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**PAN AMERICAN INSTITUTE FOR FOOD  
PROTECTION AND ZOOSES (INPPAZ)**

**REGIONAL PROGRAM FOR TECHNICAL COOPERATION  
IN FOOD PROTECTION**

**EVALUATION FOR 1995-1998**

**Regional Program for Technical Cooperation in Food Protection  
Evaluation for 1995–1998**

**1. Background**

The VII Inter-American Meeting, at the Ministerial Level, on Animal Health (VII RIMSA) adopted Resolution III in April 1991 requesting the Director of the Pan American Health Organization (PAHO) to establish a Food Protection Program for 1991-1995.

The Strategic Orientations and Program Priorities (SOPP) for 1991-1995 and the Strategic and Programmatic Orientations (SPO) for 1995-1998 (Documents CSP24/12, August 1994, of the XXXIV Pan American Sanitary Conference and XLVI Meeting of the Regional Committee, and AMPES/DAPS 12-12-94) set forth the following lines of action for technical cooperation in food protection:

**Lines of Action for Technical Cooperation in Food Protection**

"Develop a more complete understanding of the causes and risk factors responsible for foodborne and diarrheal disease and methods for their prevention."

"On the basis of improved knowledge, implement simple and cost-effective measures in communities and families to maintain food and water free of infectious agents, in order to reduce mortality from diarrheal diseases;" and

"Strengthen national capacity to organize and develop integrated food protection programs and epidemiological surveillance systems for foodborne diseases."

## **2. Conceptual Elements for the Evaluation**

### **2.1 Objective**

The purpose of the evaluation was to determine the extent to which the technical cooperation activities helped to achieve the objectives (expected results), targets, or goals set forth in the Regional Program for Technical Cooperation in Food Protection.

To that end, data was collected from the countries that permitted an objective evaluation of the 1995-1998 Regional Program for Technical Cooperation in Food Protection to be conducted. This evaluation made it possible to estimate the scope of the activities carried out and their contributions to achieving the proposed objectives and goals. It also helped to recognize limitations and to set priorities for future technical cooperation.

The information available was used to estimate the direct and indirect benefits attributable to the technical cooperation interventions in food protection, health protection and promotion, and control of foodborne disease (FBD).

This evaluation is based on the information available in the countries involved, at the Pan American Institute for Food Protection and Zoonoses (INPPAZ), and at PAHO Headquarters.

## **3. Analysis of the Results**

Annex 1 outlines the most significant technical cooperation activities conducted during the period in question by the Program on Veterinary Public Health (HCV), at PAHO Headquarters, by the consultants in the countries, and by INPPAZ. However, a more detailed analysis of the technical cooperation by component is presented in the paragraphs below.

### **3.1. Organization of Integrated Food Protection Programs**

The vast majority of the countries in the Region (85%) have received cooperation to establish integrated food protection programs. This cooperation consisted mainly of seminars and/or workshops, dissemination of information, and direct technical assistance

from staff members of the HCV Program and INPPAZ in the Region, seeking to promote mechanisms for interinstitutional articulation in the countries.

As the result of this cooperation, almost 60% of the countries have set up integrated program structures by establishing national or local commissions. However, these programs are operational in only 30% of the countries, with the remainder still in progress.

Although cooperation was provided to approximately 60% of the countries to prepare a plan of action, only slightly more than 20% have a plan in place.

Regulatory aspects were a priority in technical cooperation during the period, since at least 50% of the countries received cooperation for the preparation, issuance, and/or modification of laws, regulations, and standards, as well as for a comparative study and the creation of databases for regional use.

In this regard, there has also been considerable support for activities related to the *Codex Alimentarius*; 75% of the countries received cooperation in this area, facilitating their participation at meetings of the Commission and its auxiliary bodies and in the dissemination of the information generated by such meetings, as a contribution to the harmonization of subregional standards.

To that effect, it is necessary to point to a solid achievement in this component: the establishment of the information system on food regulations by PAHO, in a joint effort with its specialized centers, INPPAZ and BIREME, and with the support of the countries, which has made it possible to develop a compendium of food legislation for use in subregional harmonization.

Another area of cooperation to the countries under this component involves institutional reorganization activities aimed at decentralization and transfer of the responsibilities of the food protection programs to the local levels, thus benefiting 40% of the countries of the Region.

Support for research projects under this component was provided to 40% of the countries. In this regard, it is important to mention the mobilization of resources from the Inter-American Development Bank for a study on microbial contamination of food sold by

street vendors in seven countries of the Region, due to the cholera epidemic in Latin America and to support a better approach to food protection programs for street vendors.

In this component, the linkage and involvement of other international organizations in the delivery of technical cooperation are worthy of special mention. Notable among these organizations are the German Cooperation Agency (GTZ), the Food and Agriculture Organization of the United Nations (FAO), the Organization of American States (OAS), and the United Nations Children's Fund (UNICEF).

