

## STDF PROJECT GRANT APPLICATION FORM

The Standards and Trade Development Facility (STDF) provides grants to eligible organizations (up to a maximum of US\$600,000) for projects that seek to: (i) enhance capacity to meet official or commercial requirements in the sanitary and phytosanitary field and so facilitate market access; and (ii) better protect human and animal health and plants against disease and pest hazards related to cross border trade. Projects should have a duration of two years or less.

Complete details on eligibility criteria and other requirements are available in the *Guidance Note for Applicants* on the STDF website ([www.standardsfacility.org](http://www.standardsfacility.org)). Please read the *Guidance Note* before completing this form.

This form should be completed by eligible organizations interested in applying for a project grant from the STDF. It is designed to provide the STDF Working Group, which makes decisions on STDF funding, with the information required to make a decision on your application. This form should be completed in English, French or Spanish.

<b>Project Title</b>	<b>Establishment of a Regional Virtual Food Inspection School in Central America and Dominican Republic</b>
<b>Objective</b>	To provide common, baseline technical and attitudinal training for food inspectors in the eight countries, to allow modernization and mutual recognition of national food inspection systems and thus contribute to the region's development through trade facilitation and improvement in the health of consumers from healthier, safer foods.
<b>Budget requested from STDF</b>	US\$ <b>977.643,00</b>
<b>Total project budget</b>	US\$ <b>1.461.876,50</b>
<b>Full name and contact details of the requesting organization(s)</b>	Ministerio de Agricultura y Ganadería Costa Rica (on behalf of Belize, Costa Rica, Dominican Republic, Guatemala, El Salvador, Honduras, Nicaragua, and Panama.
<b>Full name and contact details of contact person for follow-up</b>	Ms. Tania López Vice Minister of Agriculture Ministerio de Agricultura y Ganadería Costa Rica Tel. (506) 22327715 E-mail: <a href="mailto:tlopez@mag.go.cr">tlopez@mag.go.cr</a>

## **I. BACKGROUND**

### **1. Food inspection situation and issues**

Food inspection systems are used to ensure that food and food production systems meet the necessary requirements to protect consumers from food-borne hazards. Furthermore, mutually recognized food inspection protocols play an essential role in facilitating trade in food products, regionally and internationally, since adequate inspection is a major element in achieving equivalency agreements covering national food safety control systems. Therefore, food inspection is an essential component of regional food safety harmonization processes.

If inspection systems are to yield optimal results, compatible with consumer protection and trade facilitation, both their design and implementation must be based on a series of principles, such as objective risk assessment—appropriate to the circumstances—and the use of risk assessment methodologies consistent with internationally accepted criteria. Modern food inspection systems must be based on process and risk, have to be fit for purpose, and must have clear conformity assessment procedures, all of which are possible provided there are properly trained human resources.

The countries of the Central American region and Dominican Republic have official food inspection systems administered mainly by the ministries of agriculture and the ministries of public health, which are responsible for establishing and enforcing standards. The institutions involved carry out their work via central and regional divisions or units. In some countries, such as Costa Rica, Panama, and the Dominican Republic, other public agencies also have responsibilities in food inspection.

The ministries of agriculture, which usually have different units for inspection of foods of animal or plant origin, are generally responsible for the inspection and control of unprocessed and semi-processed foods for domestic consumption and export. In the case of animal products and by-products intended for export, official inspectors are assigned specifically to cattle, poultry, and hog slaughter facilities. Inspections of fishery products are also carried out at piers and reception and collection centers.

Generally speaking, the ministries of health are in charge of the inspection and control of all processed foods marketed within the countries.

In **Belize**, the Belize Agricultural Health Authority (BAHA) is responsible for inspections of meat and plants that process dairy, aquaculture and fishery products, juices, etc. The Ministry of Health, in turn, handles inspections in supermarkets, meat shops and restaurants, and also inspects meat in slaughter facilities.

In **Costa Rica**, the National Animal Health Service (SENASA), a division of the Ministry of Agriculture, has a Directorate for the Safety of Products of Animal Origin (DIPOA) that is responsible for regulating and controlling the safety of all foods of animal origin (both those intended for domestic consumption and for export). In the case of fishery products, the Costa Rican Institute of Fisheries and Aquaculture (INCOPECA) assists SENASA with its inspection tasks. The State Plant Health Service (SFE), another division of the Ministry of Agriculture, controls pesticide residues in fresh vegetables and promotes Good Agricultural Practices. The Ministry of Health verifies compliance with the standards governing processed

foods and those prepared by food services, which cover the various stages of production, handling, storage, distribution, and marketing.

The Ministry of Economy, Industry and Trade (MEIC) is responsible for inspections in the domestic market, particularly of pre-packed products sold in retail outlets. Another agency involved in food inspection is the National Production Council (CNP), an autonomous institute that inspects and analyzes a number of agricultural products (horticultural products and basic grains) that are subject to technical standards. Since a number of agencies are involved in the verification process, there are Regulations governing the Joint Verification of Compliance with Technical Regulations.

In **El Salvador**, the Ministry of Agriculture and Livestock has two units that carry out inspections. The Division for the Inspection of Products of Animal Origin, a unit of the General Livestock Directorate, is responsible for inspecting industrial plants that produce dairy products for the domestic and export markets, meat in pig, chicken and cattle slaughter facilities (pork, sausages and chicken destined for the domestic and export markets), eggs (for export) and fishery and aquaculture products (for the domestic and export markets). The Division for the Safety of Foods of Plant Origin, a unit of the General Plant Health Directorate, inspects fresh fruits and vegetables under a voluntary inspection system, since there is no official safety or quality standard. It also carries out postharvest quality inspections of basic grains (corn, beans, sorghum and rice), on a voluntary basis, and handles training in the postharvest management of grains.

The Food Hygiene Department of the Environmental Health Unit of the Ministry of Public Health and Social Welfare carries out inspections of premises that require a permit to operate (food processors, restaurants).

In **Guatemala**, the Safety Directorate of the Ministry of Agriculture, Livestock and Food (MAGA) controls and monitors the safety of non-processed foods of animal and plant origin (destined for the domestic and export markets). At the Ministry of Public Health and Social Welfare (MSPAS), the Department of Food Regulation and Control is responsible for the registration and control of national and imported processed foods. In addition, every municipality in the country has a Health Center that inspects food sold in small shops and by street vendors, as well as prepared foods.

In **Honduras**, the National Agricultural Health Service (SENASA) of the Secretariat of Agriculture and Livestock has a Food Safety Division (DIA). The DIA is responsible for regulating and inspecting, certifying and approving the operation of slaughter facilities and plants that pack, store and process locally produced and imported meat, aquaculture, fishery, dairy, and beekeeping products, as well as fruits and vegetables and animal feed factories. The General Directorate for Health Regulation at the Secretariat of Health is responsible for the registration and control of locally produced and imported processed foods.

In **Nicaragua**, the General Directorate for Agricultural Health and Protection at the Ministry of Agriculture and Forestry (MAGFOR) is in charge of supervising and conducting official health inspections of plants that process meat, poultry, fisheries, aquaculture, dairy and vegetable products. It also verifies the safety systems of food processing plants under the inspection system of the Directorate for Agrifood Safety.

The Directorate for Food Regulation at the Ministry of Health supervises and inspects plants that require sanitary permits and certifies the GMPs of food establishments (industry,

distributors, markets, supermarkets, grocery stores, among others). Through its Local Integrated Health Care System (SILAIS) and Health Units, the ministry inspects food establishments (industry, distributors, markets, supermarkets, grocery stores, canteens, restaurants, among others).

In **Panama**, the National Directorate for Animal Health (DINASA) at the Ministry of Agricultural Development (MIDA) is responsible for regulating and controlling the safety of foods of animal origin at the primary production level; the control of slaughter facilities is complemented by the Ministry of Health. The Plant Health Directorate (DINASAVE) controls pesticide residues in fresh vegetables and promotes traceability and Good Agricultural Practices.

The Ministry of Health's Food Protection Department is responsible for the safety of food for human consumption prepared, sold, and distributed throughout the country, and for export. It is also in charge of health permits and hygiene inspections, and the food safety control.

In addition to the MIDA and the Ministry of Health, Panama has a Food Safety Authority (AUPSA), a public entity created to ensure compliance with, and the enforcement of, the country's food safety laws and regulations governing imported foods. It carries out inspections at entry points such as ports and airports, and checks the official documentation, identity, and foods in general.

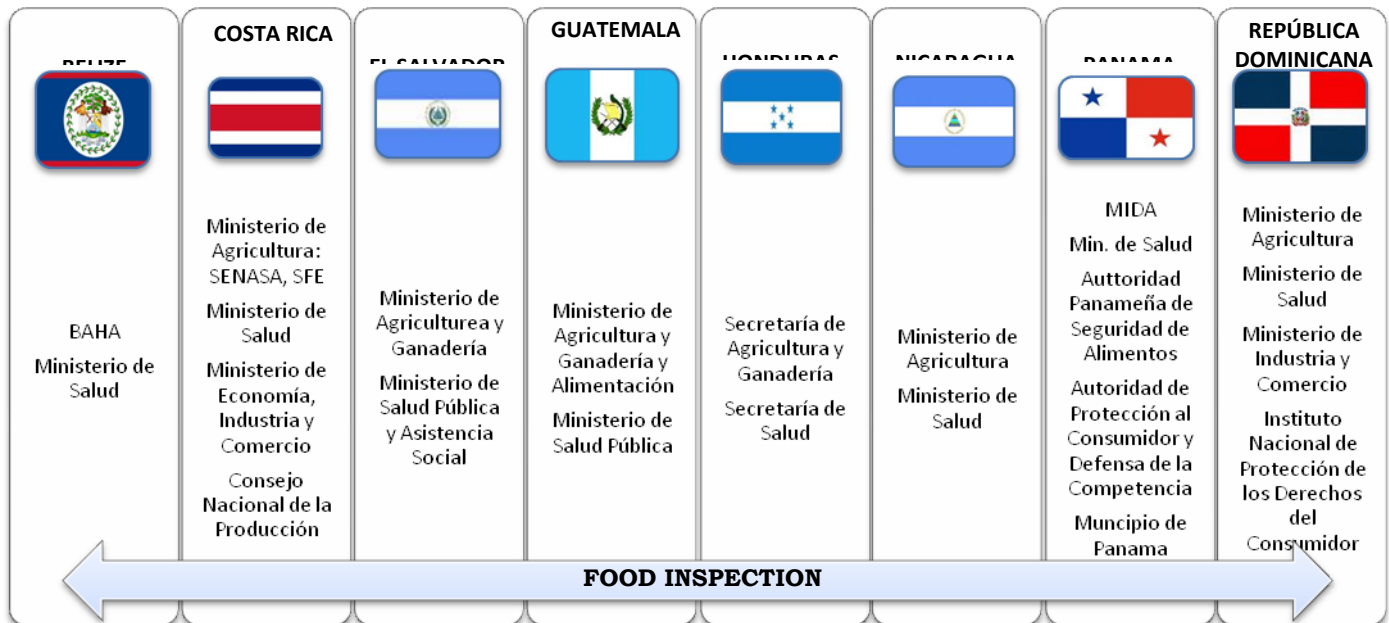
Another entity involved in food inspection in Panama is the Authority for the Protection of the Consumer and the Defense of Competitiveness (ACODECO), which operates under the aegis of the Ministry of Trade and Industry. This agency verifies the commercial information offered to consumers related to all national and imported products, such as their expiration date, net content, and country of origin.

