PANEL: COMMUNITY PARTICIPATION IN FOOD PROTECTION

COMMUNITY PARTICIPATION IN FOOD PROTECTION IN THE TOURISM INDUSTRY

by

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1. **Introduction**

Tourism is one of the largest industries in the world and one that is experiencing the greatest growth and development in our day in terms of quality, geography, volume, and competitiveness. Promoted by communication, transportation, and financing facilities, a growing population in the millions traverses the earth, moving between continents, for reasons ranging from business to pleasure and leisure pursuits.

Steahr and Roberts (1993) put the annual number of people hospitalized in the United States because of foodborne diseases (FBD) at approximately 750,000, with an average hospital stay of six days, for an annual cost of nearly US$ 3 billion ($687 per person per day) just for the hospital stay. If to this we add the losses in productivity, the figure may be up to 18 times this value.

The annual report of the Caribbean Tourism Organization revealed that in 1998, 19.5 million people traveled to its member countries to engage in tourism, while another 12.2 stopped in from cruise ships. Notes Dr. Merle Lewis, of the Pan American Health Organization’s Caribbean Epidemiology Center, in his article “The Role of Travelers in the Emergence and Reemergence of Infectious Diseases,” when compared with the resident population, this number of visitors makes the Caribbean the most tourism-dependent region in the world. While tourist spending in the region totaled $3.8 billion in 1980, by 1998 the figure had risen to $18 billion. Tourism accounts for 25% of the Gross Domestic Product of the area’s countries and is the principal income category for many of them.

The island of Aruba is located at 2° 30’ N latitude, 70° W longitude, 18 miles (30 km) north of the Venezuelan coast and 31,025 nautical miles from Buenos Aires.

Aruba’s temperatures average 27°C (81°F), and the island is located outside the Caribbean hurricane belt. It has a population of around 90,000. The mortality rate per 1,000 population is 6.0 (world average: 9.9). The birth rate is substantially below the Caribbean average, but the mortality rate is even lower, maintaining a natural rate of increase.

The official language of Aruba is Dutch and the native language Papiamento, which evolved out of the different languages spoken during the island’s history. It should be mentioned that English and Spanish are languages that are commonly used.

The political structure of Aruba is interesting: since 1986, the island has been an autonomous entity within the Kingdom of the Netherlands, with a democratically elected government.
The Head of Government is the Governor, appointed by the Constitutional Monarchy of the Netherlands. The chief executive is the Prime Minister, elected every four years, who holds executive power jointly with a Cabinet, with the support of 21 members of Parliament.

The Kingdom of the Netherlands is responsible for the island’s defense, in addition to its political and diplomatic relations.

Aruba’s economy has been flourishing in recent years (Figure 1). The industry that is most important to the island’s economic development is tourism. This is why the goal of the local tourism industry is to ensure that Aruba stands out from other countries in terms of the quality of its tourist services, infrastructure, and the food and beverages served on the island. The instruments provided by the Hazard Analysis and Critical Control Points (HACCP) system have proven highly value in safeguarding the quality of food and beverages for Aruba’s guests.

**Figure 1. Aruba - Trend of the Gross National Product per capita**

![Graph showing the trend of the Gross National Product per capita from 1995 to 2001.](image)

2. **Attractions of Aruba**

The island of Aruba was born of volcanic activity some 90 to 95 million years ago. The first human inhabitants were the Arawaks, who came from the South American mainland in canoes or by crossing a land bridge that may have existed at the time. The indigenous culture gradually became diluted after the first Roman Catholic church was built in the center of the indigenous community.
In 1986 it was determined that more half the population born on the island was still of indigenous descent; the rest was predominantly Spanish, Dutch, and some minorities such as Asian Indian, Chinese, and African. People from 60 different nations currently live in Aruba.

Aruba is full of delightful surprises. The possibilities abound: in the air, parasailing; on land, on wheels, on foot, or on horseback; on water, in a self-propelled craft, by boat, or by ship, snorkeling or diving to the bottom of the sea.

The ever-present trade winds that keep Aruba dry and fresh also contribute to the unusual vegetation found on the island. Aruba’s trademark is the dividivi (watapana) tree, bent by the winds, pointing always westward.

