

Bangkok's street food project

R. Dawson, S. Liamrangsi and F. Boccas

Richard Dawson is Senior Technical Advisor at the FAO Regional Office for Asia and the Pacific (FAORAP). Suang Liamrangsi is Senior Expert in Public Health at Thailand's Department of Health. Franck Boccas is an FAO Associate Food and Nutrition Officer.

Confronted with the need to control health hazards, street litter, effluent disposal, pollution and obstruction of pedestrian traffic resulting from street food vending, the Bangkok Metropolitan Administration (BMA) authorizes and regulates this activity through the city police and the district Public Health Sections. In the adjacent city of Nonthaburi, the Environmental and Health Division has similar responsibilities.

These local authorities receive technical advice from the national Department of Health (DOH) on aspects of street foods that could affect public health. To guide municipalities, DOH developed a ten-step code of practice for street foods (see Box) which gives recommendations for equipment, handling and storage of foods and general hygiene practices.

With the support of FAO, DOH launched an action-oriented project on street foods in Bangkok and the municipality of Nonthaburi in 1994. This pilot project was intended to improve the safety of the street food areas and the related environment. It was to serve as a model for corrective measures and to attract the interest of decision-makers within BMA. It was hoped that this would lead to further operations in Bangkok and other main cities of Thailand.

To be sustainable, the strategy relied on the resources and energy of the vendors themselves. The project staff gave technical advice, but in order to show that most investments would be made by the vendors if they found the changes to be beneficial, no subsidies were provided to support the improvement of infrastructures. The total budget for the two-year operation, excluding personnel costs and technical assistance by DOH and FAO, was US\$25 000.

MODEL STREET FOOD AREAS

Areas in which the code for street foods was to be implemented were identified. It was expected that after implementation of corrective actions the improved areas and the vendors in those areas would become models for other vendors and the public in general.

The involvement and commitment of the Mayor of Nonthaburi, the directors of three district offices of BMA and the staff of DOH were critical for the project's implementation. During the first two months of activities,

consultations were held with local authorities to explain the project and to select zones in Bangkok and Nonthaburi.

Four areas in Bangkok – Central, Dusit Zoo, Rachawat and Lad Prao Road – and one in Nonthaburi were selected. The first selection criterion was poor sanitary conditions and a need for improvements to reduce serious health hazards. In addition, the areas were chosen because of the likelihood that sales would increase if sanitary conditions were improved since the areas would be visited by more consumers and

THAILAND DEPARTMENT OF HEALTH CODE OF PRACTICE FOR STREET FOODS

Sanitary requirements for street food stalls

1. Vending units should be designed and constructed so that they are strong and easy to clean. They should be kept clean, and food preparation surfaces should be at least at 60 cm above the ground.
2. Foods and drinks should be protected from contamination (microorganisms, toxic chemicals, dirt, etc.). Food displayed for sale should be protected by suitable coverings which can be made of glass, clear plastic or any clean material.
3. Seasonings and ingredients should be of a quality approved by the Food and Drug Administration.
4. Ice for human consumption and drinking-water should be clean and safe. Ice for human consumption should be kept in a clean container and covered. Nothing else should be stored in this container. Handling of ice for human consumption by hands is not permitted. A separate container should be used for the storage of ice used for purposes other than human consumption.
5. Utensils such as bowls, dishes, spoons, forks and chopsticks should be clean, in good condition and made of materials that do not release toxic or hazardous substances into food and drinks. They should be designed for sanitation and kept clean. Utensils with colour decoration on inner surfaces are prohibited.
6. Utensils should be washed in three steps in suitable sinks maintained at least at 60 cm above the ground.
7. Utensils should be kept in a clean place at least at 60 cm above the ground. Bowls, dishes and glasses should be stored in upside-down position. Spoons, forks or chopsticks should be stored with the handles up.
8. Containers and spoons used for seasonings such as vinegar, soy sauce or hot sauce should be made of glass, stainless steel or white porcelain (with no colour decorations), and covers should always be used for protection from contamination.
9. Refuse containers should be of suitable size and designed with a cover. Containers should be emptied and cleaned routinely.
10. Food handlers should be trained specifically on the subjects of personal hygiene and food preparation. They should follow appropriate hygienic food handling practices. The cook should always wear a clean white apron, and hair should be covered.

