

FINAL PROGRAMME REPORT FORMAT

EXECUTIVE SUMMARY

The overall objective of the programme was to rebuild food safety and food processing industry capacity in Iraq through the technical support of three UN collaborating agencies (WHO, FAO and UNIDO) to work with three ministries of Health (MOH), Agriculture (MOA) and Industries (MOI) and other relevant line ministries involved in Food safety with the overall goal to protect consumer's health through addressing the weaknesses of the food safety system as well as the gaps in the food production sector which were identified at the beginning of the programme in 2006. It aimed at assisting the Government of Iraq to put in place mechanisms for reviewing and possibly updating food laws and regulations, developing coordinated Food control mechanisms/services, improving the food production sector and developing an integrated programme for prevention and control of food borne diseases.

The programme has succeeded in addressing most of the challenges that were identified when it was launched and this is illustrated by the following achievements:

1. Food quality control mechanisms have been strengthened thanks to the rehabilitation of key reference and regional food safety laboratories, including the Nutrition Research Institute (NRI); the Food Safety Section of the Central Public Health Laboratory (PHCL), the rehabilitation and upgrading of three regional food control laboratories of Basra, Mosul and Erbil.
2. The quality of imported food stuffs is currently better ensured compared to 2006, through the new quality check procedures that are now routinely carried out on all food consignments crossing border entry points where existing quarantine border laboratories have been upgraded through training of personnel and provision of equipment. The network of these laboratories has also been widened by the construction of two quarantine border laboratories of Safwan and Zirbatiya in Basra and Wassit governorates respectively.
3. The dairy processing industry sector has been upgraded and as a consequence, the quality of milk and milk derived products has improved thanks particularly to the rehabilitation of the milk collection center in Babil and the rehabilitation of the Mosul dairy factory. This is in addition to the capacity for dairy, sugar and vegetable oil industries which has been increased through provision of laboratory equipment and supplies.
4. Professionals from different ministries have acquired new skills through a series of intensive training packages inside and outside the country, encompassing a wide range of disciplines. Applying these skills in the field has made difference to the beneficiaries of the services rendered.
5. Through the programme, there have been a review of existing laws and policies related to food safety and the country has also become a regular participant to Codex alimentarius activities.
6. Improved skills to investigate, control and manage food borne and zoonotic diseases has allowed to have better reporting system of these diseases and in preventing outbreaks of communicable zoonotic diseases.

However, despite these achievements, the gaps in the area of food safety remain immense and the country should continue to invest in food safety interventions and the technical expertise from specialized agencies will be still needed.

I. Purpose

The overall objective of the Food Safety Programmes, supported by three UN collaborating agencies (WHO, FAO and UNIDO) was to assist the MOH, MOA, MOI and other Ministries involved in Food safety to protect consumer health and increase potential of the food trade sector in Iraq, through addressing current weaknesses of the food safety system as well as reducing gaps in the food production sector. The immediate objectives were to:

- Create a coordination mechanism for a comprehensive national level food safety system including the establishment and operation of a National Codex Committee;
- Strengthen the capacity of the national institutions and their staff active in food control and improving enforcement at all levels;
- Improve the environment for the development of entrepreneurship in the food processing sector;
- Assure improvement of food safety throughout food continuum

The following were the main expected outcomes/outputs:

1. National food safety profile (all national food control means and data) assessed.
2. Laws and legislations on food safety reviewed and possibly adopted.
3. National Codex Committee for Iraq (NCCI) setup and participation and contribution of Iraq to the work of Codex Alimentarius Commission and other food safety international forums increased.
4. Food monitoring and food-borne disease surveillance enhanced and coordinated.
5. Food control laboratories rehabilitated and emergency preparedness of food control system increased.
6. Food Inspection and food control of imported food improved.
7. Food consumed, distributed, marketed or produced are of the highest affordable standards of food safety and hygiene and food handlers committed to ensure hygiene conditions are maintained in the food processing facilities.
8. HACCP principles in selected food industry facilities are in place and enforced in three food processing industry sectors as a pilot of dairy, fruits/vegetables and mills and serve as models that the government can possibly extend to other sectors.
9. Good and safe agricultural practices applied with less chemical contamination, including pesticides
10. Consumers educated on the risks of unsafe food and its short and long term impact on health.
11. Infant and maternal mortality due to food related diseases reduced

All the eleven outcomes are in line with the vision of the government of increasing the role of agricultural production to achieve food security and also in line with UNDAF outcome related to people of Iraq having improved food and nutrition security and food safety.