Bathed by the Caribbean Sea, Aruba is blessed with white sands, crystalline waters, the kindest and friendliest people on earth, and tranquility. Its shopping and good eating are unparalleled, attracting tourists to the island.

Aruba prides itself on offering a “Festival of Food,” and its chefs continue to win gold medals in international competitions.

The “good eating” in Aruba is known worldwide to writers, reporters, and television personalities. There are many reasons for this: the wide range of menus, the fine quality of the ingredients, and even the eye-catching presentation confirm that eating in Aruba is a real experience.

Visitors delight in fresh Caribbean fish, prepared in different ways. It has a wide variety of cuisines to choose from: classical French, Greek, Italian, Dutch, German, Chinese, Indonesian, Japanese, Argentine, Caribbean, American, regional, and of course, typical Aruban cuisine.

All of this is coordinated and strictly controlled by the Hygiene Service, the Aruba Gastronomic Association (AGA), and the Aruba Hotel and Tourism Association (AHATA).

3. **Characteristics of Tourism**

Last year (2000), 721,224 tourists visited Aruba. Since 1998, the annual number of tourists has grown by 5.3%. This growth can be seen in figure 2:
Figure 2. Aruba Number of visitors (1998–2000)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1998</td>
</tr>
<tr>
<td>First</td>
<td>168,399</td>
</tr>
<tr>
<td>Second</td>
<td>156,680</td>
</tr>
<tr>
<td>Third</td>
<td>165,859</td>
</tr>
<tr>
<td>Fourth</td>
<td>156,499</td>
</tr>
</tbody>
</table>

The average number of visitors to the island in the last three years (1998–2000) was 683,994. In the year 2000, tourists spent 5,247,824 nights on the island, or 2% more than in 1999 (5,142,943). These are the data studied on the island for marketing purposes.

The majority of tourists who visit Aruba are from the United States (63% in 2000), with the next largest group from Latin America (23% in 2000). The reasons most often mentioned for visiting the island in 2000 were: vacations (86%), honeymoon (5%), and conventions (1%).

The largest number of tourists to Aruba are in the 30–39 age group (20.12%); in 2000, 11.03% of tourists were in the 60 and over age group. Many of these tourists own one or more time shares and are thus likely to visit the island more frequently. It is necessary to consider aging in this group and its growing susceptibility to pathogens that may be present in food and beverages.
Another characteristic of visitors to Aruba is the length of their stay. The average is two weeks. In recent years, a growing number of tourists have been staying for an extended period (2 weeks or more). These people usually have kitchen facilities in their lodgings and depend to a large extent on the local market for their daily meals—that is, supermarkets, butcher’s shops, bakeries etc. In contrast, people who stay for a relatively short time (less than 2 weeks), eat more often at restaurants. For this group, food safety is essential. Another group should be mentioned: visitors from cruise ships that come into port in the morning and depart at the end of the day. These are one-day tourists, who usually spend their time downtown. Thanks to their cruise package, they only need to eat lunch on the island; breakfast and dinner are served on the ship. These visitors tend to eat at internationally known fast-food restaurants.

While in port, the ship is provisioned with a new stock of fresh food products. Fresh products are brought in by plane. This cargo is transferred directly from the plane to the ship. Other products are procured in the island’s local supermarkets.

Some tourists take the precaution of not drinking the local tap water, preferring to purchase bottled water instead. Aruba’s water supply is subject to strict chemical and microbiological controls to guarantee its safety and optimal quality. The natural water source is the sea, and Aruba’s desalinization plant is the second largest in the world.

4. Infrastructure and Roles

Aruba is a small island that depends in large measure on imports of food products for its subsistence.

Figure 3. Food imports 1997–1999
In 1999, Aruba imported 104,917,000 kg of food, spending a total of $157,088,000 for imports of some of its vital products.

4.1 Public Sector

The Ministry of Public Health is responsible for decision-making and the evaluation of decisions on short- and long-term health management in Aruba. For objective decision-making, the Minister receives advice and recommendations from the Public Health Bureau; together, these two entities determine how health will be managed and assume responsibility for it. The Public Health Bureau consists of several departments and services specializing in inspection and the surveillance, control, and prevention of diseases.