BENEFITS AND RISKS OF STREET FOODS IN BANGKOK

Street foods make up a significant proportion of the diet of urban residents in Thailand. A study carried out from 1991 to 1993¹ found that a wide variety of Thai, Chinese and Indian specialities were available 24 hours a day in Bangkok. Some 213 kinds of street foods including meals, beverages and snacks were sold by approximately 20 000 vendors throughout the city.

Street foods contributed as much as 40 percent of the total energy intake, 39 percent of the total protein intake and 44 percent of the total iron intake for city residents, especially among young people. For children aged four to six years, street foods contributed 88 percent of energy. Street foods provided almost half the energy intake of adults under 40 years of age.

In spite of these benefits, authorities and consumers were concerned about safety issues. The study revealed that the percentage of positive tests for *Salmonella* spp. in meals ranged from 0 to 10 percent, while the percentage of positive tests for *Clostridium perfringens* and *Staphylococcus aureus* ranged from 0 to 33.3 percent and 0 to 30 percent, respectively. It was reported that 22 percent of samples of *Som tam* (a popular raw papaya salad) had a total plate count of 10^8 to 10^9 CFU/g, 22 percent of samples had coliform bacteria in excess of 1 100 MPN/g and 11 percent of samples had *Escherichia coli* in excess of 1 100 MPN/g. A greater incidence and higher counts of contaminants were found in beverages. Aflatoxins and lead in excess of permitted levels were also found in foods and drinks.

¹ FAO. 1994. *Street foods in Bangkok – the nutritional contribution and the contaminants content of street foods*, by L.S.R. Hutabarat. An André Mayer Research Fellowship Study. Rome.

tourists. Each of the sites selected had a minimum of 15 vendors, concentrated within a fixed perimeter and operating stationary stalls only. Each area represented one type of street food situation encountered in Bangkok, such as

daytime or evening restaurant-like operations or daytime take-away.

Two officers from the BMA district offices were assigned to field activities in each area. It was recognized that these personnel would be key to the success of the project and they were chosen for their long experience, good service records, interest and knowledge of the matter. Other crucial components such as career promotions and financial incentives were carefully addressed in the design of the project.

ASSESSING THE SITUATION

A short survey was made to assess the socio-economic situation and sanitary conditions in each area. In addition, general information about each vendor was compiled to allow for an evaluation of the impact of the corrective actions.

Socio-economic factors

Among the vendors enrolled in the project, two-thirds were women over 30 years of age, mostly married. However, in the Rachawat and Central areas, the majority of vendors were men. More than 95 percent of the vendors had completed primary school or more; vendors were literate but had a low level of education.

Not surprisingly, vendors who sold full meals in congested areas (Rachawat, Central and Nonthaburi) earned more than those who sold snacks in less frequented places (Lad Prao Road and Dusit Zoo). In Nonthaburi, Central and Rachawat, the majority of vendors declared earnings of more than 1 000 baht (US\$40) per day. The most lucrative area was Central,



Young children obtain a large proportion of energy, protein and dietary fat from street foods

where eight vendors declared that they earned more than 2 000 baht per day. On Lad Prao Road and in the zoo, most vendors earned less than 1 000 baht per day. The least profitable location was the zoo, where half of the vendors reported earnings of less than 500 baht per day. At the time of the survey, the minimum salary for an employee in Bangkok was 162 baht per day.

Sanitary conditions

The quality and safety of food in each area was assessed to formulate a plan for corrective actions and to monitor progress towards compliance with the code.

More than 75 percent of the vendors brought water from their homes or nearby areas in plastic containers. In some stalls less than 1 litre of water was used per consumer for cleaning and food preparation purposes, which indicated that cleaning operations were certainly deficient.

On average, coliform bacteria were found in more than 50 percent of the food samples. In some areas, 87 percent of the samples were contaminated. Contamination of vendors' hands and utensils ranged from 18 to 69 percent depending on the area. Where tap water was available, the contamination of utensils was significantly lower.

