya.			
Activity 1.5	**Specialized and detailed hands-on training for inspectors and other phytosanitary staff of DCP** inspection procedures of the export certification system, auditing processes, pest and disease detection, handling of documents and phytosanitary certificates, quarantine pest detection, first line diagnostics etc.. Participants: 10: DCP inspectors and other phytosanitary staff of DCP Duration: 2 weeks Organized by: DCP in concert with CABI Africa and KEPHIS / ICIPE Implemented by: KEPHIS (through COPE) and ICIPE. Location: Kenya	Number of relevant participants (ten) trained. Training programme. Participants' improved knowledge and skills related to their phytosanitary tasks.	List of participants. Educational materials. Course evaluation. Participants' report. On-the-job assessments of participants.	Participants are willing to learn actively and are motivated to increase relevant knowledge and skills.
Activity 1.6	**Development and improvement of the existing operational manual for phytosanitary inspection and compilation of other reference materials**. Based on advice of NPPS technical expert (activity 1.3) and observations of study tour (activity 1.4), manuals should include a list of quarantine organisms. Pilot testing and adjustment. Make operational manual and other materials available for airport	Operational manual up-dated and practical enough to be used by inspector. Hard copies of new manual available at inspection site at the airport.	New operational manual available at airport for inspectors. Inspectors understand the manual and use it for their Inspections as hardcopies are available for use.	Changes in the operational manual are an improvement for inspectors. Inspectors are willing and capable to work according to the new operational manuals.

	Project description	Measurable indicators	Sources of verification	Assumptions and risks
	inspectors. By: DCP staff. Location: Uganda			
Activity 1.7	**Development of a computer-based format of the export certification system** for document storage and retrieval (in line with ISPM guidelines). Technical assistance and procurement of equipment. By: Relevant specialist from NPPS, KEPHIS or other in concert with DCP staff. Duration: 5 days Location: Entebbe	Computer-based system is in operation and is used by staff.	Report of technical advice. Observations on available equipment and operation of system and storage and easy retrieval of various documents.	Phytosanitary staff is willing to change their working habits and to use the computer-based system.
Expected result 2	A streamlined inspection and export certification system based on public-private partnership is designed and adopted	An implementation plan for the phytosanitary inspections indicating clear responsibilities of the partners (DCP, UFEA, FLH and growers) is adopted and reflected in the operating procedures of all the partners.	Quality of Phytosanitary Certificates. Notification reports from the NPPS. Operating procedures of all partners	Staff of the relevant stakeholders are willing to implement new procedures.
Activity 2.1	**Dialogue and agreement on (i) improved institutionalized inspection arrangements and requirements between DCP and flower companies and (ii) a communication strategy on phytosanitary issues**, in order to perform all phytosanitary inspection and certification activities on export consignments of floricultural produce to European markets. Based on activity 1.3, issues like inspection facilities and tools, timing of inspection requests, auditing by DCP of relevant work done by employees of companies and other operational matters should receive attention. By: DCP staff, UFEA, flower companies and FHL	Number of meetings. Number of participating stakeholders in meetings. Feasible decisions and action plans on strategies and communication.	Minutes of meetings with relevant information.	Companies and other stakeholders willing to participate actively. Stakeholders are willing to implement changes in existing procedures.