The Municipal Government of Panama City works at the local level and in the municipal markets.

In the **Dominican Republic**, the Ministry of Public Health and Social Welfare is responsible for the control of food and beverages for human consumption throughout the country. At the Ministry of Agriculture, the Department for Agrifood Safety (DIA) is responsible for the control and inspection of agricultural products in the primary production and processing stages. The Animal Health Division of the General Livestock Directorate (DIGEGA), in turn, is in charge of the health and hygiene of foods of animal origin during the primary production phase. The Ministry of Industry and Trade and the National Institute for the Protection of Consumer Rights (PROCONSUMIDOR) are also involved in food inspection.

Figure 1 presents the main institutions involved in food inspection in each country of the region.

**Figure 1**  
**Institutions involved in food inspection in the countries of the region**



## 2. Links with national development strategies and policies

The “Regional Food Inspectors School” concept envisioned in the present project is consistent with the Central American Agricultural Policy (PACA, for its name in Spanish) and the process of the Central American Customs Union, aimed at facilitating the application of harmonized food safety inspection protocols and control standards and obtaining the recognition of trading partners.

Regional harmonization efforts related to food safety conducted in compliance with PACA objectives have been many and continuous. This work has been undertaken by a “Sanitary and Phytosanitary Measures Round Table” (SPS Table), within the ongoing process leading to the Central American Customs Union (Guatemala, El Salvador, Honduras, Nicaragua, and lately, Panama). The SPS Table has a full agenda comprising such work as development of harmonized technical regulations for processed foods, non-processed foods, fruits, quarantine post operation, etc. Food inspection, however, has not yet been included in the food safety harmonization process. The food inspectors school, therefore, will contribute an essential component to the entire regional food safety harmonization scheme: a cadre of food inspectors having the same food safety knowledge baseline, talking the same technical language, inspecting foods using the same modern techniques, and becoming themselves promoters of change regarding food safety in the region. Such a body of inspectors will also provide a receptive audience for further regional capacity building in areas of food safety, and potentially lead to the achievement of equivalency agreements on food safety control systems within the region and even with other commercial partners outside the region.

At the national level, in addition to Costa Rica, which approved a national policy on food safety in 2010, and as a result of a recently concluded FAO project, most of the other countries in the project are seriously engaged in modernization of their food safety

legislation. The food inspection school, by training a new generation of food inspectors, will reinforce this trend and contribute to accelerate not only the regulatory modernization process but the operational aspects as well.

### **3. Past, Ongoing or Planned Assistance**

The region was a beneficiary of project STDF 108: “Development of sustainable institutional capabilities in the countries of the Americas to consolidate their active participation in the SPS Committee and promote implementation of the SPS Agreement” (2008-2010), which was implemented with the assistance of the Inter American Institute for Cooperation on Agriculture (IICA). The project resulted in capacity building across the region in such issues as development of phytosanitary hazard profiles, risk assessment (microbiological and chemical contaminants in foods), risk communication, good practices for participation in SPS for a (Codex, SPS Committee, IPPC), operation manual for national Codex committees, auditing of notification procedures, national information management systems for Codex, etc., and various manuals that are available as international public goods. The project also assessed the SPS system in each country, developed SPS agendas for all countries in the region and for the region as a whole.

In addition, the region benefitted from a FAO TCP project (2008-2010) that assessed the food safety control systems in each country. The results of the project and recommendations for each country are not publicly available.

A project on “Promotion of the Participation of the Americas in Codex Committee meetings” has been implemented jointly by IICA and the United States Department of Agriculture (USDA) since 2009. All countries in the region have benefitted from the project at some point, but the process is highly competitive and responds to the merits of the justification presented by national Codex committees on the need of their country to participate in selected Codex committees.

An ongoing project (PROMEFRUT) on development of the fruit production sector, funded by the Inter American Development Bank, has resulted in the adoption of harmonized protocols for importation of planting vegetative material.

In Nicaragua, the Ministry of Agriculture and Forestry, the National Agrarian University (UNA) and IICA/Nicaragua, with support from STDF/WTO, are currently implementing the “Market-Oriented Training Service on Standards Application (MOTSSA) Project.” The objectives of this initiative are: (1) To set up SPS training units specifically to provide high-quality professional training services through the national professional certification system; (2) to support the Ministries of Agriculture and other governmental institutions in developing training manuals, quality control, and internal auditing procedures as part of the trainer certification process; (3) to consolidate a replicable and sustainable certification model for trainers in specific SPS areas for the okra, beans and groundnuts value chains, these being export crops of great importance for Nicaragua's trade and rural development.

Another project on SPS, funded by the European Union, “Quality and Application of SPS Measures Support Program in Central America” (PRACAMS, for its name in Spanish) is about to commence. This 4-year project will focus on the development of a region-wide quality assurance and certification scheme and on harmonization of SPS measures application, with an emphasis on plant health. The project has a quality component that includes metrology and development of standards and norms; an SPS component that covers

risk analysis of plant pests and animal diseases, as well as food borne illnesses; a regional information system on plant pest, animal diseases, and food borne illnesses; development of regional plant pest and animal disease control and eradication programs, and development and maintenance of free areas. A third component provides training on SPS issues in support of the private sector. The project does not envision food inspection.

## **II. RATIONALE, JUSTIFICATION & OBJECTIVE**

### **4. Specific problem to be addressed**

Food inspection in the Central American countries and the Dominican Republic is carried out by various official agencies, which makes close coordination among them important to ensure food safety throughout the food chain. Although there are legal frameworks that establish the responsibilities of the various entities, in some cases actions are duplicated, whereas in others there are no controls in certain parts of the food chain. Some countries have mechanisms to facilitate internal coordination of food inspection and thus ensure food safety control without hindering production or commercial activities.

Food safety control in primary production is an essential aspect of inspection in the food chain. In particular, control of the safety of plant-based products is one of the biggest challenges in the region. Plant health departments usually focus their efforts on the control of agrochemical residues, in some cases operating without the legal framework required to promote good agricultural practices in the countryside in an integrated manner. Urgent action is needed to address this situation and ensure that the citizens of these countries have access to healthy and safe vegetable products, especially fresh ones. While the market for exports of fresh vegetables and fruits is governed mainly by private standards, special attention should be paid to the U.S. Food Safety Modernization Act, which calls for the regulation of good agricultural practices. Unless the official agencies strengthen their capabilities, this will have a negative impact on the region's food exports.

In recent years, the ministries of agriculture of the region have been assigned new responsibilities in the area of food safety, to improve public health and competitiveness and facilitate trade, for which strategic modernization is required. Under the legal frameworks of some countries, the health authorities are permitted to outsource activities such as inspection processes and laboratory analyses, which they do by accrediting individuals or firms from the private sector. However, the countries have more experience with the accreditation of laboratory services, and only limited experience with the outsourcing of inspection services.

It should be noted that Costa Rica has a system for accrediting individuals, by means of specific agreements between the health authority (SENASA) and a given professional or technician, under which the latter is authorized to perform certain tasks. There is a procedure for accrediting veterinarians and other related professionals working in the private sector, so that their services meet the required standards and are official.

In Belize, Panama and the Dominican Republic, food inspection guidelines are established by the respective national regulations. In the case of Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, the countries involved in the process of developing the Central American Customs Union, food inspection guidelines are included in the Central American Technical Regulations (RTCA) and in the regulations of each country. Some countries also have mandatory technical standards, particularly for specific products.

With regard to regional regulations, *RTCA 67.01.33:06 Good manufacturing practices. General principles*, establishes standards for processed products manufactured and distributed by the food industries of the Central American countries. These regulations include a Good Manufacturing Practices Inspection Sheet for Processed Food and Beverage Factories. All plants requesting a health or operating permit must obtain a minimum score of 81 in the corresponding inspection.

Given the limitations of the regulations described above, the countries are preparing *RTCA 67.06.55:09 Good hygiene practices for unprocessed foods*, to cover the control of raw products that have not been modified physically, chemically or biologically in such a way as to alter their sensory characteristics—i.e., products that have only been subjected to processing for hygiene reasons or to remove parts that are inedible. This includes operations such as washing, peeling, disinfecting, chopping, milling, boning, bottling, freezing, scalding and ripening. These regulations are being revised considering the comments received through international consultation. In the case of applications for health or operating permits, regular checks or renewal or revalidation of permits and point of origin inspections, the final assessments must state that no critical non-conformities are detected. These regulations also establish that verification of compliance must be carried out by properly trained official inspectors or auditors, based on an up-to-date, harmonized training plan agreed by the countries, to ensure that it is done correctly. This training plan is not being carried out.

The countries also have *RTCA 67.04.50:08 Microbiological criteria for food safety*, which establishes the microbiological parameters for food safety and the acceptable limits for registration and surveillance in retail outlets. The standards are applicable to all foods for final consumption sold in retail outlets in the countries of the Central American region, but no organized inspection is conducted for compliance. Note that Panama is in the process of joining the Central American Integration System, so that the regulations established by the Central American Customs Union will soon apply to it.

Institutions with quality management systems in place, such as SENASA's Directorate for the Safety of Products of Animal Origin in Costa Rica and the AUPSA in Panama (responsible only for food imports), have procedures that standardize their inspections.

The diversity of national regulations established by the regulatory agencies has given rise to a wide variety of inspection instruments and procedures throughout the region. Although these instruments are usually based on Codex Alimentarius, it is difficult for the agencies to apply them effectively, achieve the objectives set and thereby facilitate trade. Therefore, although Central America has made progress with harmonization of food safety regulations at the regional level, there is no homogeneity regarding food inspection procedures in the countries. As a result, there is mutual distrust among countries as to the effectiveness of the other countries' food safety controls, something that works against trade facilitation.

#### **a) Number of inspectors**

Figure 2 shows the total number of official inspectors who work for the institutions involved in food inspection in each country, which in the case of Costa Rica includes the accredited inspectors. This number differs greatly among countries, with two of them, Belize and Guatemala, having the lowest. During the visit to Belize, it was pointed out that training a number of inspectors greater than the current one would offer the country an opportunity to increase its inspector force, while an extra cadre of trained individuals would also help reduce



the likelihood of their overall inspector force being eroded by attractive offers from private enterprise.

The numbers provided by Guatemala, on the other hand, are being confirmed and will be ascertained during a visit to the country in March 2012. It is likely that the low number (39) of inspectors reported through a questionnaire did not take into account other individuals who conduct inspection of food preparation and service establishments (restaurants) or cottage industries, performed by municipalities around the country.

In general, the amount of inspection work required in the countries, linked to national production and international trade, exceeds the human resource capabilities of the institutions involved, whose coverage at the national level is limited. In most of the countries food inspectors also have to perform other duties, limiting the time they can devote to inspection tasks. As already noted, Costa Rica has expanded the coverage of its animal food inspection service by accrediting private inspectors, who make up 79% of the total.