The disposal of waste water was of particular concern in Dusit Zoo, where the water was emptied directly into the surrounding ponds, causing environmental pollution. In the five other areas, waste water was dumped directly on the road, without any treatment.

Initial inspections of the stalls and food handling practices revealed that no vendors were following the DOH code of practice. Although some vending units were properly designed, they were not kept clean during operation. Foods and drinks were not covered for protection from dust and insects. Some seasonings were not of a quality approved by the Thai Food and Drug Administration. Ice for human consumption was not kept separate from ice for cooling drinks and food products. Eating utensils were sometimes not in good condition, were often washed in buckets set on the floor and were not stored properly. Containers and spoons for seasonings did not conform to specifications. Even those containers that were made of proper materials were not adequately protected from contamination. Garbage bins had no covers or when covered were not equipped with a foot pedal to open the cover. Cooks did not wear aprons or head coverings during operations. Finally, vendors were not properly trained about personal hygiene and food handling.

MOBILIZING THE VENDORS

The mobilization of the vendors was the first action to be carried out. Vendors were summoned by local authorities to

attend half-day briefings on the objectives of the project and the code of practice. The district office directors and the Mayor of Nonthaburi chaired the meetings, and field officers and their staff initiated a dialogue with the vendors. The discussions between vendors and authorities led to oral agreements on short-term work plans for the implementation of corrective actions.

These briefings were well attended and provided an opportunity to begin training of the vendors. The DOH officer showed slides, explained the technical justifications for the code and provided guidelines on hygienic food handling practices. Leaflets, aprons and head coverings were distributed at the meetings.

Directly following the briefings, inspections were made to implement the work plans immediately. The mobilization of vendors was achieved through numerous visits and regular inspections made by field officers and their staff as well as the DOH project manager and FAO officers. During these visits the areas were inspected rapidly, vendors were advised on technical matters, and possible corrective actions were discussed on a case-by-case basis. A comparison of the areas demonstrated that a regular presence was required to mobilize vendors.



Water resources are scarce and facilities are inadequate for cleaning



Risk of contamination can easily be reduced through training of vendors

IMPLEMENTING RISK-BASED CORRECTIVE ACTIONS

In assessing the microbiological risks of street food operations in Bangkok and other major cities of Thailand, DOH identified the following major practices to be corrected: the storage and handling of ice for human consumption; the storage and display of food; food handling; and cleaning of utensils. These concerns are reflected in the code of practice.

Storage and handling of ice

In Bangkok, all cold drinks are served with crushed ice in a glass, cup or small plastic bag closed with a rubber band. Therefore, ice represents an important risk which affects many people. Ice is prepared from potable water. However, crushing procedures, transportation and storage at the stall may have an impact on the quality of the ice. When the project began, vendors were storing ice for human consumption in boxes in which dirty soft-drink bottles and unclean plastic bags of food ingredients were kept. Ice boxes were also not kept clean. The ice was widely cross-contaminated even if it had been of satisfactory quality when it reached the stalls.

A great emphasis was placed on correcting these practices to reduce an obvious risk of biological and physical hazard. Since it was recognized that it was impossible to control the handling of ice before it reached the stalls, this strategy was aimed at avoiding additional contamination rather than eliminating all risks. Furthermore, handling practices at the stall had to be corrected before any programme to control the processing and transport operations could be envisioned. The use of different clean containers for ice destined for human

consumption and ice for cooling purposes or the separation of ice boxes into two compartments was the technical requirement enforced by the project staff.

Food storage

Precooked ingredients (mostly precooked meat products, meatballs and seafood), spices and raw ingredients (mainly sliced meat, chopped green onions, herbs, sliced raw cucumber, tomatoes, chilies and papaya) for the preparation of noodle or rice dishes and soups were stored at ambient temperature without adequate covering to prevent environmental and insect contamination.