	Project description	Measurable indicators	Sources of verification	Assumptions and risks
Activity 2.2	**Procurement of small equipment and tools for export inspectors and set up of a small office and laboratory at the airport** (preferably at premises of FHL) for export inspection and first-line diagnosis and certification purposes. Basic tools, equipment and reference material to plant inspectors and some additional simple equipment for supportive diagnostics in entomology. By: DCP staff in concert with CABI Africa, FHL, and UFEA / growers	Small laboratory at airport with tools, equipment in working condition. Phytosanitary inspections and issue of certificates follow described procedures.	Procedures. Records on inspected flowers and the results.	No room made available for simple laboratory facilities at the airport. Timely delivery. Inspectors are willing and capable to use new facilities and tools.
Activity 2.3	**Technical assistance on practical aspects of implementation of phytosanitary measures.** Advice on all kinds of practical aspects arising when implementing newly developed procedures and documentation for the phytosanitary measures. By: DCP staff, NPPS expert in concert with UFEA, growers and FHL Duration: 5 days NPPS expert	All new phytosanitary procedures are properly implemented.	Report of expert. Diminished number of notifications.	Staff is willing to implement new procedures. Inspection facilities available at airport. Stakeholders agree on arrangements.
Expected result 3	Specific phytosanitary survey and monitoring systems are effectively operational	Survey and monitoring system is developed and implemented by DCP and at company level by scouts under supervision of DCP.	Report on the developed survey and monitoring system. Reports, including results, its communication of the survey and monitoring system. Number of visits to flower farms by DCP staff. Reports of company scouts.	Flower growers are willing to cooperate and provide enough trained staff for scouting activities. DCP provides enough staff time to implement the system. The developed system is practical and easy to implement.
Activity 3.1	**Development and design of specific phytosanitary survey and monitoring system** (objectives, sampling procedures, etc., as per ISPM No. 6) by DCP in cooperation with a NPPS expert. By: DCP staff and NPPS expert	Survey and monitoring system is developed.	Expert's report on the survey and monitoring system and its details.	DCP staff is willing to cooperate and assist NPPS expert.

	Project description	Measurable indicators	Sources of verification	Assumptions and risks
	Duration: 5 days NPPS technical expert Location: Uganda			
Activity 3.2	**Creation of a small task force on the development of a specific phytosanitary survey and monitoring and technical assistance on the set-up of such a system in concert with the private sector.** UFEA will form a taskforce together with DCP and other stakeholders, meanwhile receiving expert advice from a NPPS advisor on specific phytosanitary survey systems and role of private sector. Communication with growers through UFEA on survey design, system of data and information collection and cooperation between crop scouts working in the flower companies and DCP staff. By: UFEA, together with DCP, NARO and other stakeholders in concert with CABI Africa. Advise: NPPS specialist for 3 days (same as 3.1) Location: Uganda	Number of meetings. Number of participating stakeholders in meetings of task force. Feasible decisions and action plans on strategies to implement phytosanitary surveys and monitoring..	Expert's report on the survey and monitoring system and its details on cooperation between public and private sector.	Companies and other stakeholders willing to participate actively. Stakeholders are willing to cooperate, participate and play their roles in phytosanitary survey and monitoring system.
Activity 3.3	**Specialized and practical training on quarantine pest surveillance systems (training of trainers)**; including mobilization of interest among flower producers. Technical topics should include field recognition of different quarantine flower pests (first line diagnostics), scouting techniques, design and systematic data analysis techniques, ways to implement, reporting, including roles of public sector (DCP) specialists as auditors and those of the private sector, such as the scouts in the flower farms. Participants: 10 participants: five flower farms scouts, crop protection specialists, quality controllers and five staff members of DCP Duration: 5 days	Number of relevant participants from both the private and public sector. Training programme. Improved knowledge and skills related survey and monitoring systems and practical aspects of its implementation.	List of participants. Educational materials. Course evaluation. Report participants. On-the-job assessments.	Participants are willing to learn and are motivated to increase relevant knowledge and skills. Flower growers / DCP provide enough staff time for training.