Technical cooperation among countries has benefited subregional integration primarily in the MERCOSUR initiative and in food safety programs in border zones--for example, the cooperation between Argentina and Bolivia and between Mexico and the United States.

### ***3.2. Strengthening Analytical Laboratories***

The rising national and international food trade and growth of subregional integration initiatives in this decade have demanded more reliable test results from food analysis laboratories.

Technical cooperation in this component of the Plan of Action has given priority to interventions that improve analytical quality assurance programs in the Region's laboratories. One of the activities that has perhaps made a significant contribution in this respect was the quality assurance programs designed for the laboratories that participated in the study on microbial contamination of food sold by street vendors in Latin American cities.

As a result, more than half the countries in Latin America have set up such programs in their laboratories or are in the process of setting them up. This is in sharp contrast to the situation in the Caribbean countries, where no progress has been made in this regard, partly because several of them have no laboratories devoted specifically to food analysis.

Reference services, a key aspect of the mission of INPPAZ, have also played an important part in PAHO cooperation. The provision of strains, cultures, reference sera, and

standards for residue analysis, together with microbiological and chemical reference analyses, has benefited virtually every laboratory in the Region.

Under the "Strengthening of Analytical Services" component of the Regional Program for Technical Cooperation in Food Protection, INPPAZ conducted an interlaboratory test to evaluate the performance of laboratories devoted to identifying organochlorine pesticide residues in food. Twenty-two laboratories in 12 Latin American and Caribbean countries participated.

The main purpose of the test was: (a) to alert the participating laboratories to problems in their work in gas chromatography; (b) to detect changes in the concentration of the standards in use; (c) to conduct an evaluation of each participating laboratory based on its qualitative and quantitative performance; and (d) to exchange information. In short, to offer support for consolidation of the quality assurance programs.

The results, which on the whole were satisfactory, are an example of the initial phase of an interlaboratory program and offer the prospect of rapid improvement in the overall quality of the analyses.

Analysis of the data and the complementary information compiled reveals the following problems: (a) an absence of standards or an inappropriate concentration of standards; (b) low resolution of the chromatographic columns; and (c) less-than-optimal technical and/or working conditions. This analysis makes it possible to identify and prioritize the goals of the technical cooperation to be provided by INPPAZ.

The training in analytical techniques provided to personnel emphasized the training of laboratory workers in microbiological analyses. An important undertaking was the cooperation in the form of training for 70 laboratory workers from 10 countries of the Americas and the isolation and identification of emerging microorganisms in food, especially *Escherichia coli* O157:H7. Moreover, in 1996, INPPAZ, with resources from the WHO Collaborating Center at the University of Missouri, began developing training programs on the isolation and identification of the following emerging pathogens: *Listeria monocytogenes*, *Campylobacter jejuni*, *Yersinia enterocolitica*, and *E. coli* O157:H7.

Cooperation to address the problem of contaminants and chemical residues in food has been supplied to 50% of the countries through training in the analysis of pesticide residues, antibiotics, anabolics, and heavy metals.

Bearing in mind the high cost and/or unavailability of standards for analytical testing in the international market, INPPAZ has been distributing standard pesticide solutions to laboratories in its member countries since 1995.

PAHO cooperation efforts in this component were complemented with technical and financial support from other international organizations, including FAO, GTZ, OAS, UNICEF, and USAID.

Also important was the promotion of technical cooperation among countries of the Americas and abroad for strengthening analytical capacity and for meeting the demands of globalization and the subregional integration initiatives.

The Caribbean Network of Food Quality Control Laboratories, created in 1989 through a commitment between laboratory workers from several countries of the subregion and PAHO, concluded its operations because of internal decisions by the countries.

Given the need to foster interaction among the laboratories of the Region, during this period PAHO began to promote the establishment of a regional network of food analysis laboratories, in which all the countries of the Americas would participate. This initiative led to the Inter-American Network of Food Analysis Laboratories (INFAL), created in December 1997, with the initial participation of 24 countries of the Region.

### **3.3 *Strengthening Inspection Services***

This is one of the components that has demanded the greatest cooperation by the countries. Almost all the countries received cooperation during the period in question, and the improvements noted are due to the modernization of inspection units, training of inspectors, and incorporation of the hazard analysis critical control point methodology (HACCP) and the programs required for its application, such as good manufacturing practices (GMP) and standard sanitary operating procedures (SSOP).

Following the global trend in this regard, the emphasis of the cooperation in this component was to promote the use of the HACCP approach by the countries' inspection systems to prevent food contamination.

One achievement of PAHO technical cooperation that is worth noting is its contribution to the dissemination of the HACCP approach at several links in the food chain; here it should be noted that all the Caribbean countries and 77% of Latin American countries targeted this activity to the processing industries. The HACCP approach also reached other links in the food chain, such as restaurants, hospital kitchens, and food sold by street vendors.