During soup preparation, raw meat, meatballs and noodles were usually immersed in a hot broth for one to two minutes. The soup was then poured into a bowl, and raw ingredients, spices and seasonings were added before serving. Fried rice and fried noodles were prepared in a similar way. Precooked poultry was displayed at ambient temperature and served with steamed rice without any reheating. Even when cooking was sufficient to reduce the bacterial load significantly, the addition of raw vegetables, precooked ingredients and spices before serving these dishes was identified as a possible risk of contamination.

The project staff insisted that raw or precooked ingredients, especially those to be eaten raw, be thoroughly cleaned and kept in ice boxes, and that spices and seasonings be kept in closed containers to reduce cross-contamination.

The preparation of *Som tam* (raw papaya salad) was even more difficult to correct because raw vegetables, chilies, dried shrimps and raw crabs were crushed in a mortar. It was

recommended that the quality of ingredients be controlled through washing and storing as described above, that mortars and pestles be properly washed and that the inclusion of raw crabs be avoided.

For the vendors selling curries, soups and composite dishes, the major challenge was to try to keep the food hot and covered in order to prevent bacterial growth and to reduce cross-contamination. Under the existing conditions, it was impossible to maintain the dishes at a proper temperature, i.e. above 60°C. The vendors used a table with a space of 1 to 2 m² to display five to ten dishes, and they had one or two gas stoves for cooking and heating. Investing in adequate holding equipment was financially impossible. Although not fully satisfactory, the corrective action proposed consisted of increasing the frequency of reheating and covering each dish individually.

Ready-to-eat snacks tended to be deep-fried. In this case the risk was related to the amount of time that they were displayed without protection. The project staff insisted on food covering and proper food handling practices and advocated the use of small packages which the vendors and the consumers found convenient.

Food handling

In large stalls, where specific tasks could be carried out by different individuals, hand washing was recommended especially for cooks. Reorganization of the duties of the different helpers was also advocated to reduce cross-contamination. For example, it was recommended that only one person handle money, and that this person should not touch the food with his or her hands. Having different people handle ready-to-eat food and garbage is another example of an easy risk-management measure.

At first, hand washing was strongly advocated in all situations. However, it was soon apparent that this would be difficult to implement efficiently in stalls where the work force was limited to one or two persons. In these stalls, the vendors had to carry out all tasks. It was impossible to require that they wash their hands every time they touched raw food or unclean surfaces. Instead, they were encouraged to use clean utensils to handle ready-to-eat food.

Cleaning of utensils

The washing of utensils and dishes was another aspect of street food operations that needed to be rectified. Corrective action consisted primarily of requiring that washing be done in three steps (soaping, rinsing and rinsing a second time) in three different sinks held at least 60 cm above the ground, according to Step 6 of the code.

EDUCATING THE PUBLIC

Several steps were taken to support vendors' efforts and to increase public awareness. Large panels and signs were displayed in each of the areas to indicate that the areas were undergoing improvement through joint efforts of municipal authorities, DOH and FAO. Aprons distributed to the vendors were also printed with the logos of DOH and FAO, and various press releases were issued in Thai- and English-language newspapers.

CASE-STUDIES

A short description and a review of the impact of the project activities is given below for three areas.

Central and Lad Prao Road areas

The Central area is located in front of a large shopping mall. Fifteen street food vendors serve common Thai preparations of soups, meals and noodles as well as barbecued snacks to shoppers and mall employees. The 37 vendors on Lad Prao Road sell take-away food on a narrow pavement. Vendors at both sites operate from 10:00 to 20:00.

In the Central and Lad Prao Road areas, corrective actions progressed quickly, thanks to the strong mobilization of the



Ready-to-eat foods displayed without minimal precautions

local police and vendors. The implementation of the first nine steps of the code was nearly completed after one year of effort. The improvement of infrastructures, orderliness and cleanliness of both areas was also satisfactory.

In the Central area compliance with Steps 1 to 9 was satisfactory overall, although some adjustments for adequate display of foods and drinks were still needed in two stalls. Vendors financed the installation of additional lights and a removable roof to replace the previous sunshades. Utensil cleaning facilities were improved, and waste water decantation tanks (with grease traps) were installed by the vendors on their own initiative. Garbage bins were provided by BMA, and banners indicating that the area was under improvement were displayed for the information of the public.