	Project description	Measurable indicators	Sources of verification	Assumptions and risks
	By: Expert from NPPS (same as under 3.1 and 3.2) and additionally an ICIPE and KEPHIS trainer. Location: Entebbe			
Activity 3.4	**Develop curriculum for specific phytosanitary survey and monitoring training and implement training.** To be developed by the task force in concert with the trainees of the specialized training of quarantine pest surveys (activity 3.3). The training will be implemented for crop protection specialists and scouts of companies who did not attend the training under 3.3. By: trained DCP staff and company scouts (under training 3.3) supervised by expert from ICIPE and KEPHIS. For: About 20 company scouts or other company crop protection specialists. Duration training: 5 days Location: Uganda	Course curriculum. Number of relevant participants from the private sector. Training programme. General improved knowledge and skills related to survey and monitoring systems and particularly scouting for quarantine pests and its implementation.	Curriculum and course programme and educational materials. List of participants. Course evaluation. Reports by participants. On-the-job assessments. Report by ICIPE and KEPHIS experts.	Participants of activity 3.3 and members of the task force are willing to cooperate and invest time in curriculum development. Participants are willing to learn and are motivated to increase relevant knowledge and skills. Flower growers provide enough staff and staff time for training.
Activity 3.5	**Procurement of surveillance equipment** (pheromone traps, sticky traps, etc.). By: DCP and CABI Africa in consultation with the NPPS expert (of activity 3.1), trainers (of activity 3.3) and taskforce (activity 3.2).	Equipment available and in working condition.	Observations in the greenhouses on the installation and use.	Timely delivery.
Activity 3.6	**Implementation of specific surveys and analysis of survey results and communication of outcomes** to export growers, international phytosanitary organization (e.g. IPPC and IAPSC) and NPPS.	Developed survey and monitoring system is implemented and analyzed by DCP staff.	Survey and monitoring reports on its implementation. Reports of company scouts. Supervision reports by DCP.	Flower growers are willing to cooperate. Flower growers / DCP provide enough staff time. DCP provides logistic

	Project description	Measurable indicators	Sources of verification	Assumptions and risks
	By: DCP, company scouts with support of KEPHIS / ICIPE Location: Uganda		Progress reports. Reporting to IPPC, IAPSC and NPPS.	facilities. Company scouts and DCP staff involved in survey and monitoring willing to cooperate and make the necessary efforts for its implementation.
Activity 3.7	**Technical assistance on the development and maintenance of a central database with phytosanitary data and information on quarantine pest populations and their developments in the greenhouses.** Together with an IT expert, an electronic pest surveillance system, e.g. like Mobiprise has to be set up and pilot implementation has to start as cooperation between DCP, UFEA and a couple of flower farms. Such a database could be basis and a prelude for an electronic export certification system, such as CLIENT. By: DCP, growers and UFEA Duration: 5 expert days Location: Uganda	A simple, practical and operational database developed. Data and information are loaded in database and shared between relevant stakeholders.	Data and information in database. Data checked by stakeholders. An effective database	Staff, both from public and private sector, willing to change their working to habits and to use the electronic system. Network / internet options /services available sufficient for
Expected result 4	Improved awareness at national levels of inspection and certification systems in the horticulture sector as a whole (outside the flower industry) and recommendations on expansions of the results to other horticulture sub-sectors are made.	Implementation of concluding workshop and its proceedings.	Final report of project, its results and options to use it in other sectors of horticulture. Seminar report. List of attendants	Limited project results that are not translatable to other horticultural sectors.
Activity 4.1	**Organization of a final seminar** by DCP and UFEA at the end of the project. Inputs from main stakeholder and those involved in the project. The seminar should also cover a component geared at dissemination of the results to stakeholders in other sectors of export horticulture. Additionally the seminar should aim at awareness	Number of seminar participants from different stakeholders in the floriculture sector and other relevant representatives. Inputs in seminar by various stakeholders.	List of participants. Seminar report.	No tangible project results. Representatives of different stakeholders willing to participate actively.

	Project description	Measurable indicators	Sources of verification	Assumptions and risks
	raising towards decision makers and/or politicians on the importance of the flower industry and significance and benefits of a well-functioning plant health system. Finally the workshop should include lessons learnt that can be used for implementation of phytosanitary issues in the National SPS Plan. Participants: 40 participants Duration: 1 day phytosanitary inspections of By: DCP, UFEA, CABI Africa and others involved in the project, like ICIPE or KEPHIS Location: Entebbe / Kampala			Some representatives of different stakeholders willing to provide inputs.
Activity 4.2	**Compile proceedings of the seminar and publish.** Publish project results related to the implementation of all the relevant phytosanitary measures related to export of floriculture produce. By: DCP with assistance from UFEA and CABI Africa.	Seminar proceedings and other specific results written.	Seminar proceedings and other specific results published.	No motivations to publish as the project results were disappointing.