II. Assessment of Programme Results

i) Narrative reporting on results:

Within the framework of the joint United Nations programming, the World Health Organization (WHO), the Food and Agriculture Organization (FAO), and the United Nations Industrial Development Organization (UNIDO), implemented the programme to support the Government of Iraq in rehabilitating and rebuilding some of the food production projects, central public health laboratories, food quality control laboratories, food inspection control facilities at the border entry points and in rehabilitating some of the food industrial processing companies in the dairy, vegetables and fruit industry and milling sectors in addition to supporting institutional and human resource capacity building through workshops and development of policies and strategies . The project was implemented jointly by the above-mentioned agencies, with the following technical specializations:

- The WHO focused on public health food safety related components, with emphasis on food legislation and food borne disease surveillance system, as well as quality assurance through upgrading food control

laboratories, capacity building of institutions and human resource development, health education, and public awareness on the importance of food safety.

- FAO concentrated on the agricultural sector, with emphasis on the supply chain and linkages to the Codex Alimentation as well as food control facilities at entry points.
- UNIDO focused on the food industry sector, including an emphasis on capacity development for quality control within the sector.

Below is a summary of the major results which were achieved through the programme:

- The national control means and data were reviewed and the National Food Safety Profile was updated including the inter-ministerial high committee on nutrition and food safety.
- Food safety laws and regulations were reviewed and international food standards and quality assurance approaches were suggested for integration in the new proposed framework for Food safety laws.
- Over 60 professionals from MOH, MOA, MOI and Ministry of Planning were trained in Codex
- A system for food-borne disease surveillance was established and put to use in the Nutrition Research Institute (NRI) and at the Center for communicable diseases of MOH .
- Through the programme, Iraq was able to resume its regular participation to Codex Alimentarius and other food safety forums. Iraq has actively participated to the 6 codex meetings with about 10 Iraq experts attending and making technical presentation. This effort has been sustained beyond the project lifespan until present.
- The three regional food control laboratories of Basra, Mosul and Erbil and two food control facility at border entry points of were rehabilitated, equipped and staff trained inside the country and abroad. Modern laboratory equipment, office furniture, computer and communication equipment were provided to rehabilitated facilities.
- The process of certification of food quality control has improved due to technical and logistic means provided to the Food Inspection and Food control at entry points.
- Hygiene practices in restaurants and other outlets which are part of the food chain (from farm to fork) have improved thanks to the impact of health education training and awareness raising campaigns conducted through this programme
- Food industries (dairy, fruits/vegetable and milling sectors) have improved their production models and processes and many of them are now applying Good Manufacturing Practices and Hazard Analysis Critical Control Point (HACCP) principles
- The use of chemicals and pesticides in agriculture have been assessed and measures to reduce chemical contamination in food chain were taken and followed up with the relevant ministries to trigger awareness on environmental issues. This has contributed to safe agriculture practices, although much remain to be done in this specific domain
- Building the capacity of different categories of actors in food safety, including institutions and staffs, have contributed to the improvement of food safety. This has contributed to the overall reduction of child and maternal mortality which has been observed between 2006 and 2010, including mortality due to food safety related diseases.

ii) Qualitative assessment:

The project contributed to the establishment of practical and effective mechanisms for updating and reviewing food safety regulations in the country to regulate the control process of food safety and quality throughout the phases of food production up to the stage of consumption. The following are some of the findings from the independent evaluation which was conducted for this programme:

- The project was successful in enhancing the capacities of national control institutions in charge of food safety, and the development of the capacities of technical staff in these institutions by organizing several workshops specialized in health, health control and inspection, as well as new methods for quality control

in MoH and the Central Organization for Standardization and Quality Control, under the supervision of WHO.