To support the strategy, these countries received cooperation in the development of training materials for inspectors, as well as manuals of procedures, standards and regulations, and teaching aids.

It should be noted, however, that the principal cooperation activity in this component focused on training. At least 3,088 people working in inspection activities were trained in the theory and practice of applying the HACCP system in food handling, with special attention to meats, milk and dairy products, seafood, restaurants, street vendors, and food suppliers. All the countries without exception received cooperation during this period for the training of inspection personnel. The cooperation provided to the Caribbean countries, however, was broken down into two training courses (one in meat inspection techniques and the other in HACCP), so that inspectors would not have to be sent to training centers in the United States.

Since, the training programs largely targeted select groups of personnel of the countries in the expectation that they would share their knowledge, the cooperation activities are expected to represent a significant contribution to the dissemination of this new approach to food inspection and food protection.

An ongoing concern of PAHO has been to support the countries in complying with international regulations. To this end, the Organization has established links with two institutions in the United States that are leaders in training on the HACCP system: the *International HACCP Alliance* and the *Seafood HACCP Alliance*. This integrated effort has enabled the vast majority of the countries to have trained staff certified by these organizations and has provide training to PAHO staff members, who have adopted the



curriculum and methodology used and recommended by U.S. regulatory authorities and WHO.

Among the international organizations that have provided technical cooperation to the countries in this component, the significant participation of the FAO deserves special mention.

Another positive aspect of PAHO technical cooperation under this component is its promotion of technical cooperation among countries, which is extremely important in this period of burgeoning subregional integration initiatives.

Also important has been the mutual support among the member countries of MERCOSUR, the Andean Pact, and NAFTA in the harmonization of standards and procedures for food inspection, which is a result of the cooperation among countries.

According to reports by the countries during the II FAO-PAHO Pan American Meeting of the National Services and Institutions for the Inspection of Fish Products, held in September 1998, as a result of PAHO technical cooperation, implementation of the HACCP system has been greater in the food processing industries and fish products sector.

#### **3.4. *Epidemiological Surveillance of Foodborne Diseases***

Given the importance of this component for all the activities of a food protection program, it has been a technical cooperation priority for the period in question.

The cooperation strategy called for PAHO to publish the Guidelines for the Establishment of Epidemiological Surveillance Systems of Foodborne Diseases and the Investigation of Outbreaks of Food Poisonings (GUIAVETA), to provide an instrument to serve as the framework for activities for the organization of surveillance systems and the investigation and reporting of outbreaks and cases of FBD, in addition to defining the flow of information.

A regional information system was also established by INPPAZ to collect, analyze, and disseminate the data gathered by the countries; this is published in the bulletin *INPPAZ in the Americas*, which is circulated regularly in the Region.

All the countries received cooperation for the development of epidemiological surveillance systems for FBD during the period in question and, specifically, for the designation of units and focal points for the institutional organization of these systems. In October 1995, INPPAZ conducted a regional workshop for focal points in order to develop the guidelines and operational mechanisms for successful regional epidemiological surveillance.

Furthermore, 16 countries of the Region regularly report to the regional system on the incidence of cases and/or outbreaks of FBD, thanks in part to the training of 1,400 staff members at various levels and the direct advisory services to the countries for the institutional organization, design and operation of surveillance systems, methodology for investigating outbreaks, and dissemination of relevant information.

Another significant achievement in this component has been the promotion of interinstitutional and interdisciplinary integration of the various sectors and units responsible for epidemiological surveillance and investigation of outbreaks of FBD, in addition to the promotion of information dissemination on FBDs at the local and national levels.

The technical cooperation among countries has fostered trade between Cuba and Bolivia, Cuba and Colombia, and Mexico and the Central American and Latin Caribbean countries.

### ***3.5 Promotion of Food Protection through Community Participation***

Action in food protection began with the need to prevent foods from making consumers sick. However, this activity has never seen enjoyed consumer participation but has almost always been spurred by the interest of the responsible authorities.

Despite the acknowledged importance of this component in supporting all food protection activities, it should be understood that progress is limited, as is cooperation to strengthen capacity in the countries to develop strategies that call for community participation in activities to promote food safety.

There are constraints, such as the lack of consumer information on food safety, a topic that is not an integral part of basic education in most countries. The traditional

method of exercising food protection through the public sector alone has not encouraged consumer participation or consumer groups acting in concert to protect their right to health.

In this regard, during the period in question, only 50% of the countries of the Region carried out cooperation activities under this component. These were primarily devoted to preparing educational materials on food protection and, to a lesser extent, fostering the organization of consumer groups or local committees to promote food safety. On this last aspect, it is worthwhile to point out the local activities that were linked to the strategies of other PAHO programs, such as the Healthy Municipios program, under way in 45% of countries, and the Caribbean Healthy Hotels Program, in place in 50% of the Caribbean countries.