APPENDIX 2: Work Plan[2]

		Year 1												Year 2											
Activity	**Responsibility**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1.1 Initiation workshop	DCP, UFEA, CABI, IPPC, NPPS																								
1.2 DCP/MAAIF New staff recruited	DCP																								
1.3 Review and update procedures	DCP and NPPS																								
1.4 Study tour to Kenya	DCP, UFEA NPPS, KEPHIS, ICIPE																								
1.5 Specialized training	DCP, CABI, KEPHIS, ICIPE																								
1.6 Developing Operational Manuals	DCP																								
1.7 Computer Export Certification system	DCP, KEPHIS, Companies, FHL																								
2.1 Dialogue on Inspections	DCP, FHL, KEPHIS																								
2.2 Procure and setup Airport Laboratory **office**	DCP, FHL, UFEA																								
2.3 Technical Assistance/ Implementation	DCP/NPPS																								
3.1 Design surveys	DCP/NPPS																								
3.2 Task Force Surveys	DCP/NARO, Growers, NPPS																								
3.3 Specialized Training (Training of trainers)	DCP,UFEA,NPPS,KEPHIS,ICIPE																								
3.4 Developing Curriculum and training surveys	DCP, KEPHIS,ICIPE and Growers																								

		Year 1												Year 2											
Activity	**Responsibility**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
3.5 Procure survey equipment	DCP, UFEA, NPPS																								
3.6 Implementation and analysis survey	DCP, UFEA, growers, KEPHIS an UFEA																								
3.7 Technical assistance Central database	DCP, UFEA																								
4.1 Final Seminar	DCP, UFEA, CABI,UFEA, ICIPE and KEPHIS																								
4.2 Publish Proceedings of seminar and other project Results	DCP, UFEA, CABI																								
PMC meetings	CABI, DCP, UFEA																								
Inception report	CABI, DCP, UFEA																								
Reporting to the Donor	CABI																								

[1]The figure represent months of the calendar year and shaded to indicate which the activity will take place.
[2] Obviously all in concert with Implementing Organisation, CABI Africa

APPENDIX 3: Terms of Reference for national key staff involved in the project

Terms of reference for Country Project Coordinator (Strengthening the Phytosanitary Capacity for the Floricultural Sector in Uganda)

Under the overall supervision of the Regional Coordinator, the national coordinator will undertake the following;

- Organise and supervise the planned activities in the country (workshops, training programmes);
- Identify constraints and gaps in the implementation of the activities and analyse, prioritise and propose solutions;
- Carry out other duties assigned by the regional coordinator from time to time; and
- Write detailed monthly reports of activities undertaken, and progress made under the project and submits to the regional coordinator and the head of department.

Qualifications and Experience required:

- An appropriate degree in Agriculture (Plant Protection and relevant training in Entomology);
- Prior experience in application of Phytosanitary measures and use of CLIMEX Simulation to predict pest outbreak; and
- Be conversant with management donor funded projects.

Appendix 6: Detailed budget (USD$)

Activity		Specifications	Units	No	cost/unit	Total	STDF	Uganda
General local project coordination DCP and UFEA		3 days / month	days	72	150	10800	10800	
	CABI PMC meeting preparation & attendance	For 6 meetings	days	50	600	30000	30000	
	DSA CABI project manager	6x: 3 days DSA	DSA	18	150	2700	2700	
	tickets CABI project manager	6x airfare economy	tickets	6	500	3000	3000	
PMC Meetings (6x)								
	Attendance Ugandans	6 members, 6 meetings						
	DSA PMC members	6x 2 days DSA	DSA	72	50	3600	3600	
	Local travel cost PMC members	6 x 6 local travel cost	tickets	36	50	1800	1800	
	Salaries Ugandans	Local salary costs 6 persons	days	72	50	3600		3600
	Secretarial support DCP/UFEA	6x 5 days	days	30	50	1500	1500	
	Professional support DCP/UFEA	6x 5 days	days	30	100	3000	3000	
	Meeting room	6x rent	rent	6	150	900	900	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	6	350	2100	2100	
	Lunches and coffee breaks	(6 + 1) members x 12	lunch/coffee	84	20	1680	1680	
Activity 1.1 General Project Initiation workshop								
	Travel costs participants	20 x local travel costs	tickets	20	50	1000	1000	
	Salaries Ugandans	Local salary costs 20 persons	days	40	50	2000		2000
	Meeting room	Rent	rent	1	300	300	300	
	Secretarial support DCP/UFEA	10 days	days	10	50	500	500	
	Professional support DCP/UFEA	15 days	days	15	100	1500	1500	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	650	650	650	
	Lunches and coffee breaks	25 part. x 2 days	lunch/coffee	50	20	1000	1000	
	CABI DSA	2 days DSA	DSA	2	150	300	300	
	CABI travel cost	1 x airfare economy	tickets	1	500	500	500	
	2 External facilitators: 2 experts from abroad (IPPC & NL)							
	Ext. Fac. Preparation, travel, participation	2 x 6 days fees (average)	days	12	1250	15000	15000	
	External Fac. Travel cost	2 x airfare economy (average)	tickets	2	2500	5000	5000	
	External Fac. DSA	2 x 2 days DSA	DSA	4	150	600	600	