There are three departments that specialize in food control and inspection, among other things:

- the Hygiene Service
- the Infectious Service
- the Veterinary Service

These three services are the core of food inspection, although the support of other Bureau services, such as Epidemiology, Research and Statistics, and the National Laboratory, should not be ignored. Their cooperation is essential to maintaining continuous control and structural prevention.

4.1.1 Hygiene Service

The Department of Hygiene is responsible for food inspection and control, water, and hygiene. Its mission is to safeguard public health. The Department is in charge of a number of activities, for example: oversight to ensure compliance with the safety and biosecurity laws on food and beverages; control over sanitary permits for public and private establishments; investigation of complaints by the community and individuals about food hygiene problems; enforcement of the existing food and beverage laws; monitoring of the handling, processing, and distribution of food and beverages; confiscation of food unfit for human consumption; imposition of penalties appropriate to the severity of the infraction.

In order to exercise these functions, the Hygiene Service regularly programs annual and semiannual visits to establishments where food and beverages are sold. The Service qualitatively classifies the sanitary conditions of the site to be visited, and its decisions are backed by the Director of the Public Health Bureau and the Minister of Health. Concerning the quality of drinking water, the Hygiene Service is in charge of
water surveillance and control. It samples the water at various distribution points of the Autonomous W.E.B. Company, sending the samples to the National Laboratory of Aruba for microbiological analysis. In December 2000 further microbiological control of drinking water was adopted at risk points such as the hospital, the airport, nursing homes, hotels, orphanages, etc.; the surveillance included testing for *Legionella ssp* in the water. To date, there have been no indigenous cases of Legionella disease on the island.

4.1.2 *Infectious Disease Service*

The general objective of this service is to combat and prevent all sorts of infectious diseases. Under this framework, every worker on the island who sells, serves and/ or handles food is monitored.

In Aruba every person who works with food must obtain a health certificate, which must be renewed annually. Aruba’s economic development since 1990 has led to imports of labor, especially from neighboring countries in the Caribbean and South America, not to mention countries as far away as China, the Philippines, and the Netherlands. The continuous structural migration and the influx of workers call for greater monitoring of these immigrants. This one-way migration also carries the risk of importing known exotic infectious diseases that are endemic to certain countries. Some of these diseases have already been controlled and eradicated from Aruba. Cases of tuberculosis, leishmaniasis, malaria, infectious hepatitis, and other diseases have been recorded among these migrants.

The majority of these migrants work in the hotel/tourist sector. The health certificate is obtained after certain medical tests have been done. The first time, a chest x-ray is required, along with a stool analysis for salmonella and shigella; this latter test performed annually thereafter. The inspectors register and administer the certificate. Workers are required to keep the certificate at their workplace. This enables inspectors to ensure that workers have a certificate and to verify its validity right in the workplace. When a suspected or confirmed case of infectious disease is reported, the necessary steps are taken to prevent its spread, and a clinical epidemiological study and laboratory diagnosis are performed for both the individual involved and his or her potential work and family contacts.

4.1.3 *Veterinary Service*

The Veterinary Service protects the well-being of animals to guarantee the health of human and animal population. The Service also monitors compliance with veterinary laws, oversees the health and environment of animals, and ensures quality control of animal products to prevent exposure to high risks to human health.
In order to meet the goals stated above, the Veterinary Service engages in the following activities: inspection of meat for human consumption, destruction of contaminated meats and other animal products that fail to meet the standards for importation or consumption.

The Veterinary Service has a laboratory responsible for detecting toxic and infectious microorganisms in fresh animal products and in the environment where these products are handled and sold (machinery used in the processing and sale of these products). All butcher’s shops in Aruba are registered with the Veterinary Service. Quarterly inspections are conducted and reports issued. These reports permit establishments to compare themselves anonymously with their competitors and past findings. The anonymity of each establishment is guaranteed during the inspection and reporting, since each butcher’s shop is issued a number at random.

There is structural management that offers producers of livestock (lambs, goats, and swine) incentives to use the slaughterhouse when the time comes to butcher the animals. The incentives are a service with a high level of hygiene, an attractive fee for using the slaughterhouse, and inspection of the meat prior to its consumption.