Storage of raw and semi-cooked ingredients also improved. For example, showcases were equipped with doors to keep insects out. Separation of ice for human consumption and for cooling purposes was managed regularly by using different ice boxes or arranging two compartments in the same box. Vendors began to keep most of their raw and precooked ingredients in ice boxes and to display only the minimum quantity required for their immediate operation.

In the two largest stalls staff wore clean aprons and head coverings, and owners imposed a rule that their staff wear uniform-colour dress. Although this modification did not directly affect food safety, it demonstrated the increase in motivation and discipline that had occurred. Each of the vendors made visible personal efforts to improve operations and facilities.

After one year, the vendors in the area declared that their daily incomes had increased by 20 percent. This gain demonstrated that consumers reacted positively to the efforts and that improvements could bring benefits to the vendors.

The dynamic on Lad Prao Road was similar. Stalls were progressively equipped with adequate and strong protection devices such as plastic showcases. Cooking equipment was removed from the front of stalls, which eliminated potential physical hazards for passers-by and consumers. The use of individual packages for ready-to-eat snacks began to be standard practice. Although progress was excellent in two stalls, the preparation and storage of food still required general improvement after one year.

Dusit Zoo

Among families, Dusit Zoo is a very popular green spot in Bangkok, especially on weekends. It has one restaurant, two food centres and several snack bars which deliver a wide variety of meals, snacks and beverages for all consumers. Significant progress has been made at the Dusit Zoo

Restaurant and in the snack bars. Overall compliance with eight of the ten steps of the code was achieved. Major visible improvements included modifications of food preparation areas, dish cleaning facilities, storage procedures and facilities for raw ingredients and seasonings. However, garbage disposal, storage of utensils, training of vendors in personal hygiene and pest control measures were not satisfactory.

Although more effort was made in the two food centres than in the restaurant, less progress was achieved, primarily because of a different managerial arrangement: the restaurant and snack bars were operated under a contract between the manager and the zoo administration, while the two food centres were run by relatives of the zoo employees on a rotating basis. Each family was given permission to operate a centre for one year. Because the activity of the families was temporary, with no possibility of continuing after the year ended, it was more difficult for the administration to impose sanitary requirements on them than on the manager of the restaurant and snack bars. Their motivation was very low, and it was difficult to persuade them to implement even rudimentary precautions such as the protection of food and drinks from contamination, the use of ingredients and seasonings of a quality approved by the Thai Food and Drug Administration and the proper handling of ice.

The zoo administration closed the food centres during the month of September 1995 to modify the sewage system. During the closure the food centres were cleaned and renovated, which provided better conditions for the application of certain requirements of the code such as those regarding the design of stalls, the design, cleaning and storage of utensils and appropriate waste disposal. A new group of vendors was established, and training in personal hygiene, food preparation and food handling was started on the initiative of DOH. These vendors were authorized to sell for the year ahead and were more cooperative in setting up their operation in conformity with the code. This particular situation is a good illustration that little improvement can be expected if vendors do not have long-term authorization to sell.

LESSONS FOR THE FUTURE

This pilot project has demonstrated that food safety in street food operations can be improved through the implementation of risk-based corrective actions, even if such improvements cannot immediately reduce the risk to the levels that can be attained in fully controlled operations. In food factories, General Principles of Food Hygiene and risk-based management tools such as Hazard Analysis Critical Control Point, Total Quality Management or the International Organization for Standardization's ISO 9000 series can be

implemented fully, but this does not appear to be the case with street foods, at least at this time. The elaboration and implementation of corrective actions in street food operations is hampered by the socio-economic situation of the operators, the environment, which cannot be controlled, and the behaviour of consumers, who are often unaware of the risks they face. The inspector cannot ignore these constraints and must identify means of reducing risks where possible without destroying the street food sector, which may be the only source of food available for large clusters of the population and the only source of income for many poor families.