	External Fac. Visa	Visa 2x	Visa	2	75	150	150	
Activity 1.3 Review & update DCP's procedures								
	Expert fees	10 days fees	days	10	1250	12500	12500	
	Expert DSA	7 days	days	7	150	1050	1050	
	Expert travel cost (+ 1 visa)	1 airfare economy & 1 x visa	ticket	1	1500	1500	1500	
	Transport for visits	Fuel	Lump sum	1	200	200	200	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	100	100	100	
	Salaries Ugandans	Local salary costs 3 staff	days	21	50	1050		1050
Activity 1.4 Study tour Kenya & support NL expert								
	Costs participants	10 x 7 days DSA	DSA	70	300	21000	21000	
	Tickets: Entebbe - NBI, v.v.	10x airfare economy	tickets	10	500	5000	5000	
	Ticket NL expert AMS-NBI-vv	1x airfare economy + 1 x visa cost	ticket	1	1500	1500	1500	
	Local transport cost in Kenya	Transport abroad 7 days	days	7	150	1050	1050	
	Salaries Ugandans	Local salary costs 10 persons	days	70	50	3500		3500
	Costs institutions abroad	5 days fees Kenya	days	5	1000	5000	5000	
	Fees NL expert in Kenya	7 days fees NL expert	days	7	1500	10500	10500	
	DSA NL expert in Kenya	1 x 7 days DSA	days	7	300	2100	2100	
	Secretarial support preparation	10 days	days	10	50	500	500	
	Professional support preparation	10 days	days	10	100	1000	1000	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	400	400	400	
Activity 1.5 Specialised phytosanitary training Kenya								
	Registration	10 participants	fee	10	40	400	400	
	Tuition fee two week course/participant	10 participants	fee	10	600	6000	6000	
	Lectures and inputs by ICIPE experts	4 days fees	fee	4	500	2000	2000	
	Full board KEPHIS for 12 days	10 participants	board	10	800	8000	8000	
	Daily allowance for 12 days	10 days x 12 participants	DSA	120	50	6000	6000	
	Tickets Entebbe - NBI, v.v.	10x airfare economy	tickets	10	500	5000	5000	
	Salaries Ugandans	Local salary costs 10 persons	days	100	50	5000		5000
	Secretarial support preparation	5 days	days	5	50	250	250	