4.2 Private Sector

Aruba’s trade differs not in variety but in quantity from that of neighbors. The food industry is represented by the following sectors:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesalers</td>
<td>54</td>
</tr>
<tr>
<td>Retailers</td>
<td>109</td>
</tr>
<tr>
<td>Bars</td>
<td>26</td>
</tr>
<tr>
<td>Restaurants</td>
<td>74</td>
</tr>
<tr>
<td>Catering</td>
<td>8</td>
</tr>
<tr>
<td>Fast food restaurants</td>
<td>156</td>
</tr>
<tr>
<td>Street vendors</td>
<td>8</td>
</tr>
<tr>
<td>Night Clubs, dinner &amp; dancing</td>
<td>12</td>
</tr>
<tr>
<td>Hotels and resorts (time share)</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>480</strong></td>
</tr>
</tbody>
</table>

4.2.1 Importers/Distributors

The majority of food in Aruba is imported (processed food, meats, fruits and vegetables, grains, dairy products, and fish and other seafood) and is brought in by plane or ship. The Hygiene Service is on call 24 hours a day to inspect these food imports. Local fishing supplies less than 5% of the local market.
There is a seafood distributor that imports for the hotel sector and the local market, and exports local products to the exterior.

In 1999 a course was offered in HACCP, organized by the Public Health Bureau in cooperation with PAHO. Representatives from the following organizations attended: Department of Public Health, Calloway, the Hospital of Aruba, and hotels.

In 2000 an inspector from the Hygiene Service was invited to participate in two courses designed to improve knowledge about HACCP monitoring and inspection tools.

Aruba Gastronomic Association (AGA). At present, this association has 33 members. In May 2000, the AGA took the initiative to ensure inspections of food hygiene at its member restaurants. This inspection was done by Service Measurement Systems, a subsidiary of the Texas-based Freeman Group, which is also used by AHATA (Aruba Hotel and Tourism Association) and the member restaurants of AGA for the inspection of food and beverages in dining facilities. The first kitchen inspection at AGA member restaurants was also done that year.

The purpose of the inspection was establish a baseline for measuring improvements stemming from compliance with HACCP standards. We can proudly say of the 33 members of AGA that, without formal training, their score exceeded 60%, and that half the participants achieved a score of between 70% and 80%. AGA will continue to perform these inspections at least once a year.

5. Implications of Food Safety for the Tourism Industry

Aruba's economic and social development turns on tourism. Today, it is important to view progress in this sector from the standpoint of globalization, which requires actors in the sector to raise quality to the highest possible level. Quality is also reflected in the food served by a country; a decline in food safety could be disastrous for the tourism, economic, and social sectors.

Tourism sector. The impact of any epidemic would be a low number of tourists to Aruba, which would result in lower income in this sector.

As mentioned earlier, more than 11% of visitors to the island are over the age of 60. At that age people are more susceptible to disease. The safety of food and water will affect the number of future visitors from this group. When projecting the consequences for the future, it is necessary to take the age of time share owners or frequent visitors to the island into account. For this group in particular, and for the island and all its guests in general, it is of the utmost importance to maintain and guarantee the safety of the food served here and the purity of the island's drinking water.
Family tourism. Aruba is also known as a family vacation spot. Negative publicity about the food or water could result in fewer tourists from this group.

International hotel chains. The majority of hotels in Aruba are part of an international hotel chain. International development demands that the quality of the hotels remains world-class. An epidemic of foodborne disease would have a negative impact on the image of hotels and Aruba.

5.1 Economic Impact

Negative developments in tourism, Aruba's largest sector, would have serious economic consequences. Beyond lower numbers of tourists and less income for the tourism sector, it is also necessary to consider the potential unemployment that would ensue, part of which would occur in the sector. The impact would also be felt in other sectors that indirectly depend on tourism (stores, taxis, supermarkets, etc.). A potential consequence is inflation for tourists and the local population alike.

5.2 Social Impact

Unemployment and an economic downturn affect the population. The costs can be observed in terms of disease (stress, depression, and other mental health problems.), lost income, etc. The non-financial costs to society should also be taken into account—for example, the impact on the quality of life and satisfaction and the population's certainty that an infectious foodborne epidemic would adversely affect it.