In this component it is necessary to point out the regional activities carried out in conjunction with the FAO, such as the Latin American Workshop on the Integration of Consumer Interests in Food Safety, held in Quito, Ecuador, and the Latin American Seminar-Workshop on Food Sold by Street Vendors, held in Montevideo, Uruguay, which brought together more than 100 participants from the public sector of all the countries of the Americas, the food industry, and consumer groups.

These activities forged a closer relationship between consumer groups and the official control authorities, and they promoted more active participation in health protection activities.

Nongovernmental organizations, such as Consumers International (formerly the IOCU), the Ecuadorian Tribune of Consumers, the Institute for Consumer Protection (Brazil), and the Association for Consumer Protection (Argentina), were among the groups that participated most actively in providing cooperation under this component.

#### **4. General Conclusions**

Based on the results of this evaluation, PAHO technical cooperation in food protection for the period in question made a valuable contribution to strengthening programs in the countries and bringing together the various protagonists in the food production chain and the control of food safety.

One of the main achievements to underscore is related to the work coordinated by PAHO to foster better institutional organization of the national programs, by gathering all sectors and defining their responsibilities within an integrated program, thus achieving better use of resources and preventing duplication of efforts.

To support this strategy in furthering the joint efforts of the national programs, the cooperation provided very useful tools for all the agencies linked to the food sector, such as the food regulations management system, which also strengthens the necessary harmonization processes resulting from regional integration and economic globalization.

This work has been possible thanks to the interprogram activities of INPPAZ and the Latin American and Caribbean Center on Health Sciences Information (BIREME).

Events during the period evaluated had an unquestionable impact that led to a change in outlook among policymakers in the countries about the importance of food safety, in order to prevent the contamination of food and foodborne diseases.

Motivated by the cholera epidemic and the food from street vendors implicated in its transmission, the study on microbial contamination of this food source for the first time, through a more far-reaching study, led to information on the microbial quality of food from street vendors and on the social and cultural characteristics of the people involved in its sale and consumption. The contribution of this study to spreading the word about the concept of quality assurance to participating laboratories should also be noted.

Food safety in activities linked with tourism was emphasized when cholera surfaced in the Region, due to the risk of its spread to areas with heavy tourist flows and the impact it would have on that sector, which, in some countries is a vital source of national revenue.

Following the recommendations of the Pan American Conference on Food and Tourism, held in 1992, PAHO has concentrated its cooperation in food and tourism activities in the Caribbean hotel service sector, supporting in particular the training of food handlers and promoting the importance of food safety through the application of HACCP. Sentinel stations have also been set up for epidemiological surveillance of FBD in some hotels.

Another factor that had wrought significant changes in the orientation of technical cooperation has been the consecutive FBD outbreaks caused by food of animal origin contaminated with the emerging pathogen *Escherichia coli* O157:H7. This situation became serious enough to produce an overhaul of food inspection and control systems, primarily in the United States, but extending to other countries in the Americas and to other continents.

This overhaul implied a change in approach in terms of the responsibility for food safety, which now calls for greater participation by the productive sector in exercising quality control and identifies the preventive and proactive nature that such control measures should have to ensure food safety.

This, in turn, has also prompted a change in PAHO cooperation to adapt to this new trend. It has led to the need to strengthen the Organization's cooperation capacity to meet the growing demand of the countries to train their human resources in the HACCP system, the foundation of this new approach to ensuring food safety.

This new approach has also forged closer ties between the productive sector in all links of the food chain and the regulatory authorities and cooperation agencies. It has also strengthened ties with the consumer, leading to what today is viewed as the need for participation by all sectors to guarantee the availability of safe food.

In the search for new instruments to ensure food safety, PAHO, in coordination with agencies such as the International Atomic Energy Agency (IAEA), sponsored a *Coordinated Research Project on the Use of Irradiation as a Public Health Measure to Control FBDs in Latin America and the Caribbean*. This project is under way in scientific institutions in Brazil, Chile, Cuba, Mexico, Peru, the United States, and Uruguay. The final results will be presented at the XI Inter-American Meeting, at the Ministerial Level, on Animal Health (XI RIMSA).

The findings of this study determined this treatment's effectiveness in eliminating microbial contaminants from food without altering its organoleptic characteristics or, in case of live oysters, without affecting their live status. This treatment has thus emerged as an alternative for ensuring the safety of some types of food in the Region that, for cultural reasons, is eaten raw.

Furthermore, staff members from HCV and INPPAZ actively participated in national and international events where information on these strategies and/or technical cooperation results were disseminated.

## **5. Future Technical Cooperation Needs**

The national counterparts have been consulted in an attempt to determine countries' need for PAHO cooperation under each cooperation component, under the strategic approaches of the Organization.

It should be noted that the opinions obtained come from the technical staff of the official agencies. In some cases, therefore, they do not reflect the reality but are influenced by political and situational factors and decisions that are beyond the influence of the technical levels.