	Professional support preparation	5 days	days	5	100	500	500	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	150	150	150	
Activity 1.6 Development operational manual								
	DCP staff	Local staff time, 20 days	days	20	50	1000		1000
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	100	100	100	
Activity 1.7 Development computer export system								
	8 days expert fees	8 days fees	days	8	1500	12000	12000	
	Expert ticket Europe - Uganda - vv	1x airfare economy	ticket	1	1500	1500	1500	
	Expert DSA Entebbe	5 days DSA	DSA	5	150	750	750	
	Visa	1x Visa	visa	1	75	75	75	
	Equipment, computer, internet etc	List of equipment	List	1	3000	3000	3000	
	Salaries Ugandans	Local staff time	days	25	50	1250		1250
	Transport	local transport	Lump sum	1	250	250	250	
	Secretarial support preparation	5 days	days	5	50	250	250	
	Professional support preparation	10 days	days	10	100	1000	1000	
Activity 2.1 Dialogue on improvements								
	DCP, UFEA, Fresh Handling, growers	Local staff time, 25 days	days	25	50	1250		1250
	Local travel costs	20 x local travel	tickets	20	50	1000	1000	
	Secretarial support preparation	10 days	days	10	50	500	500	
	Professional support preparation	20 days	days	20	100	2000	2000	
Activity 2.2 Procurement airport laboratory								
	Laboratory room	Rent 18 months	month	18	200	3600	1800	1800
	Simple tools and equipment		list	1	8000	8000	8000	
	Additional equipment Entomology Lab	Entomology lab	list	1	3500	3500	3500	
	Secretarial support preparation	5 days	days	5	50	250	250	
	Professional support preparation	10 days	days	10	100	1000	1000	
	Salaries Ugandans	Local staff time	days	20	50	1000		1000
Activity 2.3 Technical assistance on practical aspects		1 NL expert 5 days + 2 days travel + 1 day preparation						
	Expert fees	8 days	days	8	1500	12000	12000	
	Expert DSA	5 days	days	5	150	750	750	

	Expert travel cost (+ 1 visa)	1 airfare economy + 1 x visa	ticket	1	1500	1500	1500	
	Transport for visits	Fuel	Lump sum	1	200	200	200	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	100	100	100	
	Salaries Ugandans	Local staff time (five staff)	days	25	50	1250		1250
Activity 3.1 Development phytosanitary survey		1 expert for 5 days + 2 days travel + 1 day preparation						
	Expert fees	8 days	days	8	1500	12000	12000	
	Expert travel cost	1x airfare economy	tickets	1	1500	1500	1500	
	Expert DSA	5 days	DSA	5	150	750	750	
	Visa	1x visa	Visa	1	75	75	75	
	Transport for visits	Fuel	Lump sum	1	200	200	200	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	100	100	100	
	Salaries Ugandans	Local staff time (3 staff)	days	20	50	1000		1000
Activity 3.2 Taskforce phytosanitary survey		1 expert for 3 days						
	Expert fees	3 days fees	days	3	1500	4500	4500	
	Expert DSA	3 days DSA	DSA	3	150	450	450	
	DCP, UFEA, growers	Local staff time, 25 days	days	25	50	1250		1250
	Local travel costs	20 days	tickets	20	50	1000	1000	
	Secretarial support preparation	10 days	days	10	50	500	500	
	Professional support preparation	20 days	days	20	100	2000	2000	
Activity 3.3 Quarantine pest surveillance training								
	Local travel cost	10x local travel trainees	tickets	10	50	500	500	
	Salaries Ugandans	Local salary costs 10 persons	days	50	50	2500		2500
	Fees experts NL	Expert fees NL	days	8	1500	12000	12000	
	Fees experts ICIPE & KEPHIS	8 days expert fees & 4 travel & prep	days	12	500	6000	6000	
	DSA Experts	13 days DSA expert	DSA	13	150	1950	1950	
	Visa NL expert	1x Visa	visa	1	75	75	75	
	Average air fares experts	3x airfare economy	tickets	3	850	2550	2550	
	Training venue	Rent training hall	rent	5	100	500		500
	Secretarial support preparation/impl	10 days	days	10	50	500	500	
	Professional support preparation/impl	15 days	days	15	100	1500	1500	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	250	250	250	