This pilot project emphasized the preparation of foods and their storage and also focused on drinks and ice for human consumption. In the case of Bangkok, imposing separate and clean ice boxes for ice to be used in drinks appeared to be an important and relatively easy-to-implement risk-management measure. Although this strategy could not guarantee safe ice everywhere, it prevented an increase of risk by avoiding mishandling at the stall. Requiring vendors to use seasonings that are approved by the Thai Food and Drug Administration and registered also reduces risk. Checking the integrity of labels on seasoning bottles and banning unlabelled containers can prevent harmful products from being used and is another useful and simple risk-management measure. It was possible to improve the washing of utensils, especially glasses, forks, spoons and chopsticks which all come in direct contact with the mouth and fingers of consumers and can easily carry pathogens from one individual to another. Obviously, such measures have the potential to reduce risk. Last, it is possible to ask operators to modify some of their food handling practices. In particular, they should avoid direct contact of hands with ready-to-eat foods.

Risk managers have two options in designing their policy to control street foods with the view of reducing health risks. The first consists of studying each and every street food process used in the city and trying to identify the points at which control measures can be applied. This is, indeed, the most satisfactory approach to the problem for the researcher. However, when the aim is to propose risk-management tools that can actually be used, it is very likely that the assessment will suggest a limited list of corrective actions, perhaps very similar to those implemented in this pilot project. The second option, which is perhaps more cost effective and less time consuming, is to draw up a list of risk-based corrective actions that have been implemented in other contexts and to verify their validity in the case being addressed so that implementation can begin immediately.

The latter is the approach that was followed in this particular project. A series of risk-based corrective actions, also called "Sanitary requirements for street food stalls", was

implemented to reduce the risk in street food operations. Such a list of actions could also be designated as "Code of practice for street foods", "Steps for safer street foods" or "Code of conduct for street food vendors", provided that the text is easy for local authorities to implement. When the list is developed it is extremely important to include other recommendations that may not have a direct impact on food safety but that will stimulate the vendors to improve the general cleanliness and orderliness of their operations. Asking the operators to comply with these requirements is part of the educational process that will lead to risk reduction. It is easy to imagine that vendors who do not make the simple effort to keep their stalls clean and in order will certainly not care about other more complicated and demanding requirements that directly affect food safety. Furthermore, cleanliness and orderliness will attract more consumers and therefore generate additional resources which will encourage the operators to sustain their efforts to improve their operations.

Prospects of expansion

Officers from 16 districts of BMA were invited to a one-day seminar at which technical issues and regulatory and practical aspects of the project were presented. Prospects for expansion were discussed with field officers from the pilot project. Formal negotiations to formulate a plan of action for the gradual establishment of model street food areas in all of the districts of Bangkok have been launched. A project proposal was prepared which may lead to a yearly allocation of funds for each BMA district office for the implementation of the code of practice and the setting up of a street food advisory service within BMA to conduct the activities. ♦

Bangkok's street food project

Street stalls are a convenient, inexpensive and major source of food for the public in Bangkok. These operations are also an important source of income; vendors reported sales of US\$20 to \$80 per day. However, street foods raise public health concerns. In a study carried out from 1991 to 1993, some of the drinks and foods sampled were found to be contaminated.

National and local authorities in Thailand, with FAO assistance, developed a project to improve the safety of street foods. The project assessed food quality and safety factors such as storage and protection of foods and drinks; use of approved ingredients; cleaning of equipment; food preparation; disposal of garbage; and personal hygiene of food handlers. With this information, Thailand's Department of Health developed a ten-step code of practice for street food operators which is used comprehensively by local authorities.

The vendors, primarily women, were trained and assisted in the means of complying with the code. To motivate vendors to improve their operations, regular inspections by field officers were required.

While the project staff gave technical advice, the strategy relied on the resources and energy of the vendors themselves. Improvements in cleanliness and orderliness attracted consumers, which generated additional resources for vendors and encouraged them to make additional, more difficult changes to reduce health risks. However, the number of feasible corrective actions to improve the safety of street foods is limited by the socio-economic situation of the vendors, the inability to control the environment and the lack of consumer awareness.