### **5.1 *Organization of Integrated Food Protection Programs***

In this component, note must be taken that PAHO cooperation needs to remain focused on the progress and the continued development of projects such as the Information System for Food Regulations Management, and on promoting works that seek greater country participation in the activities of the *Codex Alimentarius* Commission as well as the working groups focusing on regulatory aspects in subregional integration initiatives.

Moreover, cooperation activities must emphasize institutional organization for food protection, based on integrated structures, so that they may operate in a greater percentage of countries. The global trend toward the unification of control agencies into consolidated agencies, such as those in Canada, England, and the United States, needs to be an aspect in which cooperation activities encourage countries to achieve this unity, which would be the finest example of an integrated structure for food protection.

Training activities should focus on improving the skills of those responsible for national programs, in both managerial aspects and intersectoral integration. This is important for ensuring that these human resources are the principal promoters and executors of the integration policies.

Another cooperation need is in the dissemination of information. In this regard, it is important that INPPAZ maintain continuity in the work already under way through its Internet Website and in promoting and facilitating access and use in the countries, as a specialized institute in that area.

## **5.2 *Strengthening Analytical Laboratories***

Technical cooperation in this component, which targets reference and quality control services, direct technical assistance, and training, is considered rather necessary, even essential, by the countries. In fact, all the countries consider it essential for PAHO to provide cooperation in the delivery of reference services.

This need voiced by the countries confirms the importance of PAHO's mission with respect to this component and the current interest in quality assurance in laboratories as a prerequisite for facilitating the food trade among countries, together with the necessary equivalence and transparency of analytical services.

PAHO has worked in concert with WHO Collaborating Centers in the Region to deliver technical cooperation. In the future, this should be the principal focus for cooperation in this field, with special emphasis on training human resources and providing reference materials and reagents.

In this regard, INPPAZ will also have a significant role in sustaining the provision of supplies to support regional reference and quality control activities, as well as in strengthening the initiative to set up a regional network of food analysis laboratories, whose principal activities will be to facilitate communication and information exchange, coordinate a regional quality assurance program for laboratories, and mobilize external support to keep the laboratories up-to-date on scientific and technological advances in this field.

The growing importance of contaminants such as emerging foodborne microorganisms suggests that cooperation in training, direct technical assistance, and dissemination of information on isolating and identifying these pathogens should become the priority in this component, as is the case for disseminating up-to-date scientific information on rapid tests for this purpose.

### **5.3 *Strengthening Inspection Services***

According to the views expressed by the countries, the greatest need for technical cooperation to strengthen their inspection services is training for human resources. All the countries consider this essential or rather necessary.

This suggests that the countries are demanding that one of their greatest deficits be addressed under this component, since all inspection personnel must be instructed in the modern approaches based on HACCP principles and the prerequisite programs.

PAHO should therefore concentrate its efforts and resources to fulfill this commitment, giving priority to improving its capacity to offer the countries the opportunity to reverse this deficit in coming years. The innovative nature and steady growth and development of the HACCP system will also demand that PAHO staff receive ongoing training to enable them to fulfill the Organization's commitment to the countries with the technical competence and structure necessary.

In addition, the continued development and updating of packages of teaching materials suited to the regional situation, together with reference documentation, should support another of the needs expressed by the countries, namely, the dissemination of information.

In the future, technical cooperation under this component will need to promote greater use in the countries of new approaches to ensure food safety in the chain of production for local consumption and to ensure that these approaches also begin in the primary production of the raw materials.

Furthermore, the use of methods similar to HACCP should be ensured in the preparation of indigenous food, food from street vendors, and food prepared in the food service industry and the home.

### **5.4 *Epidemiological Surveillance of Foodborne Diseases***

The impact of cooperation under this component suggests that there are apparently fewer shortages in the countries. Accordingly, the major effort during this period has been to develop surveillance, not as a new surveillance system, but rather one incorporated into



the national surveillance systems for diseases, in which tradition and experience have been established in the countries.

The development of instruments, such as GUIAVETA, the Guidelines for the Establishment of Epidemiological Surveillance Systems for FBDs, and the advisory services for institutional organization, have significantly furthered cooperation in this component. However, the countries have expressed a greater need to cover their deficits, primarily in terms of the institutional organization of local systems and the development of policies and standards.

Cooperation should mobilize country resources for the consolidation of local structures that ensure the proper operation of surveillance systems and maintain a continuous flow of information in order to use that information to orient and help to establish intervention priorities for food protection programs.

As a priority interest for future cooperation, PAHO must consider the benefits of interprogram activities with other units of the Organization--for example, the prevention and control component for diarrheal diseases under the Program on Communicable Diseases (HCP/HCT) and the Health Situation Analysis Program (HDP/HAD)--in addition to building partnerships with institutions such as the Centers for Disease Control and Prevention (CDC) of the United States.

The purpose of this integration is to involve these agencies and promote the benefits of coordinated effort in the countries at the local level among all the actors with responsibilities in the health services, epidemiology, and food protection services, including the policy levels.