**Figure 2**  
**Food Inspectors in the Central American Region and the Dominican Republic**  
Inspectores de Alimentos en la Región Centroamericana y República Dominicana

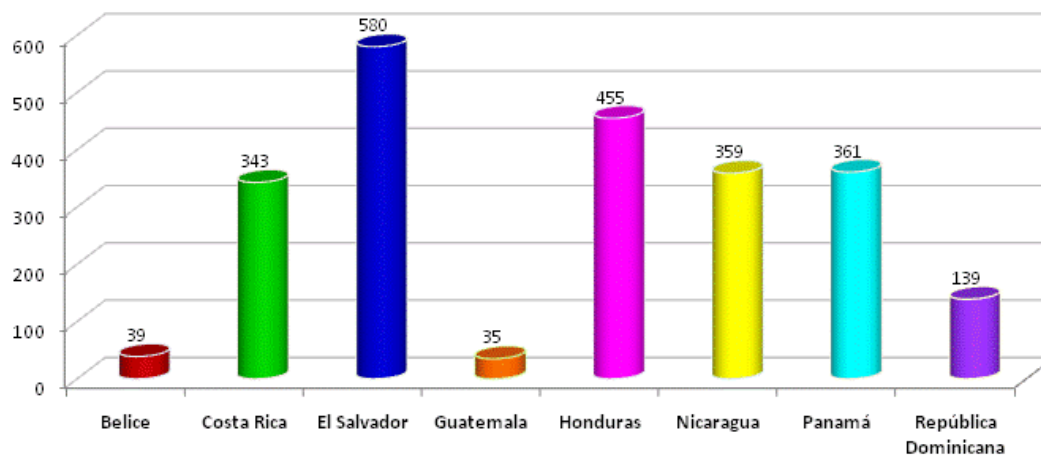
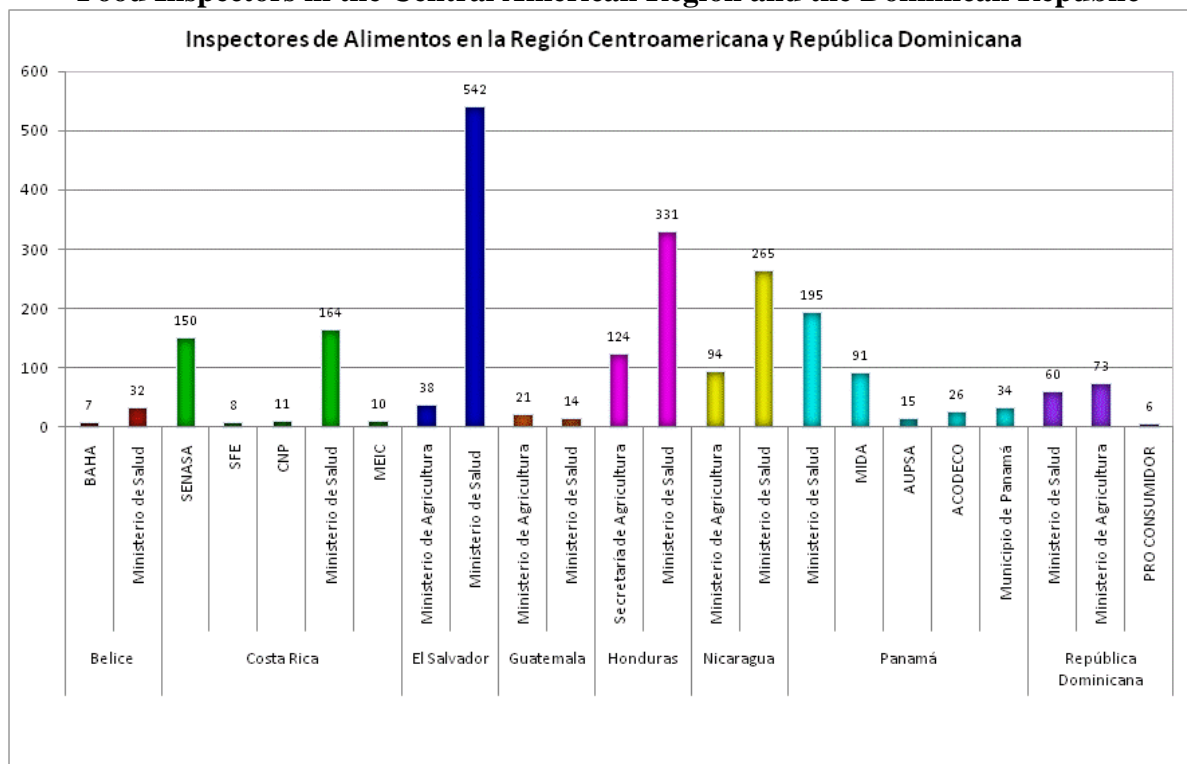
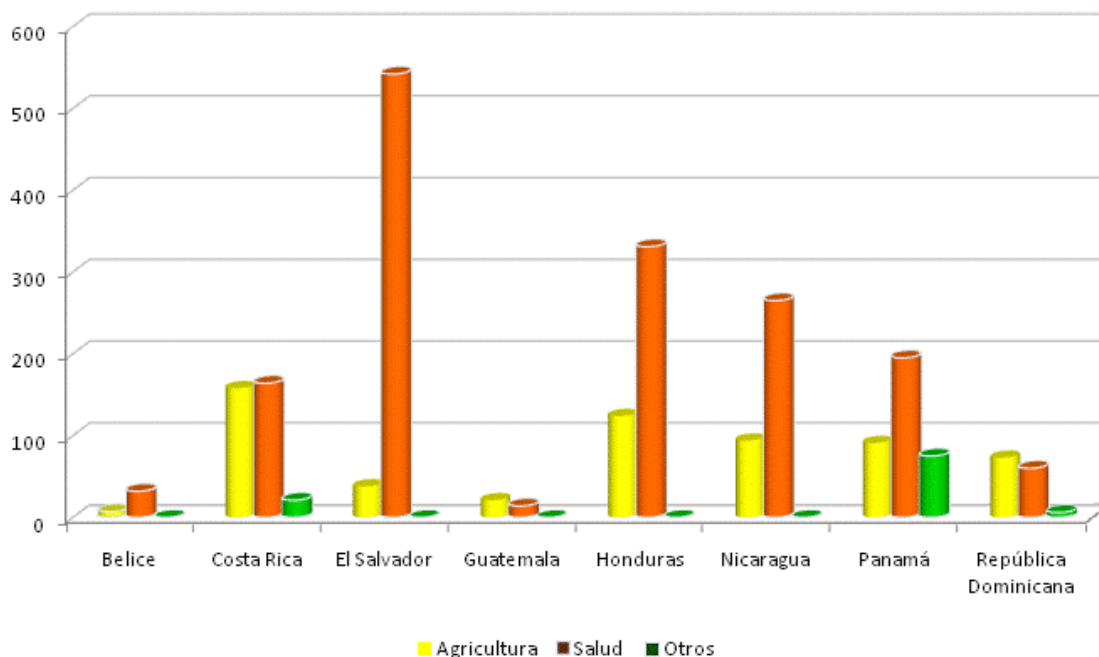


Figure 3 shows the distribution of food inspectors by institution in the different countries.

**Figure 3**  
**Food Inspectors in the Central American Region and the Dominican Republic**



**Figure 4**  
**The distribution of food inspectors by institution**



It can be seen that most food inspectors work for departments or units within the ministries of health of the countries in the region. In Costa Rica, Guatemala, and the Dominican Republic, however, inspectors are spread more evenly between the ministries of agriculture and health, as shown in Figure 4.

**b) Professional profile of inspectors in accordance with the inspection processes carried out**

The professional profile of food inspectors varies enormously in terms of their level of formal training and academic background. Some inspectors have only a high school education while others have some higher education, an undergraduate degree or even a master's degree. There are veterinarians, agronomists, agro-industrial and food engineers, biologists, chemists and graduates in environmental health, aquaculture and animal husbandry. The ministries of agriculture of all the countries employ mostly veterinarians and agronomists, some of whom have master's degrees. The Regional Food Inspection School initiative will take these aspects into account, so that differentiated levels of training are provided for inspectors.

Table 1 shows the current general profile of food inspectors, broken down by the institutions involved in inspection activities in each country.

In Belize, Costa Rica, Guatemala, El Salvador, Panama and the Dominican Republic, food inspectors have a higher education or college degree.

In El Salvador, the inspectors at the Ministry of Agriculture and Livestock are veterinarians, agronomists and agro-industrial engineers, or high school graduates in the same disciplines. Some 50% of food inspectors are high school graduates. In contrast, almost all food inspectors at the Ministry of Public Health and Social Welfare are environmental health inspectors (high school graduates), with one food engineering or technology professional in each of the five regions.

In Guatemala, almost 65% of the professionals at the Ministry of Agriculture's Safety Directorate have a master's degree in disciplines related to food safety. At the Ministry of Health, inspectors have a college degree and a specialization in food.

In Honduras, 70% of inspectors of the National Agricultural Health Service at the Secretariat of Agriculture have a higher education or college degree. At the Secretariat of Health, inspectors are environmental health technicians and environmental health assistants (the latter have no formal education, only experience).

In Nicaragua, food inspectors at the Ministry of Agriculture are veterinarians, agronomists, chemists, and food and fishery product engineers. At the Ministry of Health, 29% of the inspectors have some high school education, 31% are high school graduates, 36% are hygiene technicians, and only 4% are professionals. This situation is further complicated by the fact that, in addition to performing their duties as food inspectors, health inspectors must carry out other tasks related to environmental health, zoonoses, pesticides, school hygiene and occupational health and deal with health emergencies such as outbreaks of dengue, malaria, leptospirosis, and diarrheal diseases, among others.

In Panama, the MIDA's food inspectors are veterinarians, agronomists, and animal husbandry specialists. The AUPSA's food inspectors are veterinarians, agronomists and food engineers. At the Ministry of Health, more than 50% of the food inspectors are veterinarians; the other inspectors are agronomists, biologists, agricultural and food technicians, and health inspectors.

In the Dominican Republic, the Ministry of Agriculture has veterinarians and agronomists. The Ministry of Public Health and Social Welfare has veterinarians and technicians working as inspectors.