- The project was also successful in establishing work systems, developing strategies and guidelines, adopting systematic approaches to risk management, reviewing standard specifications of products and raw materials, and improving testing methods in cooperation with health control units, central inspection departments, quality control departments, as well as the relevant departments in the MOH, MoI and MoA.
- The project helped to improve working environments, as well as production levels. This was evidenced by the performance of factories of the State Company for Dairy Production which are managed by MOI in cooperation with MoA. In order to meet the basic needs of raw milk, the project supported awareness, orientation and education campaigns about the significance of food safety, in addition to enabling the promotion of milk among dairy factories and preventing the use of pesticides and antibiotics in treating animals and plants during harvest, and the isolation of treated animals and in preventing the mixing of milk produced by sick animals with milk collected from healthy ones.
- The increase in the efficiency and effectiveness of food testing labs has contributed to the surveillance of the quality of produced food in food industry projects in the country, quality control of drinking water, as well as the quality of imported meat, fish, poultry, eggs, powder milk and various dairy products. However, the fact that food control check points were not established on the Basra border means that results in this area were not fully achieved—full control over imports is not yet ensured by essential implementers in southern Iraq, which constitute the transit route of about 50% of all food items imported into Iraq.
- The project did not include production projects for food manufacturing by the private sector, such as private dairy factories throughout the country. The same applies on canning projects in several suspended canning factories, due to exceptional circumstances in the private sector. As such, there remains a significant portion of the market which has not yet benefited from the interventions initiated by the project.
- The various training courses inside and outside the country have contributed to upgrading the capacities of technical and scientific staff working in the health sector as well as in the food production industry. UNIDO and WHO contributed, to this result, which was based on new methods and approaches in quality control such as HACCP, GMP and GHP applications.
- The equipment provided to health labs and production company labs, as well as the provision of scientific resources, have encouraged and motivated the workers in these labs to undertake research and development activities in the field of food safety in their areas of specialization, and in cooperation with neighboring scientific universities and scientific research departments that belong to the Ministry of Science and Technology.
- Participation in the meetings of Codex Alimentarius Commission by concerned persons in the MoH and the Central Organization for Standardization and Quality Control has contributed effectively to the development of standard specifications for food items and the application of specifications issued by the International Standards Organization (ISO).
- The introduction of new methods in food testing and analysis (i.e. use of portable kits) has effectively facilitated the process of obtaining faster, lab results, and has facilitated decision-making in term of edibility and quality of materials and products. Similarly, quality checks in the system have been greatly facilitated by the new equipment. Examples include: examining the hygiene of workers using the Hygiene Monitoring System; the use of the Portable Grain Analyzer that measures protein; humidity and fats in all types of grains; the Hydro Palm Aw that measures humidity in food; and the Alcohol Analyzer.
- The introduction of state of the art testing equipment in the labs of state companies, such as the HPLC and Atomic Absorption, as well as the training of their workers, has contributed meaningfully to the development of the capacities of labs in companies that belong to the Ministry of Industries.

ii) Indicator Based Performance Assessment:

	Performance Indicators	Indicator Baselines	Planned Indicator Targets	Achieved Indicator Targets	Reasons for Variance (if any)	Source of Verification	Comments (if any)
Outcome 1: To improve food safety and increase the potential of the food trade sector in Iraq.							
Output 1.1 National food safety profile: review of all national food control means and data	Indicator 1.1.1 - Inventory of available means for food safety - Food safety profile finalized	0 0	Report of the review Profile report	Achieved	NV (no variance)	MOH/NRI	Achieved
Output 1.2 Laws and legislations on food safety reviewed and possibly adopted.	Indicator 1.2.1 Reviewed laws in place in two years.	1	1	1		MOH/NRI	The review of existing food related regulations laws was completed in 2007 and led to a WHO/FAO/UNIDO position paper on the steps recommended to the GoI in order to set up an independent food safety authority. However the adoption of laws is yet to occur
Output 1.3 National Codex Committee set up	Indicator 1.3.1 National Codex Committee in place.	0	1	all	NV (no variance)	MOH/MOA/MOP	Achieved and the Codex Committee is operational The meetings of the Codex Committee comprising of representatives of all concerned ministries are held on a regular basis.
	Performance Indicators	Indicator Baselines	Planned Indicator Targets	Achieved Indicator Targets	Reasons for Variance (if any)	Source of Verification	Comments (if any)
Output 1.4 Food monitoring, animal and food borne disease surveillance system enhanced and coordinated.	Indicator 1.4.1 Reports on Incidence and prevalence of food borne diseases made available.	0	Monthly reports	All	N/V	MOH/CDC	Achieved, the major food borne diseases are now part of the regular reporting of Communicable diseases Center
Output 1.5 Contributions of Iraq to the			Participati	70%		MOH/NRI	