Cooperation should also foster mechanisms to improve the dissemination of information on FBD at all levels and, principally, to ensure timely reporting of disease outbreaks to support an early-warning system and facilitate early application of preventive measures.

### **5.5 *Promotion of Food Protection through Community Participation***

The limited scope of cooperation in this component is reflected in the high demand expressed by the countries in all the strategic approaches, as seen in the following table.

The most significant changes in official food protection policies are almost always economically motivated. Occasionally, however, they are motivated by heavy consumer pressure. This is the case in the United States, where, at the turn of the century, an inspection system was established due to consumer pressure; 90 years later, that system has again been modified due to renewed community pressure.

This is a prime example of the importance of consumer organization in spurring governments to action and transforming them into a vital ally for official control measures, while promoting self-care, safe food handling, and the right to safe food among the population.

It is necessary to bear in mind that interventions under this component demand, above all, strategies that require knowledge of several disciplines, such as communications, education, anthropology, sociology, and other sciences.

Accordingly, the cooperation must initially focus on establishing a period of internal consultation with experts in these areas and on designing effective strategies to encourage regional action that will provide a general framework of what cooperation should represent under this component. However, it should also devise the adaptations necessary to meet the specific needs of certain sectors, such as basic education, community organizations, consumer groups, food suppliers, tourists, etc.

Some of these strategies should also be designed through interprogram action with PAHO units, such as the Division of Health Promotion and Protection, to include educational components, such as the Healthy Municipios, Healthy Hotels, and other programs, in the initiatives.

## **6. Technical Cooperation Strategy**

The constant development and frequent changes in recent years and the likely persistence of this trend, make it advisable to formulate PAHO's strategy for technical cooperation in food protection along general lines of action consistent with the biennial program budgets of the Organizations programming system (AMPES).

According to AMPES, technical cooperation in food protection (FOS) is classified as a program in the list based on the WHO General Programme of Work, which outlines the goals for the Secretariat for two-year periods.

Preparing plans of action for periods of longer than two years can have drawbacks. These include plans that are not vigorous enough to mirror the constant changes in the food sector or plans that do not subsequently permit objective evaluations because the criteria for such evaluations and the evaluation indicators cannot be applied to that end due to the frequent adjustments that are needed.

In this regard, it is suggested for the 1998-1999 programming period that the technical cooperation follow lines of action based on the results of this evaluation, especially those obtained through the countries' expressed need to strengthen the capacity of their national food protection programs.

One aspect to bear in mind when designing future plans is the need to clearly set out the objectives and the expected results, based on the principle that PAHO cooperation is a **contributing** and not a **determining** factor in changing the situation in the countries. Accordingly, establishing quantitative goals, as in previous plans of action, suggests that the evaluation will likely produce results that translate into noncompliance but are due to factors beyond the control of the technical cooperation.

The suggestion in this regard is that the establishment of the *Regional Program for Technical Cooperation in Food Protection* is based on the participatory work between the PAHO/WHO field offices in the countries and the national counterparts, who will set the national priorities requiring PAHO technical cooperation. This process should be completed in a joint effort between HCV at Headquarters and INPPAZ, at which time the cooperation strategies for each biennium will be established.

To strengthen the planning of the regional program, bearing in mind the results of the evaluation and the changes in the inspection and control methods, INPPAZ prepared a strategic plan in which the short-, medium-, and long-term objectives are defined, as well as the strategies to achieve them.

Based on the results of this evaluation, the priorities for future cooperation will be:

To give continuity to the project on the Information System for Food Regulations Management.

To cooperate with the countries to permit them to participate more fully in *Codex Alimentarius* activities.

To facilitate participation in the subregional integration initiatives.

To emphasize promotion of the integrated approach to national programs.

To provide reference services to the food analysis laboratories.

To promote integration of the national laboratories into the Inter-American Network of Food Analysis Laboratories (INFAL), to further the communication among them, and to establish analytical quality assurance programs.

To improve the training of national laboratory workers in techniques for the isolation and identification of contaminants, especially emerging pathogens.

To promote training for the human resources devoted to inspection in the countries in approaches based on HACCP principles.

To promote the use of HACCP methodologies in all stages of the food production chain (from the farm to the table), in indigenous food production, among street vendors, in institutional dining facilities, and the home.

To contribute to the strengthening of local surveillance structures, which will ensure the proper operation of FBD surveillance systems.

To internally analyze the strategies to be adopted for strengthening community participation in food protection.

To strengthen the capacity for dissemination of information in all components of the *Regional Program for Technical Cooperation in Food Protection*.

To promote interprogram work with others units of PAHO.

To expand the internal capacity of the Program for resource mobilization.

To maintain a policy of ongoing training for the human resources of the Program that will ensure an optimal level of technical cooperation.