**Table 1**  
**Profile of food inspectors in each country, by institution**

<b>Country</b>	<b>Institution</b>	<b>Profile of Inspectors</b>
Belize	BAHA - Food Safety Department	Associate Degree
	Ministry of Health	Associate Degree
Costa Rica	SENASA - Ministry of Agriculture	Veterinarians
	SFE - Ministry of Agriculture	Agronomists
	CNP	Agronomist, agricultural engineer, food technologist
	Ministry of Health	Food technologist, agro-industrial engineer, environmental managers, industrial engineers, sanitary engineers
	MEIC	Sociologists, economists, administrators, lawyers and business administrators
El Salvador	Ministry of Agriculture and Livestock	Veterinarians, agronomists, agro-industrial engineers
	Ministry of Public Health and Social Welfare	Environmental health inspectors, nearly all are high school graduates. Food engineers or technologists
Guatemala	Ministry of Agriculture, Livestock and Food	Veterinarians, agronomists, graduates with licentiate degrees in aquaculture and animal husbandry
	Ministry of Public Health and Social Welfare	Inspectors with a college degree and a specialization in food
Honduras	Secretariat of Agriculture	Veterinarians and agronomists
	Ministry of Health	Environmental health technicians Environmental health assistants (no formal education, only experience)
Nicaragua	Ministry of Agriculture	Veterinarians, agronomists, graduates with a licentiate degree in chemistry, food and fishery product engineers
	Ministry of Health	Some years of high school, high school graduates, hygiene technicians, graduates with licentiate degrees
Panama	MIDA	Veterinarians, agronomists and animal husbandry specialists
	Ministry of Health	Veterinarians, agronomists, biologists, agricultural and food technicians, sanitary inspectors
	AUPSA	Veterinarians, agronomists and food engineers
	ACODECO	High school graduates and technical college level

Country	Institution	Profile of Inspectors
	Municipal Government of Panama City	Science high school graduate and food technologists
Dominican Republic	Ministry of Agriculture	Veterinarians and agronomists, some with a master's degree
	Ministry of Public Health and Social Welfare	Veterinarians and technicians
	PRO CONSUMIDOR	College degrees (various disciplines)

### c) Capacity building programs for food inspectors

Costa Rica is the only country in the region that has specific training programs for food inspectors. In very few cases is training a requirement for food inspectors or the performance of food inspectors evaluated. Most training in the countries is provided by technical cooperation agencies such as FAO, PAHO, OIRSA, and IICA, and focuses on specific issues. Training is also provided under SPS projects financed by the European Union, Spain, the United States, and Japan, but these are not sustained programs. The institutions involved in food inspection do not have the resources to train their own inspectors.

The official agencies that have quality systems in place, such as Costa Rica's SENASA and Panama's AUPSA, have procedures to promote inspection by trained professionals.

In Costa Rica, most food inspectors have taken part in the "Food Safety Inspector Program" run by the National Learning Institute (INA), an autonomous public institution whose main task is to promote and implement training and professional development in all production sectors. INA is financed primarily by 1.0% of the amount of the payroll of private companies in all sectors of the economy that have at least five workers; 0.5% in the case of agricultural companies that have more than ten workers; 1.5% of the total amount of the payrolls of autonomous and semiautonomous institutions and State-run enterprises; and income received from the sale of products and the use of goods and the delivery of services generated by INA under its programs. Most of SENASA's food inspectors have successfully completed the INA course. The Ministry of Health is coordinating the implementation of this program—which consists of eight modules and lasts one year—in Costa Rica's nine regions and 82 Health Areas. INA also offers other courses for inspectors, such as training in GMPs and sampling techniques. Because it is funded through taxes, INA does not charge for the training it provides.

In Panama, despite the fact that AUPSA does not have a permanent training program for technical auditors, training is a requirement for performing technical audits. As a result, AUPSA has technical personnel certified as ISO 9001:2008 internal auditors and HACCP auditors.

### d) Institutions involved in capacity building and development in the area of food safety

Table 2 shows the institutions in each country involved in capacity building and development in the area of food safety. Although all these education and training entities have the capacity to train inspectors, only one of them (Costa Rica's INA, not a university but a technical training institution) carries out activities targeted specifically at food inspectors.

The universities and other educational centers in the countries have faculties or academic programs whose courses on the agrifood industry, food technology and food engineering, among others, include aspects of food inspection.

Some universities, such as the Zamorano (Honduras), the National Autonomous University of León and the National Agrarian University (Nicaragua), the University of Panama and the Technological University of Panama, provide training in food safety for the public and private sectors, and have experience in the implementation of cooperation projects. However, they do not have programs for training food inspectors.

**Table 2**  
**Institutions involved in capacity building and development**  
**in the area of food safety in the region**

Country	Institution
1. Belize	<b>University of Belize</b>
2. Costa Rica	Instituto Nacional de Aprendizaje (Núcleo de la Industria Alimentaria) <b>University of Costa Rica</b>
3. El Salvador	University of El Salvador - School of Agronomic Sciences: (Agronomic and agro-industrial engineering, veterinary medicine) - School of Engineering and Architecture, (Food Technology Engineering) - School of Chemistry and Pharmacy <b>José Matías Delgado University (Agro-industrial engineering)</b>
4. Guatemala	Instituto de Adiestramiento de Personal en Salud (INDAPS) Instituto Técnico de Capacitación y Productividad (INTECAP) University of San Carlos: - Food Engineering - Food Industry Engineering Universidad del Valle: - Food Science Engineering <b>Rafael Landívar University:</b> - Food Industry Engineering
5. Honduras	Escuela Agrícola El Zamorano: Food Agro-industry Course <b>Universidad Nacional de Agricultura:</b> Food Technology Course
6. Nicaragua	<b>Universidad Nacional Autónoma de Nicaragua, León</b> School of Chemical Sciences, Food Engineering Course Universidad Nacional Agraria Diploma Course in Product Quality, Safety and Traceability (MOTSSA Project) Universidad Católica Agropecuaria del Trópico Seco (UCATSE) School of Agricultural Sciences

Country	Institution
7. Panama	<b>University of Panama.</b> CRU de Coclé School of Science and Food Technologies (ECTA-Academic unit that administers the Licentiate Degree Course in Science and Food Technology)
	Universidad Tecnológica de Panamá
8. Dominican Republic	<b>ISA University (Santiago)</b> Food Technology Course
	Instituto de Innovación en Biotecnología e Industria (IIBI)
	Universidad Autónoma de Santo Domingo (UASD)

**NOTE:** Institutions in red are those selected in each country to participate in the project. In Panama and the Dominican Republic, the selected universities have agreed to coordinate efforts related to the project with other academic institutions in their country.

(Background information above contributed by Alejandra Díaz)

## 5. Target Beneficiaries

The project will benefit primary food producers, particularly small- and medium-sized farmers through the application of good agricultural practices promoted by proper inspection at the primary production level, and the possibility to graduate their own field managers and other management staff (including the producers themselves). In addition, processors, exporters, and importers will benefit in various ways: through more efficient food inspection systems geared towards continuous improvement; through the regional recognition of each other's food inspection systems; and by the eventual achievement of equivalence agreement with other trading partners. In addition, processors will also have the opportunity to have their shift managers and themselves trained by taking the course, something that would give them the advantage of speaking the same technical language of inspectors. Furthermore, the consumers of the region will benefit through improved public health and healthier foods.

It is envisioned that the governments of the region will also benefit through the creation of a technically educated body of food inspectors—who may become drivers of change regarding national food safety regulations—and through reduced national social and economic costs associated with food-borne illnesses and their long-term sequelae.

## 6. Ownership and stakeholder commitment

The project has received the endorsement of the eight Ministers of Agriculture, gathered in the Central American Agricultural Council (CAC), and of the eight Ministers of Public Health, gathered at the Council of Health Ministers of Central America (COMISCA, for its name in Spanish). The signed endorsements from both ministerial councils are attached as Annex 1. Once the first group of inspectors graduates and an evaluation of the results demonstrates that the course accomplishes the objectives of the school, every effort will be made to obtain the agreement of the Ministers of Agriculture and Public Health of all countries in the region to make the school's diploma mandatory for all food inspectors.

In addition, Annex 2 contains the endorsement letters from all the universities and other academic institutions that will be part of the project (one from each Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama, and Dominican Republic) and the National Learning Institute of Costa Rica. The universities have agreed to participate in the

International Advisory Group to administer the school's study plans, to remain as part of the school set up indefinitely, to partake of the assigned duties, and to share the income generated through registrations in ways to be agreed upon at the time the school is launched.

## **7. Relevance for the STDF**

The Virtual Regional Food Inspection School is an innovative project geared towards trade facilitation through harmonization of food inspection protocols within the Central American Region, as a complement to harmonized regulations, leading to mutual recognition of equivalence in food safety inspection systems between countries in the region, and, hopefully, to similar recognition by other, extra-regional trading partners. In that sense, the project will provide the eight participating countries with standardized food inspection—via a cadre of inspectors evenly trained and formed—thus generating confidence in each other's application of regional, harmonized regulations and thereby facilitating market access.

Moreover, since the school will be open to individuals from the private sector, it will also allow a common baseline technical and regulatory knowledge to exist between official inspectors and individuals in inspected entities, thus contributing to continuous improvement of the entire food system.

In addition, considering the impact of inspection on the safety of foodstuffs, the modernization of food inspection in the countries of the region so that it is conducted on the basis of risk and process, responds fully to the guidelines of the Codex Alimentarius and will likely result in a decrease in food-borne illnesses, thus contributing to the wellbeing of Central American consumers through healthier, safer foods.

The concept of a regional virtual food inspection school has already been shown interest in from other regions in the Americas. Originally, the project was to be set up in the Southern Cone, but political developments made it necessary to change the setting of this first school. Therefore, if successful, the concept may promptly be adopted in other regions and possibly by other areas of agricultural health as well. So far, there is interest in the South (Argentina, Brazil, Chile, Paraguay and Uruguay) and in the Caribbean regions.

## **8. Development Objective**

The countries of the Central American region ((Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, and Panama) and Dominican Republic are engaged in economic integration schemes that call for harmonization of regulations, including food safety regulations. However, ongoing harmonization of food safety regulations is rendered irrelevant if there is no simultaneous harmonization of protocols. With regard to food safety, the most important protocol in need of harmonization and modernization in the region is food inspection.

The present project responds to the need to harmonize food inspection protocols across the region to parallel the harmonization process that is taking place within the Central American economic integration and customs union processes. The overall development objective is to provide common, baseline technical and attitudinal training for food inspectors in the eight countries, to allow modernization and mutual recognition of national food inspection systems



and thus contribute to the region's development through trade facilitation and improvement in the health of consumers from healthier, safer foods.

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

It is envisioned that the creation of a cadre of food inspectors, trained in modern inspection techniques and having an attitude leading to proactive participation in the improvement of food safety in the region, will contribute not only to eliminate or minimize incidents resulting in obstacles to trade, and to overcome the distrust of each country in the food inspection system of its regional partners, but also to continuous modernization and improvement of food safety regulations. Harmonized food inspection procedures across the region will make it easier to advance towards a customs union and positively impact the health of consumers. Furthermore, a modern food inspection and auditing system in the region would go a long ways towards eventual equivalence agreements on food safety control systems within the region and called for by the legislation of important trading partners for the region, such as the United States and the European Union.

It is expected that at least 35% of food inspectors (ca. 800) in the region will have been trained by the school at the end of the project. The final goal of the school is to train every single food inspector in all eight countries, but the school will also be open to private individuals interested in obtaining the diploma, whether on their own or financed by the companies they work for. This is expected to increase several fold the total number of individuals that the school would train in food inspection.

In addition, there will be a second course for food safety auditors ready to be offered by the school at the end of the project. Although the curriculum for the auditors would not be prepared—or the educational material developed—until year 3 of the project, the formation of the auditors is envisaged as responding to the requirements of such programs as the International HACCP Alliance and certifying schemes such as Global GAP. The existence of properly trained personnel to certify the validity of food safety assurance systems in establishments that produce, process, store or distribute food is a requirement of the new U.S. Food Safety Modernization Act.