5.3 Initiatives and Measures

The Aruba Gastronomic Association (AGA) is demanding that every member restaurant send a representative of its kitchen staff to participate in the next workshop, organized jointly with the Aruba Management Training Institute (AMTI) and scheduled for May 2001. At this event, the internationally renowned expert in HACCP, Mr. Michael Kasnia, will present a two-day seminar, after which the participants will receive their certification in HACCP. The basics for ensuring food safety in the kitchen will be explained in detail. The instruction will be in English, with simultaneous interpretation into Spanish for those who need it.

The Production of Hygiene criterion will include the date of sale and the nutritional composition of the food, the rotation of food—based on the principle First in, first out (FIFO)—the separation of raw and processed foods, adequate food storage, daily refrigeration record, the transport of foods with controlled temperatures, the use of thermometers to monitor temperature, the replacement of glass with plastic, and the separation of cutting boards.
Personal hygiene criterion. Will include separate washstands in all areas where food is handled, along with soap and towel dispensers, which will be checked and restocked daily. Emphasis will also be placed on regular handwashing, clean uniforms, and disposable caps. Eating, drinking, and smoking in the kitchen area will be prohibited.

Work team criterion. Will include clean cutting boards free of grooves, clean work tables adequate for the work area, shelves, cooking equipment, an area for washing pots and pans, and an automatic dishwasher, as well as appropriate spaces for storing kitchen equipment. Toilets should be available and used properly.

Criteria for hygiene. Will include regular vector control, ongoing and sustainable cleaning programs, clean and unobstructed drains, clean and adequate trashcans/dumpsters, clean walls at least 1.80 meters high, and regular refuse collection. Walls, ceilings, drains, lights, covers, and floors must be clean and in repairable condition.

Other practical recommendations that have been immediately implemented are: purchasing from certified recommended suppliers; cooking all susceptible and potentially harmful food at the recommended temperatures; using pasteurized eggs; separating raw meat, shellfish, eggs, etc., disinfecting and cleaning with an approved detergent or hot water at 150° F for more than three minutes; using only clean, empty plastic containers to store food; keeping potentially harmful food at temperatures above 140° F (60° C) or below 41° F (5° C).

6. Technical Cooperation Required

- The tourism industry’s labor market is highly depends on migration, especially from Latin American countries. In order to ensure continuity of compliance with HACCP rules, it will be necessary to have facilitators for the HACCP course in other languages.

- Inspectors need specific knowledge for monitoring and auditing HACCP rules. HACCP training for this government inspector lasts 10 weeks. For Aruba, it is of the utmost importance that this official be ready to perform the work within a short time.

- Train government HACCP inspectors. An international course on foodborne diseases is scheduled for November 2001.

- Strengthen the foundations for the development of the environmental and food laboratory through training in microbiological analysis, indicators, and the interpretation of results.
• Train a staff member from Aruba’s National Public Health Laboratory at the Microbiology Laboratory of Venezuela’s Rafael Rangel National Institute of Hygiene for research on food pathogens and the detection of histamines.

• Oversee monitoring of the Food and Water Analysis Laboratory of the National Public Health Laboratory’s Microbiology Service.

• Hold a workshop on good laboratory practices and quality assurance programs.

7. **Outlook for Development of the Local Food Safety Policy**

The spread of foodborne diseases is becoming a global public health problem, with many factors affecting their establishment and persistence. Current government policy is geared to setting up a management system for quality control and quality assurance of food, grounded in the monitoring and prevention of health hazards. This would involve joint and coordinated participation between the various public health departments and the private sector (tourism, business, etc.) through the application of standards, guidelines, and rational procedures that ensure food safety. The common goal of this cooperation is to guarantee the health and well-being of both the local community and visitors to the island.

To this end, negotiations are under way for the creation of a Commission for the Study of Foodborne Diseases, coordinated by the Disease Prevention Service and made up of the different public health departments of the Ministry of Health, namely: the Infectious Disease Service, Vector Control, the Veterinary Service, Epidemiology, the Hygiene Service, the National Laboratory, and the Public Health Bureau, with the participation of representatives from the tourism and business sectors. The object is to guarantee the biosafety of foods and to control the diseases transmitted through them. To carry out this ambitious program, contact was established with the Pan American Health Organization for logistical support and technical cooperation to incorporate, update, and optimize the services involved for the control, surveillance, and prevention of foodborne diseases.