**Annex 1**

**Summary of Activities in  
Technical Cooperation in Food Protection  
1995 - 1998**

**Preparation of Plans, Policies, and Standards**

Organization and holding of the III Meeting of the *International Coordination Council of INPPAZ*. 17-19 March 1997

Joint development with the Latin American and Caribbean Center on Health Sciences Information (BIREME) of the Information System for Food Regulations Management, and delivery to the countries of the Region

Assistance to Uruguay in strengthening its initiative for establishing an Integrated National Food Protection Program

Preparation of the Evaluation of the Regional Program for Technical Cooperation in Food Protection, for the period 1991-1996

Presentation of the Information System for Food Regulations Management at the Regional Workshop on Harmonization of Basic Food Law and Regulations for Latin America and the Caribbean (Uruguay) and the Seminar on Food Regulations Management (Brazil)

Joint organization of the International Conference on HACCP of the NSF

Organization and holding of the II Pan American Meeting of the National Services and Institutions for the Inspection of Fish Products

Participation in a joint FAO/WHO consultation on the role of governments in HACCP verification

Participation at the meetings on the joint FAO/WHO/AIEA project on food irradiation

Assistance to Argentina in implementing the national database on food regulations

### **Training**

Workshop on Safe Food Management in Tourist Areas. 25 participants. Santo Domingo, Dominican Republic. 17-19 February 1995.

Workshop on Food Quality Assurance through the HACCP system. 25 participants. Panama. 29 May-2 June 1995.

Jointly with the University of Miami, organization of the International Meeting on Ciguatera and other Marine Toxins, with 55 participants from 24 countries of the Region. Miami, 29 May-1 June 1995.

Seminar-Workshop on Information Systems and Investigation of Outbreaks of FBD, with 45 participants from Argentina, Bolivia, Chile, and Peru. Santiago, Chile, 24-29 July 1995.

First Training Course in Meat and Poultry Inspection for the Caribbean. 25 participants from all the English-speaking countries of the Caribbean. Kingston, Jamaica, 31 July-25 August 1995.

Regional Course on Identification of Anabolic Residue Agents in Food. 9 participants from Argentina, Chile, Colombia, Panama, and Uruguay. INPPAZ, 2-6 October 1995.

The First Seminar-Workshop of Focal Points for Epidemiological Surveillance of FBDs, with 61 participants from the entire Region. INPPAZ, 17 to 20 October 1995.

Workshop on Epidemiological Surveillance of FBDs and Investigation of Outbreaks. 25 participants. Bogota, Colombia. 14-17 November 1995.

HACCP Workshop applied to the Dairy Industry. 50 participants from Argentina and Uruguay. Montevideo, Uruguay, 27 November -1 December 1995.

Meeting of the Subregional Network (Argentina, Brazil, Chile, and Uruguay) on Epidemiological Surveillance of Poisonings by Seafood Products. INPPAZ, 13-15 December 1995.

Through a joint project with the Health and Agriculture authorities of Argentina and with scientific and technical support from WHO Collaborating Centers in food microbiology, in particular the University of Missouri, the first *Regional Course on Isolation and Identification of Emerging Pathogens* was held. Place: International Reference Laboratory, INPPAZ.

In cooperation with the National Service for Agricultural Food Safety and Quality, SENASA, the Seminar-Workshop *HACCP/Pathogen Reduction/Plant Audit* was held, targeting Official Meat Inspectors of SENASA and aimed at strengthening its verification capacity in prerequisite programs for HACCP and plans for that industry. 45 staff members of SENASA participated. Two technicians from the United States participated as principal lecturers at the event.

In a joint effort with SENASA, the seminar *Experiences in HACCP Implementation* was held, with an expert from Germany as Guest Lecturer. During the event, experiences in the use of the HACCP system in countries of the European Union were discussed, as well as regulatory aspects of that system in the countries of the Union. 39 SENASA staff members participated.

As a joint activity with FAO and ILSI International to support the harmonization of food regulations in the Region, a workshop was held prior to the meeting of the *Coordinating Committee of Codex Alimentarius for Latin America and the Caribbean on Harmonization of Basic Food Law and Regulations for Latin America and the Caribbean*, held in Montevideo, Uruguay, 23-28 February 1997. 56 people attended, representing the countries of the Region.

With a view to consolidating criteria in connection with PAHO technical cooperation for HACCP training in the Region, 16 staff members from the Program on Veterinary Public Health and INPPAZ participated in the Seminar *Hazard Analysis Critical Control Point System (HACCP)*, organized jointly with the *International HACCP Alliance of Texas A & M University*.



Training of staff from the countries of South America, Central America, Mexico, and the Caribbean in activities related to food standards and regulations in the countries, in information and management of the *Information System for Food Regulations Management*, developed jointly by INPPAZ and BIREME.

Cooperation in the development of the National Food Protection Program of Honduras; support was provided for holding the *Planning Workshop for Management of the National Food Protection Program*. February 1997.