The sustainability of the school is based on the registration fee that students will pay; this one-time fee is estimated at US\$200 for inspectors and US\$500 for auditors. Although the project will cover the registration fee for the first 800 inspectors as a scholarship, further numbers of trainees will have to pay the fee, whether financed by the public institution or private enterprise they work for or by themselves.

## **III. IMMEDIATE OBJECTIVES, OUTPUTS & ACTIVITIES**

### **10. Objectives, outputs and activities, including logframe and work plan**

#### **General Objective**

To provide common, baseline technical and attitudinal training for food inspectors in the eight countries, to allow modernization and mutual recognition of national food inspection systems and thus contribute to the region's development through trade facilitation and improvement in the health of consumers from healthier, safer foods.

Measurable indicator: Increased regional trade and less food-borne diseases.

### **Immediate Objectives**

Modern harmonized inspection procedures conducted by a properly trained cadre of food inspectors and food safety auditors in all countries of the region.

Measurable indicator: 20% (on average) of food inspectors per country and at least 200 private individuals in total trained within five years of the start of the project.

### **Expected results**

- Institutional framework of a regional virtual food inspection school
- Virtual course for food safety inspectors in place
- Virtual course for food safety auditors in place

### **Activities**

1. Institutional framework of a regional virtual food inspection school
  - 1.1. Expansion and/or confirmation of the International Advisory Group
  - 1.2. Formation of a Technical Consulting Group consisting of food safety control officials from all involved services in all participating countries.
  - 1.3. Formation of the school's Academic Council (made up of one representative from each participating university).
  - 1.4. Four meetings of the international Advisory Group
  - 1.5. First meeting of the Technical Consulting Group.
  - 1.6. Second meeting of the Technical Consulting Group.
  - 1.7. Meetings of the Academic Council plus the International Advisory Group. Confirmation or modification of curriculum and academic processes.
  - 1.8. Joint meetings of the Technical Consulting Group and the Academic Council (1 per year).
  - 1.9. Formation of the school's Steering Committee during the first joint meeting of the Technical Consulting Group and the Academic Council. This meeting will also initiate a discussion on the school's sustainability.
  - 1.10. Six-month report to Ministers of Agriculture and Public Health
2. To create a virtual course for food safety inspectors
  - 2.1. Confirmation or revision of proposed curriculum for food inspectors received from the International Advisory Group.
  - 2.2. Submission of the planned curriculum for food inspectors for comments by the school's Technical Consulting Group – confirmation of the course fee (30-day comment period).
  - 2.3. Development of class materials by the International Advisory Group.
  - 2.4. Design and diagram of class materials.
  - 2.5. Design of the virtual platform.
  - 2.6. Installation of the virtual platform.
  - 2.7. Installation of material in platform and copies on CD – pilot testing.
  - 2.8. Procurement and installation of videoconference equipment at each participating university and pilot testing.
  - 2.9. Nomination of the first 50 - 100 inspectors per country.
  - 2.10. Initiation of classes for food safety inspectors.
  - 2.11. Evaluation of the food inspection course by graduates

- 2.12. Modification or adjustment of curriculum and training and operating procedures, as needed.
  - 2.13. Dissemination of news about the course among private sector organizations and invitation to participate - promotion visit to 8 countries.
  - 2.14. Operation of the school on non-project funds.
3. To develop a virtual course for food safety auditors
- 3.1. Videoconference lectures on four or more topics of interest.
  - 3.2. Design of level-2 curriculum (food safety auditor course) by the school's International Advisory Group.
  - 3.3. Submission of the planned curriculum for food safety auditors for comments by the school's Technical Consulting Group – confirmation of the course fee (30-day comment period).
  - 3.4. Preparation of course material for food safety auditors by the International Advisory Group.
  - 3.5. Design, diagram and installation of the food safety auditing course (level 2).

## **11. Public-public or public-private cooperation**

The food inspection school's main goal is to provide a common, baseline training of food inspectors and auditors in all countries in the region. As such, it will contribute not only to harmonize inspection protocols among the participating countries, but also between institutions in the same country that are charged with food inspection responsibilities. This expected result will contribute to intra-government and regional harmonization of food safety inspection and auditing protocols.

Similarly, the opportunity given to the private sector to graduate their management, production and processing technical staff (including owners of food production, processing and preparation establishments and their plant and shift managers) with the same certificate as food inspectors, is expected to result in a new paradigm of dialogue and cooperation between inspectors and the inspected, leading to continuous improvement of the overall food safety control systems.

## **12. Risks**

The main risk confronting the school is the sustainability of the political support, without which the effort would be undermined. This support implies the agreement to make the food safety inspector mandatory for all individuals involved in food safety inspection at all levels of the national food safety control system (customs, ministries of agriculture, public health and other such as commerce, as applicable, and municipalities).

To ensure political support, the project has sought and received the written endorsement of all Ministers of Agriculture (gathered under the Central American Agricultural Council – CAC) and Public Health (meeting jointly under the Central American Council of Public Health Ministers – COMISCA) in the eight countries involved, and, just as important, of the technical cadres in those institutions, all of which have been visited to discuss the project and gather their support.

## IV. INPUTS & BUDGET

### 13. Inputs and estimated budget

Expenditure (describe in detail below)	Budget requested from STDF (US\$)	Applicant's contribution (US\$)	Budget requested from other donors (US\$)	Total
<b>Output 1: Institutional framework of a regional virtual food inspection school</b>				<b>541.805,00</b>
Activity 1.1. Expansion and/or confirmation of the International Advisory Group	0,00	3.000,00		
Activity 1.2. Formation of a Technical Consulting Group	0,00	3.000,00		
Activity 1.3. Formation of the school's Academic Council	0,00	3.000,00		
Activity 1.4. Four meetings of the international Advisory Group (includes travel and per diem)	131.200,00	16.920,00		
Activity 1.5. First meeting of the Technical Consulting Group. (includes travel and per diem)	47.400,00	16.915,00		
Activity 1.6. Second meeting of the Technical Consulting Group. (includes travel and per diem)	47.400,00	16.915,00		
Activity 1.7: Three meetings of the Academic Council plus the International Advisory Group (includes travel and per diem)	89.170,00	16.915,00		
Activity 1.8: Joint meetings of the Technical Consulting Group and the Academic Council (includes travel and per diem) - Second meeting will be virtual	118.055,00	16.915,00		
Activity 1.9: Formation of the school's Steering Committee	0,00	3.000,00		
Activity 1.10: Six-month report to Ministers of Agriculture and Public Health	9.000,00	3.000,00		
<b>Output 2: Virtual course for food safety inspectors in place</b>				<b>452.320,00</b>
Activity 2.1. Confirmation or revision of proposed curriculum for food inspectors	0,00	3.000,00		
Activity 2.2. Submission of the planned curriculum for food inspectors for comments by the school's Technical Consulting Group – confirmation of the course fee	0,00	3.000,00		
Activity 2.3. Fees for development of class materials by the International Advisory Group.	50.000,00	3.915,00		
Activity 2.4. Design and diagram of class materials.	20.000,00	3.915,00		
Activity 2.5. Design of the virtual platform.	0,00	3.200,00		
Activity 2.6. Installation of the virtual platform	13.000,00	3.915,00		
Activity 2.7. Installation of material in platform and copies on CD – pilot	15.000,00	3.915,00		

testing.				
Activity 2.8. Procurement and installation of videoconference equipment at each participating university and pilot testing.	105.000,00	13.715,00		
Activity 2.9. Nomination of the first 50 - 100 inspectors per country.	160.000,00	3.915,00		
Activity 2.10. Initiation of classes for food safety inspectors.	0,00	3.000,00		
Activity 2.11. Evaluation of the food inspection course by graduates (6 months after first echelon of 100 graduates per	0,00	3.000,00		
Activity 2.12. Modification or adjustment of curriculum and training and operating procedures, as needed.	10.000,00	3.915,00		
Activity 2.13 Dissemination of news about the course among private sector organizations and invitation to participate - promotion visits to 8 countries	20.000,00	3.915,00		
Activity 2.14. Operation of the school on non-project funds – training of inspectors beyond the initial 100 per country	0,00	3.000,00		
<b>Output 3: Virtual course for food safety auditors in place</b>				<b>87.426,50</b>
Activity 3.1. Videoconference lectures on four or more topics of interest.	0,00	3.200,00		
Activity 3.2. Design of level-2 curriculum (food safety auditor course) by the school's International Advisory Group.	0,00	3.200,00		
Activity 3.3. Submission of the planned curriculum for food safety auditors for comments by the school's Technical Consulting Group – confirmation of the course fee	0,00	3.195,00		
Activity 3.4. Preparation of course material for food safety auditors by the International Advisory Group.	50.000,00	3.915,00		
Activity 3.5. Design, diagram and installation of the food safety auditing course (level 2).	20.000,00	3.916,50		
<b>SUBTOTAL</b>	<b>905.225,00</b>			
<b>Administrative Costs</b>	<b>72.418,00</b>			
<b>IICA In Kind Contribution</b>		<b>176.326,50</b>		
<b>Countries In Kind Contribution</b>			<b>380.325,00</b>	
<b>TOTAL</b>	<b>977.643,00<sup>1</sup></b>	<b>176.326,50</b>	<b>380.325,00</b>	<b>1.461.876,50</b>

<sup>1</sup> For IICA purposes: plus US\$ 72.418,00 (8% for administrative costs).

## IICA In Kind Contribution

Table #1. IICA's In-Kind Contribution

Office	Position	Time %	Estimated Salary	Monthly Contribution
IICA Belize	Local Specialist	10,00%	\$2.500,00	\$250,00
	Administrative Assistant	7,00%	\$900,00	\$63,00
IICA Guatemala	Local Specialist	10,00%	\$2.000,00	\$200,00
	Administrator	7,00%	\$1.800,00	\$126,00
	Secretary	5,00%	\$1.500,00	\$75,00
IICA El Salvador	Local Specialist	10,00%	\$2.000,00	\$200,00
	Administrator	7,00%	\$1.500,00	\$105,00
	Secretary	5,00%	\$1.200,00	\$60,00
IICA Honduras	Local Specialist	10,00%	\$2.500,00	\$250,00
	Administrator	7,00%	\$1.700,00	\$119,00
	Secretary	5,00%	\$1.200,00	\$60,00
IICA Nicaragua	Local Specialist	10,00%	\$2.500,00	\$250,00
	Administrator	7,00%	\$1.500,00	\$105,00
	Secretary	5,00%	\$1.200,00	\$60,00
IICA Costa Rica	Local Specialist	10,00%	\$3.000,00	\$300,00
IICA Panama	Local Specialist	10,00%	\$3.000,00	\$300,00
	Administrator	7,00%	\$2.000,00	\$140,00
	Secretary	5,00%	\$1.500,00	\$75,00
IICA Dominican Rep	Local Specialist	10,00%	\$2.500,00	\$250,00
	Administrative Assistant	7,00%	\$1.200,00	\$84,00
	Secretary	5,00%	\$1.200,00	\$60,00
IICA Headquarters	Head AHFS	14,50%	\$9.500,00	\$1.377,50
	Local Specialist	14,50%	\$3.200,00	\$464,00
	Local Specialist	9,50%	\$6.000,00	\$570,00
	Administrative Assistant	10,00%	\$1.020,00	\$102,00
	Secretary	7,00%	\$715,00	\$50,05
	Finance Technician	7,00%	\$1.300,00	\$91,00
	Finance Technician	7,00%	\$1.300,00	\$91,00
<b>Subtotal- Monthly Contribution</b>				<b>\$5.877,55</b>
<b>TOTAL CONTRIBUTION (30 months)</b>				<b>\$176.326,50</b>