Activity 3.4 Develop training curriculum & implementation								
	Local travel cost	20x local travel trainees	tickets	20	50	1000	1000	
	Local salaries Ugandans	Local staff times	days	100	50	5000		5000
	Local salaries development curriculum	Local salary costs 20 persons	days	20	50	1000		1000
	Training venue	Rent training hall	rent	5	100	500		500
	Professional support preparation/impl	3 local trainers each 10 days	days	30	100	3000	3000	
	Secretarial support preparation/impl	10 days	days	10	50	500	500	
	KEPHIS / ICIPE expert fees	Fees, 7 days	days	7	500	3500	3500	
	Expert DSA	DSA 5 days	days	5	150	750	750	
	1 X air-fare expert NBI - Entebbe - vv	1 economy ticket	tickets	1	500	500	500	
Activity 3.5 Procurement surveillance equipment								
	Surveillance and monitoring equipment		List	1	3500	3500	3500	
	Secretarial support preparation	5 days	days	5	50	250	250	
	Professional support preparation	10 days	days	10	100	1000	1000	
	Salaries Ugandans	Local Salary costs	days	15	50	750		750
Activity 3.6 Implementation of surveys and analysis								
	Salaries Ugandans	Local staff costs	days	30	50	1500		1500
	Transport	Local transport	Lump sum	1	500	500	500	
	Secretarial support implementation	10 days	days	10	50	500	500	
	Professional support implementation	30 days	days	30	100	3000	3000	
	Fees expert KEPHIS / ICIPE	5 days + 2 days travel	days	7	500	3500	3500	
	Expert DSA	5 days	days	5	150	750	750	
	Expert airfare NBI-Entebbe-vv	1x airfare economy	ticket	1	500	500	500	
Activity 3.7 TA & development survey database								
	Fees expert	8 days fees	days	8	1000	8000	8000	
	Ticket airfare	1x airfare economy	ticket	1	1000	1000	1000	
	DSA expert	5 days DSA	DSA	5	150	750	750	
	Visa	1x Visa	visa	1	75	75	75	
	Equipment, computer, internet etc	Local salary costs	List	1	3500	3500	3500	

	Salaries Ugandans	Local staff costs	days	30	50	1500		1500
	Transport	Local transport	Lump sum	1	250	250	250	
	Secretarial support	5 days	days	5	50	250	250	
	Professional support	10 days	days	10	100	1000	1000	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	250	250	250	
Activity 4.1 Final seminar								
	Local travel costs participants	40x local travel costs	tickets	40	50	2000	2000	
	Salaries Ugandans	Local staff costs	days	40	50	2000		2000
	Meeting room	Rent	rent	1	200	200	200	
	Secretarial support	5 days	days	5	50	250	250	
	Professional support	10 days	days	10	100	1000	1000	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	500	500	500	
	Lunches + coffee breaks	45 participants	lunch/coffee	45	20	900	900	
	CABI and Kenyan expert	2 (1 CABI staff & 1 Kenyan expert)						
	Fees Kenyan expert	3 days fees (average)	days	3	1000	3000	3000	
	DSA CABI and Kenyan experts	2 days DSA	DSA	4	150	600	600	
	Tickets CABI and Kenyan experts	2x airfare economy	tickets	2	500	1000	1000	
Activity 4.2 Proceedings final workshop & (online) brochures on results								
	Salaries Ugandans	Local staff costs	days	25	50	1250		1250
	Editorial support	5 days fees	days	5	750	3750	3750	
	Secretarial support	5 days	days	5	50	250	250	
	Professional support	10 days	days	10	100	1000	1000	
	Tel., fax, photocopies	Tel., fax, photocopies	Lump sum	1	550	550	550	
SUBTOTAL						373480	332030	41450
Contingencies: 5%						18674	16601.5	2072.5
TOTAL						392154	348631.5	43522.5
Overhead	CABI Implementation	10%					34863.15	
TOTAL (including Overhead)							383495	

APPENDIX 7. Lists of Equipment

List Activity 2.2: Airport Laboratory / Office

	Item	No.	Item price US$	Total US$
1.	Knife	5	20	100
2.	Glove	10	10	100
3.	Hand lens	5	30	150
4.	Thermometer	2	25	50
5.	Stereoscope	1	2,500	2,500
6.	Microscope slides	10 pkts	15	150
7.	Cover slips	5 pkts	10	50
8.	Petri dishes (plastic)	360	1	360
9.	Dissecting pins	1 set	25	25
10.	Sample bottles	25	1	25
11.	Cool box	2	25	50
12.	Ethanol	1 x 2,5 l	25	25
12.	Refrigerator	1	750	750
13.	Reflection jackets	5	10	50
14.	Laboratory overcoats	5	50	250
15.	Winter coats	2	100	200
16.	Respiration masks	4	50	200
17	Computer and accessories	1	1,500	1,500
18	Digital camera	1	400	400
19.	Miscellaneous		1065	
TOTAL			**8,000**	