Participation as lecturers in conducting the Seminar *Total Sanitary Control of the Livestock Chain*, prior to the XXIV Regular Meeting of the South American Commission for the Control of Foot-and-mouth Disease, COSALFA, held in Cartagena de Indias, Colombia. 10-12 March 1997.

Participation as lecturers at the *World Congress on Food Safety*, The Hague, the Netherlands. 27-29 August 1997.

Participation in the seminar *Navigating HACCP*, organized by *Food Chemical News*, 22-23 September 1997. The current trends in the use of the HACCP System in North America were discussed at the seminar.

Organization of the course *Training the Trainers*, offered by the *Seafood Alliance*, Miami, 27-30 October 1997.

Cooperation with the Government of Argentina for participation in *Codex Alimentarius* activities and for attending the meetings of: Committees on Imports and Exports (1), Food Labeling (1), Fresh Fruits and Vegetables (1), *Codex* Commission (1), and Food Safety (2).

Cooperation in conducting *First Seminar for Updating in Triquinelosis*, an event organized with the national authorities of Argentina. INPPAZ

Cooperation with the national authorities of Panama to prepare the Seminar-Workshop on *Surveillance of M. bovis Tuberculosis in Panama*. 2-5 September 1997. 29 staff members from the Ministries of Health and Agriculture of Panama participated.

Cooperation with the national authorities of Paraguay to prepare the Seminar-Workshop on *Epidemiological Surveillance of M. bovis Tuberculosis*. 24-28 November 1997. 35 staff members participated.

Cooperation with Mexico, through the Universidad Nacional Autónoma de México, to conduct the Seminar on HACCP within the *II and III Refresher Course on Meat Safety and Quality*. August 1997 and 1998. 62 participants.

Cooperation with the School of Biochemists of Córdoba Province to conduct the seminar on *The HACCP System for Food Quality Assurance*, as part of the course on Food Protection for Biochemists prepared by the professional association. 29 participants.

Organization of workshops on training in HACCP for personnel from Peru, Paraguay, and Argentina.

Joint offering, with the FAO, of three workshops for HACCP trainers within the framework of the FAO project for strengthening the National *Codex* Committee

Joint organization, with the International HACCP Alliance, of the training workshop on HACCP for meat export inspectors from Central America and the Dominican Republic.

Mexico-Central America Subregional Workshop on Integrated Food Protection Programs and Information Systems on Food Regulations. Guatemala, October 1998.

Development of a project for Strengthening Inspection Services for Food of Animal Origin with the DIPOA of Brazil. Course offered three times, with training for 75 inspectors.

### **Dissemination of Information**

Preparation and publication of the *Abbreviated Guidelines for Application of the Hazard Analysis Critical Control Point System (HACCP)*.

Presentation of works on SIRVE-FBD at the World Congress on Food Hygiene, World Congress on Foodborne Diseases, and Latin American Congress on Microbiology and Food Hygiene.

Preparation and publication of the bulletin *INPPAZ in the Americas. Volumes 5 and 6.*

Information to the countries of the Region on prerequisite programs and HACCP, current list of the compulsory HACCP meat and poultry regulations in the United States and progress of the Program for Pathogen Reduction.

Dissemination of standards for good manufacturing practices (GMP) and standard sanitary operating procedures (SSOP).

Holding of symposia on food safety at the International Congress on Natural Disasters (Cuba) and the Pan American Congress of Veterinary Sciences (Bolivia).

Preparation of technical materials to post on the INPPAZ Website.

Preparation of a document on Food Safety in Natural Disasters and Migrations

Distribution of audiovisual materials on HACCP, Food Handling, Hantavirus, and *M. bovis* Tuberculosis.

### **Mobilization of Resources**

Cooperation of an expert from the University of Missouri for technical management of the First Regional Course on Isolation and Identification of Emerging Pathogens in Food.

Cooperation of the *International HACCP Alliance, Texas A & M University*, with a Head Instructor for training Advisers from the Program on Veterinary Public Health in the HACCP System. Washington, 28-30 April 1997.

### **Direct Technical Assistance**

Assistance to the Binational Agreement ARBOL II (Argentina-Bolivia) for the development of a Comprehensive Training Program in Food Safety in the border area for the prevention of foodborne diseases, with emphasis on street vendors. Preparation of a training and development plan for a Border Workshop on Training Food Handlers.

Assistance to the Governments of Argentina, Brazil, Chile, Mexico, Ecuador, Central America, and Uruguay in the institutional organization and establishment of local epidemiological surveillance systems for FBDs.

Assistance to the authorities of the Panama's Ministry of Health in establishing surveillance of tuberculosis of bovine origin in meat processing.

Advisory services to authorities in Argentina to strengthen the information system on epidemiological surveillance of tuberculosis in slaughterhouses.

Advisory services to the Dominican Republic, Honduras, and Nicaragua on food management in emergencies caused by Hurricanes Georges and Mitch.