<b>TABLE #2. COUNTRY NATIONAL SERVICES - IN KIND CONTRIBUTION</b>				
<b>Country</b>	<b>Position</b>	<b>Time %</b>	<b>Estimated salary</b>	<b>Monthly contribution</b>
Belize	Head of National Services (Food Safety/Plant and Animal Health)	10%	\$3.000,00	\$300,00
Guatemala	Head of National Service -Food Safety	5%	\$3.200,00	\$160,00
	Head of National Service -Plant Health	5%	\$3.200,00	\$160,00
	Head of National Service - Animal Health	5%	\$3.200,00	\$160,00
El Salvador	Head of National Service -Food Safety	5%	\$3.000,00	\$150,00
	Head of National Service -Plant Health	5%	\$3.000,00	\$150,00
	Head of National Service - Animal Health	5%	\$3.000,00	\$150,00
Honduras	Head of National Service -Food Safety	5%	\$3.000,00	\$150,00
	Head of National Service -Plant Health	5%	\$3.000,00	\$150,00
	Head of National Service - Animal Health	5%	\$3.000,00	\$150,00
Nicaragua	Head of National Service -Food Safety	5%	\$2.500,00	\$125,00
	Head of National Service -Plant Health	5%	\$2.500,00	\$125,00
	Head of National Service - Animal Health	5%	\$2.500,00	\$125,00
Costa Rica	Head of National Service -Food Safety	5%	\$3.500,00	\$175,00
	Head of National Service -Plant Health	5%	\$3.500,00	\$175,00
	Head of National Service - Animal Health	5%	\$3.500,00	\$175,00
Panama	Head of National Service -Food Safety	5%	\$3.500,00	\$175,00
	Head of National Service -Plant Health	5%	\$3.500,00	\$175,00
	Head of National Service - Animal Health	5%	\$3.500,00	\$175,00
Dominican Rep.	Head of National Service -Food Safety	5%	\$3.000,00	\$150,00
	Head of National Service -Plant Health	5%	\$3.000,00	\$150,00
	Head of National Service - Animal Health	5%	\$3.000,00	\$150,00
Subtotal - National Services Monthly Contribution				\$3.555,00
<b>Total 1 - National Services Monthly Contribution (6 months)</b>				<b>\$21.330,00</b>
<b>COUNTRY INSPECTORS - IN KIND CONTRIBUTION</b>				
<b>Country</b>	<b>Quantity of Inspectors*</b>	<b>% Time</b>	<b>Estimated salary</b>	<b>Monthly contribution**</b>
Belize	Estimated # of Inspectors roll in the program: 14p	7%	\$800,00	\$784,00
Guatemala	Estimated # of Inspectors roll in the program: 12p	7%	\$1.200,00	\$1.008,00
El Salvador	Estimated # of Inspectors roll in the program: 203p	7%	\$1.000,00	\$14.210,00
Honduras	Estimated # of Inspectors roll in the program: 159p	7%	\$1.000,00	\$11.130,00
Nicaragua	Estimated # of Inspectors roll in the program: 126p	7%	\$900,00	\$7.938,00
Costa Rica	Estimated # of Inspectors roll in the program: 120p	7%	\$1.300,00	\$10.920,00
Panama	Estimated # of Inspectors roll in the program: 126p	7%	\$1.200,00	\$10.584,00
Dominican Repub.	Estimated # of Inspectors roll in the program: 49p	7%	\$950,00	\$3.258,50
Subtotal - National Inspectors Monthly Contribution				\$59.832,50
<b>Total 2 - National Inspectors Monthly Contribution (6 months)</b>				<b>\$358.995,00</b>
<b>Total 1 + Total 2 - TOTAL COUNTRY AN INSPECTORS IN KIND CONTRIBUTION</b>				<b>\$380.325,00</b>

\*Estimation of number of inspectors by country in the initial program was based on 35% of the total number of inspectors reported. \*\* Total monthly contribution by country.

## 14. Cost-effectiveness

The modernization of food safety control systems cannot proceed without attitudinal and technical changes in the food inspection and auditing protocols currently in use in the region. It would be economically and politically impossible for the countries to privatize food inspection. The proposed training on food inspection and auditing for both public officials and private individuals is envisioned as a shortcut towards achieving a better understanding and cooperation between these two sectors, something that would be expected to result not only in trade facilitation, but, just as important from the social and economic standpoints, in better health for the population and thus lower costs from food borne illnesses, health care, food borne illness life-long sequelae, and other associated losses in productivity. Moreover, modernization of food safety inspection and auditing taking advantage of modern, low-cost information technologies, is expected to result in an economical means towards achieving regional—and eventually international—facilitation of equivalence recognition agreements between the national food safety control systems in the region and with those of trading partners.

## V. PROJECT IMPLEMENTATION & MANAGEMENT

### 15. Implementing / supervising organization

It is proposed that the project be implemented and administered by the Inter American Institute for Cooperation on Agriculture (IICA), which serves all the countries participating in the project and has extensive experience in food safety and other SPS issues. IICA would hold the Secretariat of the school during and after implementation of the project.

Person at IICA to be contacted:

Dr. Ricardo Molins  
Head, Agricultural Health and Food Safety  
IICA  
San José, Costa Rica  
Tel.: 506-2216-0184  
E-mail: [Ricardo.Molins@iica.int](mailto:Ricardo.Molins@iica.int)

**Letters of support** from each of the organizations to be involved in project implementation are included as Appendix 4.

### 16. Project management

The school will involve one university or equivalent academic/technical institution in each of the eight participating countries. The universities will be entrusted with the task of administering exams, issuing course certificates jointly with the virtual school (something that will lend such certificates added credibility at the national level), providing laboratory facilities and guidance for some very basic, practical work by students, and, ideally, having a pilot plant for food processing where mock inspections can be conducted. The pertinent academic staff at the universities will also answer questions from students in their country, and, when necessary, will refer them to an International Advisory Group.

The International Advisory Group in charge of curriculum and class material development formed during the pre-project stage will be confirmed and expanded. This group, composed

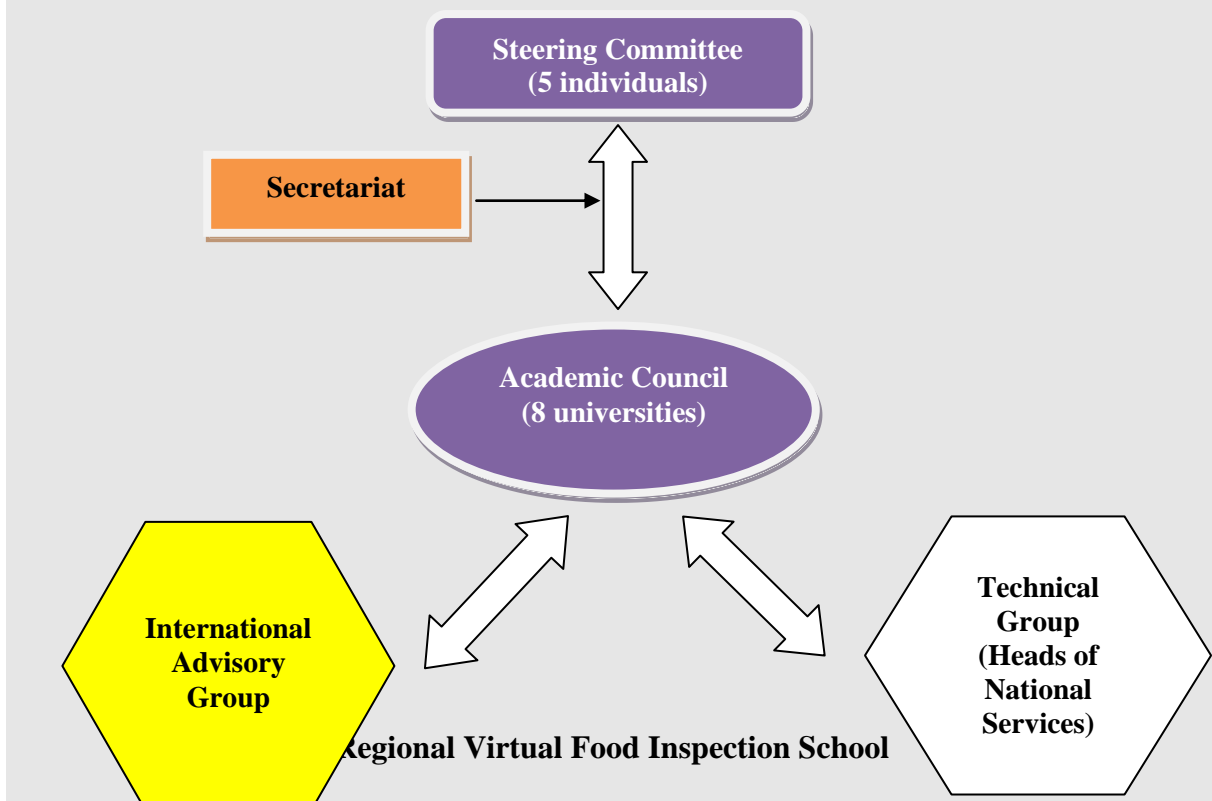


of representatives from universities in Europe (Universidad Politécnica de Valencia, Spain), North America (University of Nebraska-Lincoln - UNL, USA; Universidad Nacional Autónoma de México - UNAM), Central America (Universidad de Costa Rica), as well as food safety institutions, national and international, such as the Agencia Santafesina de Seguridad Alimentaria - ASSA, from Argentina, during the pre-project phase, will be expanded to include representatives of the Food and Agriculture Organization of the United Nations - FAO, the Pan American Health Organization - PAHO, and the International Regional Organization on Agricultural Health - OIRSA).