work of Codex Alimentarius increased	Indicator 1.5.1 Regular attendance in Codex meetings by Iraq representatives	0	on to 5 annual Codex meetings		Due to various reasons some meetings are missed out	archives	Every year Iraq participates to at least 3 Codex activities .
Output 1.6 Regional food control laboratories rehabilitated and Emergency preparedness of food control system increased	Indicator 1.6.1 Three operational food control laboratories established with food control Protocols.	0	3	All	N/V	Visits to the three labs of Basra, Erbil and Mosul	This output has been completed at 100%, including three food control laboratories. A monitoring visit to the food control lab in Erbil was completed by project staff. The evaluation team has confirmed in its report that all of the food control laboratories under MoH in Mosul, Basra and Erbil were found fully operational and in good conditions.

	Performance Indicators	Indicator Baselines	Planned Indicator Targets	Achieved Indicator Targets	Reasons for Variance (if any)	Source of Verification	Comments (if any)
Output 1.7 Food inspection and food control systems of imported food improved	Indicator 1.7.1 -Operational food inspection system established. - All sampled shipments inspected	0	Annual Food Inspection reports Monthly reports of lab results of samples	All	N/V	Archives of MOH/Health Audit department	-This output has been achieved. -Rabiaa food control at the border point was not built as the zone was considered military zone
Output 1.8 Food consumed, distributed, marketed or produced are of the highest affordable standards of food safety and hygiene and Food handlers committed to ensure hygiene conditions are maintained in the food processing facilities	Indicator 1.8.1 -Inspections of food establishments done at regular intervals - Better cleanliness and hygiene in model food processing facilities promoted.	No inspection No GHP followed	Regular inspection visits Regular inspection for GHP compliance	All	N/V	MOH/Audit department MOI archives	As observed by the evaluation team, and evidenced by both site visits and field interviews, inspections have improved in both frequency and quality. In addition, substantive improvements have been observed in cleanliness and hygiene in food processing industries and in food outlets.

	Performance Indicators	Indicator Baselines	Planned Indicator Targets	Achieved Indicator Targets	Reasons for Variance (if any)	Source of Verification	Comments (if any)
Output 1.9 HACCP principles are in place and enforced in selected food industries facilities (diary, milling and fruits/vegetables sectors). These enterprises serve as models for the other enterprises of the sector	Indicator 1.9.1 Three food processing model enterprises have HACCP principles incorporated and quality assurance system in place.	0	3	5	More food industries have adopted HACCP principles	MOH Audit Department Inspection report MOI Inspection reports	HACCP principles have been incorporated into project interventions. The evaluation data indicate that HACCP training has been provided to industry staff and that the principles have been incorporated and quality assurance systems are in place in Diwaniya and Mossul Dairy Factories.
Output 1.10 Selected Food enterprises are applying GMP and HACCP principles.	Indicator 1.10.1 Guidelines for GMP and HACCP for the selected sectors developed and implemented in up to 30 industries in private and public sector.	0 factories using GMP and HACCP guidelines	30	40	There are more food industries applying GMP and HACCP guidelines	MOI and MOH inspection reports	GMP, GAP, and HACCP principles are repeatedly referenced in project documents, and training has been provided where appropriate. The output has been achieved in spirit through the interventions at the Mosel and Babel dairy facilities.
Output 1.11 Safe agriculture practiced with less chemicals	Indicator 1.11.1 Levels of hazardous chemicals in food products reduced to acceptable levels.	0	All food products with no chemicals	Estimated achieved at 70%	It is difficult to test all products But samples tested showed that about 30% of samples fail the tests	CPHL and MOH/NRI laboratory results	The evidence from the field evaluation indicates that more rigorous testing is now taking place as a result of the training and equipment provided by the project. During site inspections, records confirmed that levels of hazardous chemicals in food products are generally reduced to acceptable levels,