List Activity 2.2.: Additional equipment entomology diagnostic laboratory

Entomology

	Item	No	Item price US$	Total US$
1.	Insect cabinet	10	150	1,500
2.	Killing jar	25	10	250
3.	Pinning block	5	50	250
4.	Insect pins	5 pkts	20	100
5.	Insect box	10	50	500
6.	Spreading board	2	50	100
7.	Dissecting kit	2	50	100
8.	Forceps, fine pin	5	15	75
9.	Acid free adhesive tape	5 pkts	5	25
10	Parafilm	1 pkt	50	50
11	Miscellaneous		550	
	TOTAL			**3,500**

List Activity 1.7. Database certification system

	Item	NO.	**Item price US$**	**Total US$**
1.	Computer	1	1,500	1,500
2.	Printer / scanner	1	250	250
3.	External hard disk	1	200	200
4.	Internet	1	200	200
5.	Special software	1	250	250
	Miscellaneous		600	
TOTAL			**3,000**	

List Activity 3.5. Surveillance tools/equipment

	Item	**No**	**Item price US$**	**Total US$**
1.	Traps for pheromones, various types	25	25	750
2.	Lures with pheromones	25	50	1,250
3.	Sticky insect traps, various types	100	5	500
4.	Hand lens	10	30	300
5.	Miscellaneous			700
TOTAL			**3,500**	

List Activity 3.7. Development survey database

	Item	**No**	**Item price US$**	**Total US$**
1.	Computer	1	1,500	1,500
2.	Printer / scanner	1	250	250
3.	External hard disk	1	200	200
4.	Internet	1	200	200
5.	Special software	1	1000	1000
	Miscellaneous		350	350
TOTAL			**3,500**	

APPENDIX 8. ABBREVIATIONS AND ACRONYMS

ADC	Agribusiness Development Centre
APEP	Agricultural Productivity Enhancement Programme
ASPS	Agriculture Sector Programme Support
BAC	Bukalasa Agricultural College
BSMD	Business Services Marketing Development
CAA	Civil Aviation Authority
COPE	Centre of Phytosanitary Excellence
DANIDA	Danish International Development Assistance
DCP	Department of Crop Protection (of MAAIF)
DFID	Department for International Development (UK)
DTIS	Diagnostic Trade Integration Studies
EAC	East African Community
EC	European Commission
EIF	Enhanced Integration Framework
EU	European Union
EUREPGAP	Euro-Retailers Produce Working Group Good Agricultural Practices
FAO	Food and Agriculture Organisation of the United Nations
FHL	Fresh Handling Ltd
GAP	Good Agricultural Practices
GLOBALGAP	Global Good Agricultural Practices (formerly EUREPGAP)
GoU	Government of Uganda
IAPSC	African Union's Inter African Phytosanitary Council
IDEA	Investment in Developing Export Agriculture Project
IF	Integrated Framework
ILO	International Labour Organisation
IPM	Integrated Pest Management
IPPC	International Plant Protection Convention
ISPM	International Standards for Phytosanitary Measures
KEPHIS	Kenya Plant Health Inspectorate Service
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MMU	Mountain of the Moon University
MPS	"Milieu Project Sierteelt" (*Environmental Project Ornamentals)*
MTTI	Ministry of Tourism, Trade and Industry
MU	Makerere University
NARO	National Agricultural Research Organisation
NDP	National Development Plan
NPPO	National Plant Protection Organisation
NPPS	Netherlands Plant Protection Service (presently part of the "new VWA")
PCE	Phytosanitary Capacity Evaluation
PEAP	Poverty Eradication Action Plan
PMC	Project Management Committee
PPG	Project Preparation Grant
PRA	Pest Risk Analysis
QUISP	Quality Infrastructure and Standards Programme
SPS	Sanitary and Phytosanitary
STDF	Standards and Trade Development Facility
ToR	Terms of Reference
UFA	Uganda Floricultural Association
UFEA	Uganda Flower Exporters Association
UNIDO	United Nation Industrial Development Organisation
USAID	United States Agency for International Development
VWA	Food and Consumer Product Safety Authority (the Netherlands)
WB	World Bank
WSSD	World Summit on Sustainable Development
WTO	World Trade Organisation