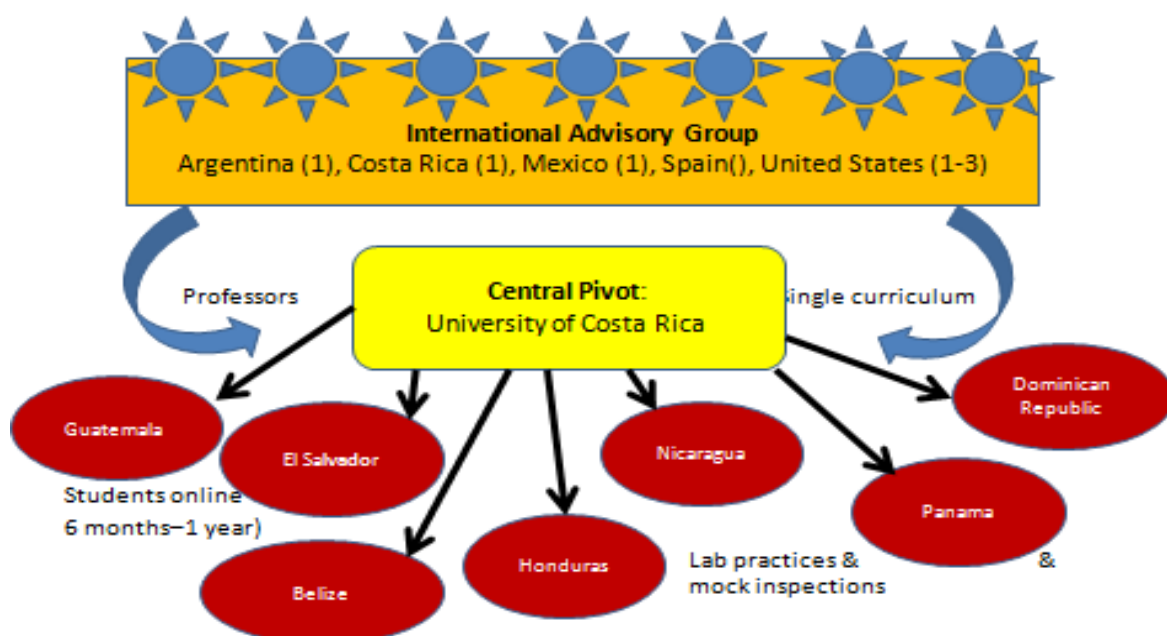
There will be an Academic Council composed of eight individuals—one from each participating university [one university per country]—and a Technical Group composed of a representative from each food safety control agency in all eight participating countries. A Steering Committee will constitute the school’s top governing body. The Steering Committee will consist of five individuals, four of which—two from each group—will be elected by a joint meeting of the Academic Council and the Technical Group for a period of time to be determined during the first joint meeting of these groups. The representative of the University of Costa Rica, the institution that will constitute the pivot of the school structure, will be a permanent member of the Steering Committee.

The Steering Committee will be advised by a Secretariat, held by IICA, which will advise the Steering Committee and will also administer the school’s fund originating from student registration fees and possible donations. These funds will be periodically distributed by IICA among the participating universities to allow renewal of laboratory equipment and facilities, and to recognize the efforts of the academic staff. IICA will retain 8% of the funds to cover administration fees.

The proposed schematic diagram of the school governance is the following:



## The Regional Virtual Food Inspectors School



## VI. REPORTING, MONITORING & EVALUATION

### 17. Project reporting

Progress reports will be presented to the STDF every six months. A final technical report will be presented to the STDF within 30 days of completion of the project, and a financial report will be presented within 90 days of completion of the project.

In addition, 6-month reports will be presented on the progress of the project to the Council of Ministers of Agriculture and the Council of Ministers of Public Health of the eight participating countries.

### 18. Monitoring and evaluation, including performance indicators

Progress made in project implementation will be monitored on a continuous basis and a project implementation status statement will be part of the six-month report presented to the STDF. The success of the activities conducted will be based on the measurable indicators contained in the logical framework, using the sources of verification mentioned therein.

### 19. Dissemination of the projects results

Visits to the participating countries have been scheduled to inform the authorities on project progress and results, as well as to induce the private sector to make use of the school's

capability to train their technical staff. A brochure will be developed describing the school's offering, and Councils of Ministers of Public Health and Agriculture will be informed periodically. Press releases in all eight countries will be issued as major project landmarks are reached.

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## **ATTACHMENTS**

**Appendix 1:** Logical framework

**Appendix 2:** Work Plan

**Appendix 3:** Terms of Reference for key staff involved in project implementation

**Appendix 4:** Letters of support from each organization to be involved in project implementation

**Appendix 5:** Letter from IICA agreeing to implement the project.

**Appendix 6:** Proposed curriculum for the food inspection school

**APPENDIX 1: Logical Framework**

	<b>Project description</b>	<b>Measurable indicators / targets</b>	<b>Sources of verification</b>	<b>Assumptions and risks</b>
<b>Goal</b>	<b>To provide common, baseline technical and attitudinal training for food inspectors in the eight countries, to allow modernization and mutual recognition of national food inspection systems and thus contribute to the region's development through trade facilitation and improvement in the health of consumers from healthier, safer foods.</b>	Food inspection is increasingly being conducted on the basis of risk in all countries of the region.	Survey after the first group of inspectors have graduated and begin their inspection duties.	The authorities and technical cadres in charge of food safety in the eight countries are satisfied with the results of the course, continue to support the project, and accept the school's diploma as effective and achieving the objectives set in the project.
<b>Immediate objective (purpose)</b>	<b>Modern harmonized inspection procedures conducted by a properly trained cadre of food inspectors and food safety auditors in all countries of the region.</b>	20% of all food inspectors trained per country and at least 200 private sector individuals in total trained within five years of the start of the project.	Number of diplomas granted per country.	Continued political support from Ministers of Agriculture and Public Health and their technical cadres, from academic and technical institutions involved, and from the private sector.

<b>Expected result # 1 (outputs)</b>	<b>Institutional and operational framework of a regional virtual food inspection school</b>	International Advisory Group, Academic Council, Technical Group and Steering Committee formed.	Confirmation letter from each member of the group.	N/A
<b>Activities</b>	1.1. Expansion and/or confirmation of the International Advisory Group	At least seven international advisors comprise this group.	Letters of confirmation from each member of the International Advisory Group.	N/A
	1.2 Formation of a Technical Consulting Group consisting of food safety control officials from all involved services in all participating countries	Technical Consulting Group formed and confirmed by national authorities	Letters of confirmation from each member of the Technical Consulting Group.	N/A
	1.3 Formation of the school's Academic Council (made up of one representative from each participating university)	Academic Council formed and installed. It is envisioned that the University of Costa Rica will retain the permanent Secretariat..	Academic Council roster	All academic institutions contacted during the pre-project stage confirm their participation and nominate a representative.
	1.4. Four meetings of the International Advisory Group	At least four meetings held to discuss curricula for inspectors and auditors, development of materials, and modifications or improvements needed.	Meeting agendas and proceedings.	
	1.5 First meeting of the Technical Consulting Group	Meeting held to discuss and agree on the proposed curriculum for inspectors and	Meeting agendas and proceedings	

		formation of the Steering Committee.		
	1.6 Second meeting of the Technical Consulting Group	Coordination among food safety control authorities in all participating countries regarding food safety inspection achieved	3Meeting agendas and proceedings	
	1.7 Meetings of the Academic Council plus the International Advisory Group. Confirmation or modification of curriculum and academic processes.	Three joint meetings of the Academic Council and the International Advisory Group held to discuss curriculum and modify or confirm it, as needed, and plan other academic activities.	Meeting agendas and proceedings.	Schedule of members of both groups must permit their participation.
	1.8 Joint meetings of the Technical Consulting Group and the Academic Council (1 per year).	Agreement on possible revisions of curriculum or processes to fit the needs as the project progresses.	Meeting agendas and proceedings.	None in particular.
	1.9 Formation of the school's Steering Committee during the first joint meeting of the Technical Consulting Group and the Academic Council. This meeting will also initiate a discussion on the school's sustainability.	Steering Committee formed by election during the first joint meeting of the Technical Consulting Group and the Academic Council. It is envisioned that the Steering Committee will function unchanged throughout the duration of the project, will be composed of three members from each group, and will have an elected chair belonging to the Academic	Steering Committee roster available.	The chair of the joint meeting should be occupied by a member of the Academic Council to avoid changes due to potential public sector movements.

		Council.		
	1.10 Six-month report to STDF and Ministers of Agriculture and Public Health	Reports presented and available.	STDF Secretariat's receipt of the six-month report. and copy of report to Ministers.	None in particular.
<b>Expected result # 2 (outputs)</b>	Virtual course for food safety inspectors developed and in place	Virtual course for food safety inspectors available.	School's webpage and CDs.	
<b>Activities</b>	2.1 Confirmation or revision of proposed curriculum for food inspectors received from the International Advisory Group.	Draft of curriculum for the food inspectors' course was developed during the project preparation stage.	Draft of the curriculum for the food inspectors' course is available.	The International Advisory Group must deliver on time
	2.2 Submission of the planned curriculum for food inspectors for comments by the school's Technical Consulting Group and confirmation of the course fee (30-day comment period).	Comments received.	Messages received from members of the Technical Consulting Group and corresponding comments.	Technical Consulting Group members must respond on time or their comments will not be taken into account
	2.3 Development of class materials by the International Advisory Group.	Agreement reached on assignment of tasks among the International Advisory Group to develop specific sections of the curriculum. Members of the Group deliver the materials.	Complete educational material for the food inspection course is ready for design and diagram.	Members of the International Advisory Group must agree to develop and deliver the assigned sections of the educational material necessary to complete the curriculum for food inspectors. The educational materials must be delivered on time.
	2.4 Design and diagram of class materials.	Class materials are available in proper design for online	Complete educational material for the food inspection course is	Design and diagram of materials completed on time.

		adaptation. The material has also been placed in proper diagram form.	available in final form, ready to be installed in the school's virtual platform.	
2.5 Design of the virtual platform.	Virtual platform designed and ready to install.	Design of platform available.	None in particular.	
2.6 Installation of the virtual platform.	Virtual platform installed and operational.	School's webpage.	None in particular.	
2.7 Installation of material in platform and copies on CD – pilot testing.	Course online and on CDs. Pilot testing completed.	School's webpage and CDs.	None in particular.	
2.8 Procurement and installation of videoconference equipment at each participating university and pilot testing.	Selection and purchase of videoconference equipment for all academic institutions completed, installed and tested	Purchase orders for equipment and installation schedules.	Academic institutions facilitate installation and provide assurances of priority use of equipment by the school.	
2.9 Nomination of the first 50 - 100 inspectors per country.	List of candidates per country available.	List of candidates from every country.	Ministries of Agriculture, Public Health and other food safety control institutions deliver their list of candidates on time.	
2.10 Initiation of classes for food safety inspectors.	The school is open and the first students are registered and taking the course on food inspection.	Roster of registered students.	None in particular.	
2.11 Evaluation of the food inspection course by graduates.	Evaluation questionnaire developed, sent to graduates, and responses received and processed.	Evaluation report from Secretariat.	Graduates respond to questionnaire on time.	
2.12 Modification or	Evaluation results used to	Curriculum and/or school	N/A	



	adjustment of curriculum and training and operating procedures, as needed.	adjust curriculum and/or school procedures.	procedures adjustment plan.	
	2.13 Dissemination of news about the course among private sector organizations and invitation to participate – promotion visits to 8 countries.	Dissemination material (brochures) developed and available. Eight promotional events for the private sector conducted (one in each participating country).	Secretariat; list of events and participating institutions in each country.	The private sector must be receptive to the idea of training managers, plant shift heads and other operators – a good promotional approach will be essential.
	2.14. Operation of the school on non-project funds.	The school is functioning on funds coming from student registrations.	School’s budget statements.	The public and private sectors and individuals continue to have interest in the school and register students
<b>Expected result # 3</b>	Virtual course for food safety auditors in place	Virtual course for food safety auditors available	School’s webpage and CDs.	
	3.1 Videoconference lectures on four or more topics of interest.	At least four distance lectures have been offered on food safety topics of interest to students by individuals from such agencies as CFIA, U.S. FDA, etc.	Number and title of lectures.	Support institutions willing to contribute lecturers.
	3.2 Design of level-2 curriculum (food safety auditor course) by the school’s International Advisory Group.	Draft of level 2 curriculum (for food safety auditors) developed.	Draft of the curriculum food safety auditors sent electronically to the Technical Consulting Group.	International Advisory Group delivers draft curriculum on time.
	3.3 Submission of the planned curriculum for food safety auditors for comments by the school’s Technical Consulting Group –	Comments received.	Messages received from members of the Technical Consulting Group and corresponding comments.	Technical Consulting Group members must respond on time or their comments will not be taken into account.

	confirmation of the course fee (30-day comment period).			
	3.4 Preparation of course material for food safety auditors by the International Advisory Group.	Agreement reached on assignment of tasks among the International Advisory Group to develop specific sections of the curriculum. Members of the Group deliver the materials.	Complete educational material for the food inspection course is ready for design and diagram.	Members of the International Advisory Group must agree to develop and deliver the assigned sections of the educational material necessary to complete the curriculum for food auditors. The educational materials must be delivered on time.
	3.5 Design, diagram and installation of the food safety auditing course (level 2).	Class materials are available in proper design for online adaptation. The material has also been placed in proper diagram form.	Complete educational material for the food safety auditor course is available in final form, ready to be installed in the school's virtual platform.	Design, diagram and installation are completed on time.