Le projet modèle de vente d'aliments sur la voie publique à Bangkok

A Bangkok, les aliments vendus sur la voie publique sont une source commode, bon marché et considérable de nourriture pour les habitants de la ville. Cette activité est aussi une importante source de revenus, d'après les vendeurs, qui font état d'un chiffre d'affaires compris entre 20 et 80 dollars EU par jour. Cependant, la vente d'aliments dans la rue pose un problème de santé publique. Une étude effectuée entre 1991 et 1993 révèle qu'une partie des aliments et des boissons analysés étaient contaminés.

Les autorités thaïlandaises, aux niveaux national et local, ont mis au point, avec l'assistance de la FAO, un projet visant à améliorer l'innocuité des aliments vendus dans la rue. Ce projet a permis d'évaluer la qualité des aliments et les facteurs d'innocuité, notamment le stockage et la protection des aliments et des boissons; l'utilisation d'ingrédients agréés; le nettoyage du matériel; la préparation des aliments; l'évacuation des déchets; et l'hygiène personnelle de tous ceux qui participent à la manipulation des aliments. Muni de ces informations, le Département de la santé thaïlandais a élaboré un code d'usages en 10 parties, à l'intention des vendeurs d'aliments sur la voie publique, qui offre aux collectivités locales un outil complet.

Les vendeurs, en majorité des femmes, ont reçu une formation et une assistance destinées à leur permettre d'appliquer le code. Pour inciter les vendeurs à améliorer leurs méthodes de travail, il est apparu nécessaire de prévoir des inspections effectuées par des agents de terrain.

Le personnel du projet a fourni des conseils techniques, mais la mise en œuvre de la stratégie repose sur les ressources et l'énergie des vendeurs eux-mêmes. L'amélioration de la propreté et de la présentation ont attiré les clients, engendrant une augmentation des recettes qui a encouragé les vendeurs à entreprendre des changements supplémentaires et plus difficiles pour réduire les risques sanitaires. Cependant, le nombre de mesures correctives que peuvent prendre les vendeurs pour améliorer l'innocuité des aliments vendus dans la rue est toutefois limité du fait de leur situation socioéconomique, de l'impossibilité de maîtriser l'environnement et de l'absence de prise de conscience chez les consommateurs.

Proyecto sobre alimentos callejeros en Bangkok

Los alimentos callejeros son una fuente cómoda, poco costosa e importante de alimentación para la población de Bangkok. Las operaciones de venta de alimentos en las calles son también una fuente importante de ingresos que reportan a los vendedores entre 20 y 80 dólares EE.UU. al día. Sin embargo, los alimentos callejeros suscitan preocupación en lo que concierne a la salud pública, dada la contaminación de algunos de los alimentos y bebidas de los que se han tomado muestras.

Las autoridades nacionales y locales de Tailandia han desarrollado un proyecto, con asistencia de la FAO, para mejorar la inocuidad de los alimentos callejeros. El proyecto ha evaluado factores relacionados con la calidad e inocuidad de los alimentos, entre ellos el almacenamiento y la protección de alimentos y bebidas, el uso de ingredientes aprobados, la limpieza del equipo, la preparación de los alimentos, la eliminación de los desechos y la higiene personal de los manipuladores de alimentos. Con esta información, el Departamento de Salud de Tailandia estableció un código de prácticas en doce etapas para las personas que manejan alimentos callejeros que las autoridades locales utilizan como referencia.

Los vendedores, principalmente mujeres, recibieron capacitación y asistencia para observar el código. Con el fin de motivar a los vendedores para que mejoraran sus operaciones, fue necesario que funcionarios locales llevaran a cabo inspecciones periódicas.

Aunque el personal del proyecto ofreció asesoramiento técnico, la estrategia se basó en los recursos y energías de los propios vendedores. Las mejoras en la limpieza atrajeron a los consumidores, lo cual generó nuevos recursos para los vendedores y los animó a introducir otros cambios más dificultosos a fin de reducir los riesgos para la salud. Sin embargo, la situación socioeconómica de los vendedores, la incapacidad de controlar el medio ambiente y la insensibilidad de los consumidores limitan el número de medidas correctivas que pueden aplicarse para mejorar la inocuidad de los alimentos callejeros. ♦