	Performance Indicators	Indicator Baselines	Planned Indicator Targets	Achieved Indicator Targets	Reasons for Variance (if any)	Source of Verification	Comments (if any)
Output 1.12 Consumers educated on the risks of unsafe food and its short and long term impact on health	Indicator 1.12.1 IEC Materials on the importance of food safety and how to contribute to reducing food borne diseases developed disseminated in all governorates	0	4 Health promotion materials produced	8	It was felt necessary to conduct additional activities for promoting food safety and GHP. For this reason, more posters/fact sheets and guidelines on food safety were developed in the different areas of GAP on fisheries and vegetables on GHP, etc	MOH and MOA Archives at central and governorate level	
Output 1.13 Staff involved in food safety programme capacity built taking into consideration specific needs, in particular with regard to gender	Indicator 1.13.1 At least 50% of participants are female.	10% of females	50% of females	45% (average)	In some cases (lab technicians), there were more females than males while in training for food safety managers or inspectors they were less females than males.	Training workshops records in MOH, MOA and MOI	The presence of female workers at project sites and in project workshops has been anecdotally noted. Female university graduates have been employed in labs for food testing.

iii) Evaluation, Best Practices and Lessons Learned

The project model, in both operational and programmatic terms, was very sound and has assisted the Government of Iraq to rethink the way food safety issues should be managed. Different ministries were able to work together to overcome the traditional issues of vertical programmes where different institutions working on the complementary topics could not communicate and coordinate. There are always coordination challenges when working with multiple agencies and multiple ministries. However, the collaboration of the MOH, MOA and MOI was a good model where MOH played an important role as Secretariat to the inter-ministerial high committee on Nutrition and Food Safety.

Many of the project outputs have a long lasting impact and activities related to these outputs have been sustained. This has been highlighted by the independent evaluation conducted after the completion of the programme. The evaluation has revealed that this programme was useful and succeeded in achieving the expected results

The way the training courses focused on training of trainers were organized is one of the best practices that need to be retained for similar programmes. It involved experts with field experience who were able to come in the region and interact with the trainees, particularly with regard to the training on the use and trouble shooting of specialized laboratory devices. The fact that some of the experts were from Arabic speaking countries such as Jordan has facilitated tremendously the process of gaining rapidly the new skills. Sound technical knowledge of trainers coupled with appropriate training environment were essential to the success of such these activities

It is important to choose participants based on professional background, and in a transparent manner, taking into account their scientific and qualifications. This was important to maintain as a principle, in a environment where often, opportunities for training as often misused and seen just as an opportunity to go abroad without looking at the contribution of the trainees to the programme in the country. As such, line ministries in Iraq are encouraged to articulate clear selection criteria for potential candidates for learning opportunities.

Another area of best practices was the development of the capacities in disease surveillance, where collaboration between veterinary services in the Ministry of Agriculture worked closely with their colleagues of the Ministry of Health/Center for communicable diseases to integrate the two surveillance system with exchange of data and information instead of duplicating the work.

The establishment of the food safety system helped preventing the spread of food and water borne diseases. One particularly effective mechanism within the system, as determined by the evaluation team, was the use of simple technologies such as portable kits that can be used with a minimal training by most of food quality control lab technicians.

iv) A Specific Story (Optional)

Samples of some pictures taken at different stages of project implementation



Food Control Laboratory in Mosul



Laboratory equipment used in food analysis



Mosul dairy product factory



Training of trainers of Lab technicians (Amman)

Glossary of Abbreviations

CPHL	Central Public Health Laboratory
FAO	Food and Agriculture Organization
FSMS	Food Safety Management System
GAP	Good Agricultural Practices
GDP	Good Distribution Practices
GHP	Good Hygiene Practices
GMP	Good Manufacturing Practices
GOI	Government of Iraq
GPP	Good Production Practices
GTP	Good Training Practices
HACCP	Hazards Analysis at Critical Control Point
IEC	Information, Education and Communication
ISO	International Standards Organization
NRI	Nutrition Research Institute
UNIDO	United Nations Industrial Development Organization
WHO	World Health Organization