## APPENDIX 2: Work Plan

Activity	Responsibility	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Output 1:</b> Institutional framework of a regional virtual food inspection school	IICA, Participating countries												
Activity 1.1: Expansion and/or confirmation of the International Advisory Group	IICA												
Activity 1.2: Formation of a Technical Consulting Group consisting of food safety control officials from all involved services in all participating countries.	Participating countries												
Activity 1.3: Formation of the school's Academic Council (made up of one representative from each participating university).	Participating universities												
Activity 1.4: Meetings of the international Advisory Group	IICA												

Activity 1.5: First meeting of the Technical Consulting Group.	IICA												
Activity 1.6: Second meeting of the Technical Consulting Group.	IICA												
Activity 1.7: Meetings of the Academic Council plus the International Advisory Group. Confirmation or modification of curriculum and academic processes.	IICA												
Activity 1.8: Joint meetings of the Technical Consulting Group and the Academic Council (1 per year).	IICA												
Activity 1.9: Formation of the school's Steering Committee during the first joint meeting of the Technical Consulting Group and the Academic Council.	Academic Council and Technical Consulting Group												
Activity 1.10: Six-month report to Ministers of Agriculture and Public Health	IICA												
<b>Output # 2:</b> Virtual course for food safety inspectors in place													
Activity 2.1. Confirmation or revision of proposed curriculum for food inspectors received from the International Advisory Group.	International Advisory Group												
Activity 2.2. Submission of the planned curriculum for food inspectors for comments by the school's Technical	IICA												

Consulting Group – confirmation of the course fee (30-day comment period).													
Activity 2.3. Development of class materials by the International Advisory Group.	International Advisory Group												
Activity 2.4: Design and diagram of class materials.	IICA												
Activity 2.5: Design of the virtual platform.	Consultant and International Advisory Group, respectively												
Activity 2.6: Installation of the virtual platform.	IICA												
Activity 2.7: Installation of material in platform and copies on CD – pilot testing.	IICA												
Activity 2.8: Procurement and installation of videoconference equipment at each participating university and pilot testing.	IICA												
Activity 2.9: Nomination of the first 50 - 100 inspectors per country.	Countries												
Activity 2.10: Initiation of classes for food safety inspectors.	School												
Activity 2.11: Evaluation of the food inspection course by graduates	IICA- School Steering Committee												

Activity 2.12: Modification or adjustment of curriculum and training and operating procedures, as needed.	International Advisory Group & IICS												
Activity 2.13: Dissemination of news about the course among private sector organizations and invitation to participate – promotion visits to 8 countries.	IICA												
Activity 2.14: Operation of the school on non-project funds.	Academic Council												
<b>Output 3:</b> Virtual course for food safety auditors in place													
Activity 3.1: Videoconference lectures on four or more topics of interest.	Academic Council & International Advisory Group												
Activity 3.2: Design of level-2 curriculum (food safety auditor course) by the school's International Advisory Group.	International Advisory Group												
Activity 3.3: Submission of the planned curriculum for food safety auditors for comments by the school's Technical Consulting Group – confirmation of the course fee (30-day comment period).	IICA												
Activity 3.4: Preparation of course material for food safety auditors by the International Advisory Group.	IICA												

Activity 3.5: Design, diagram and installation of the food safety auditing course (level 2).													





## APPENDIX 6

### PROPOSED CURRICULUM FOR THE FOOD INSPECTION SCHOOL

(Developed by the International Advisory Group<sup>2</sup>)

PROFILE OF THE INSPECTOR	PROFILE OF THE AUDITOR
<ul style="list-style-type: none"> <li>• High school diploma.</li> <li>• Three years' experience as a food inspector or working in food production within the food industry.</li> <li>• Has taken and passed the INA food handler's course.</li> </ul>	<ul style="list-style-type: none"> <li>• Professional holding at least a Bachelor's Degree, with training either in the food industry or related area.</li> <li>• Must take an entrance or admission test and if unsuccessful, must complete appropriate modules from the inspectors' course.</li> </ul> <p><b>NOTE: curriculum for auditors to be developed the second year of the project</b></p>

INSPECTOR CURRICULUM	%	Hours
<p>General Objective: To be able to determine if the food production system of a business establishment is operated properly and if the safety of its products can be guaranteed, based on:</p> <ol style="list-style-type: none"> <li>a. National legislation and/or regulations currently in force</li> <li>b. Regional legislation and/or regulations currently in force, when appropriate</li> <li>c. The hazard/risk principles related to food production</li> </ol>		
<p>Learning objective 1: To learn the fundamentals of food chemistry and food microbiology</p> <ul style="list-style-type: none"> <li>• Difference between safety and quality</li> <li>• Food chemistry               <ul style="list-style-type: none"> <li>○ Chemical composition</li> <li>○ Additives</li> </ul> </li> <li>• Food microbiology               <ul style="list-style-type: none"> <li>○ Factors that affect the growth of microbes</li> <li>○ Classification and reproduction of microorganisms</li> <li>○ Theory of multiple hurdles</li> </ul> </li> </ul>	11,7%	14 hours
<p>Learning objective 2: To identify the hazards/risks frequently associated with different types of food and the diseases they may</p>	21%	25

<sup>2</sup> The International Advisory Group: Dr. Juan Antonio Serra, Universidad Politécnica de Valencia (Spain); Dr. Rolando Flores, University of Nebraska-Lincoln (USA); Dr. María Salud Rubio, Universidad Nacional Autónoma de México (UNAM); MSc. Carmela Velásquez, Universidad de Costa Rica (UCR); MSc. Ileana Leandro, Instituto Nacional de Aprendizaje (INA, Costa Rica); Dr. Marcos Monteverde, Agencia Santafecina de Seguridad Alimentaria (Argentina); and Dr. Ricardo Molins, Dr. Marco Sánchez and Ana Marisa Cordero, IICA.

<p>cause</p> <ul style="list-style-type: none"> <li>• Chemical <ul style="list-style-type: none"> <li>○ Mycotoxins</li> <li>○ Toxins of animal origin</li> <li>○ Substances used in agriculture and veterinary medicine</li> <li>○ Heavy metals</li> <li>○ Allergens</li> </ul> </li> <li>• Physical <ul style="list-style-type: none"> <li>○ Particulates and objects</li> </ul> </li> <li>• Biological <ul style="list-style-type: none"> <li>○ Mycotoxin-producing fungi</li> <li>○ Bacteria</li> <li>○ Viruses</li> <li>○ Parasites</li> </ul> </li> </ul>		
<p>Learning objective 3: To learn about, analyze and evaluate the general principles of Good Agricultural Practices, Good Animal Rearing Practices (including fisheries and aquaculture), and Good Manufacturing Practices</p>	<p>16,7%</p>	<p>20 hours</p>
<p>Learning objective 4: To identify the hazards/risks and controls (preventive actions) associated with the storage, handling, processing, and preservation of foods such as:</p> <ul style="list-style-type: none"> <li>• Grains, legumes, and cereals <ul style="list-style-type: none"> <li>○ Bread, pastries, tortillas, breakfast cereals, etc.</li> <li>○ Processing of legumes</li> </ul> </li> <li>• Meat, poultry, and fisheries or aquaculture products <ul style="list-style-type: none"> <li>○ Slaughter</li> <li>○ Sausages and other byproducts</li> <li>○ Harvesting and handling of fisheries and aquaculture products</li> </ul> </li> <li>• Fats and oils <ul style="list-style-type: none"> <li>○ Extraction and processing</li> </ul> </li> <li>• Water and beverages <ul style="list-style-type: none"> <li>○ Flavored, carbonated, etc.</li> <li>○ Fruit juices</li> <li>○ Alcoholic beverages</li> </ul> </li> <li>• Dairy <ul style="list-style-type: none"> <li>○ Milk</li> <li>○ Dairy products</li> </ul> </li> <li>• Vegetables and fruits <ul style="list-style-type: none"> <li>○ Minimally processed (fourth range)</li> <li>○ Fresh</li> <li>○ Dehydrated</li> <li>○ Canned</li> <li>○ Others</li> </ul> </li> </ul>	<p>29,2%</p>	<p>35 hours</p>
<p>Learning objective 5: To identify the hazards/risks and controls</p>	<p>5%</p>	<p>6 hours</p>

(preventive actions) associated with the storage, handling, processing and conservation of ready-to-eat foods		
<p>Learning objective 6: To learn about, interpret, and apply food safety legislation and/or regulations:</p> <ul style="list-style-type: none"> <li>• At the national level:</li> <li>• At the regional level: Existing Central American regulations</li> <li>• At the international level: Codex Alimentarius</li> </ul>	6,7%	8 hours
<p>Learning objective 7: To adopt modern food inspection principles:</p> <p>a. With a systems-based approach based on:</p> <ul style="list-style-type: none"> <li>• Hazard/risk</li> <li>• Good practices</li> <li>• Process</li> </ul> <p>b. Attitude, preparation and behavior</p> <ul style="list-style-type: none"> <li>• Values and ethics</li> <li>• Leadership</li> <li>• Confidentiality</li> <li>• Communication</li> <li>• Presentation</li> <li>• 5 s</li> </ul> <p>c. Stages of the inspection process</p> <ul style="list-style-type: none"> <li>• Planning and preparation</li> <li>• Inspection: Initiation, implementation and conclusion of process</li> <li>• Preparation and delivery of report</li> <li>• Follow-up</li> </ul> <p>d. Inspection techniques</p> <ul style="list-style-type: none"> <li>• Instruments</li> <li>• Methodology</li> <li>• Taking and handling of samples</li> <li>• Measurement of variables (indicators of contamination, pH level, temperature, etc.) and interpretation of findings</li> </ul>	10%	12 hours