

Independent Evaluation Report

IRAQ

Rehabilitation of the Mosul Dairy Plant

UNIDO project number FB/IRQ/10/001



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO EVALUATION GROUP

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Abbreviations and Acronyms

AFSSOT	Agriculture and Food Security Sector Outcome Team
BOQ	Bill of Quantities
CTA	Chief Technical Adviser
DDP	Diwaniyah Dairy Plant
FAO	Food and Agriculture Organisation of the UN
GAP	Good Agricultural Practice
GHP	Good Hygienic Practice
GLP	Good Laboratory Practice
GMP	Good Manufacturing Practice
HACCP	Hazard Analysis and Critical Control Point
IAA	Inter-agency Agreement
ICI	International Compact with Iraq
KRG	Kurdistan Regional Government
MCC	Milk Collection Centre
MDG	Millennium Development Goal
MDP	Mosul Dairy Plan
MoA	Ministry of Agriculture
MoIM	Ministry of Industry and Minerals
NDS	National Development Strategy
PDS	Public Distribution System
NPC	National Project Coordinator
PSC	Project Steering Committee
PMU	Project Management Unit
SCDP	State Company for Dairy Products
SME	Small and Medium-scale Enterprises
SOE	State Owned Enterprise
SWOT	Strengths-Weaknesses-Opportunities-Threats
TOT	Training of Trainers
UHT	Ultra Heat Treated
UNAMI	UN Assistance Mission for Iraq
UNCT	UN Country Team
UNDG-ITF	United Nations Development Group Iraq Trust Fund
UNIDO	United Nations Industrial Development Organisation
USD	United States dollar

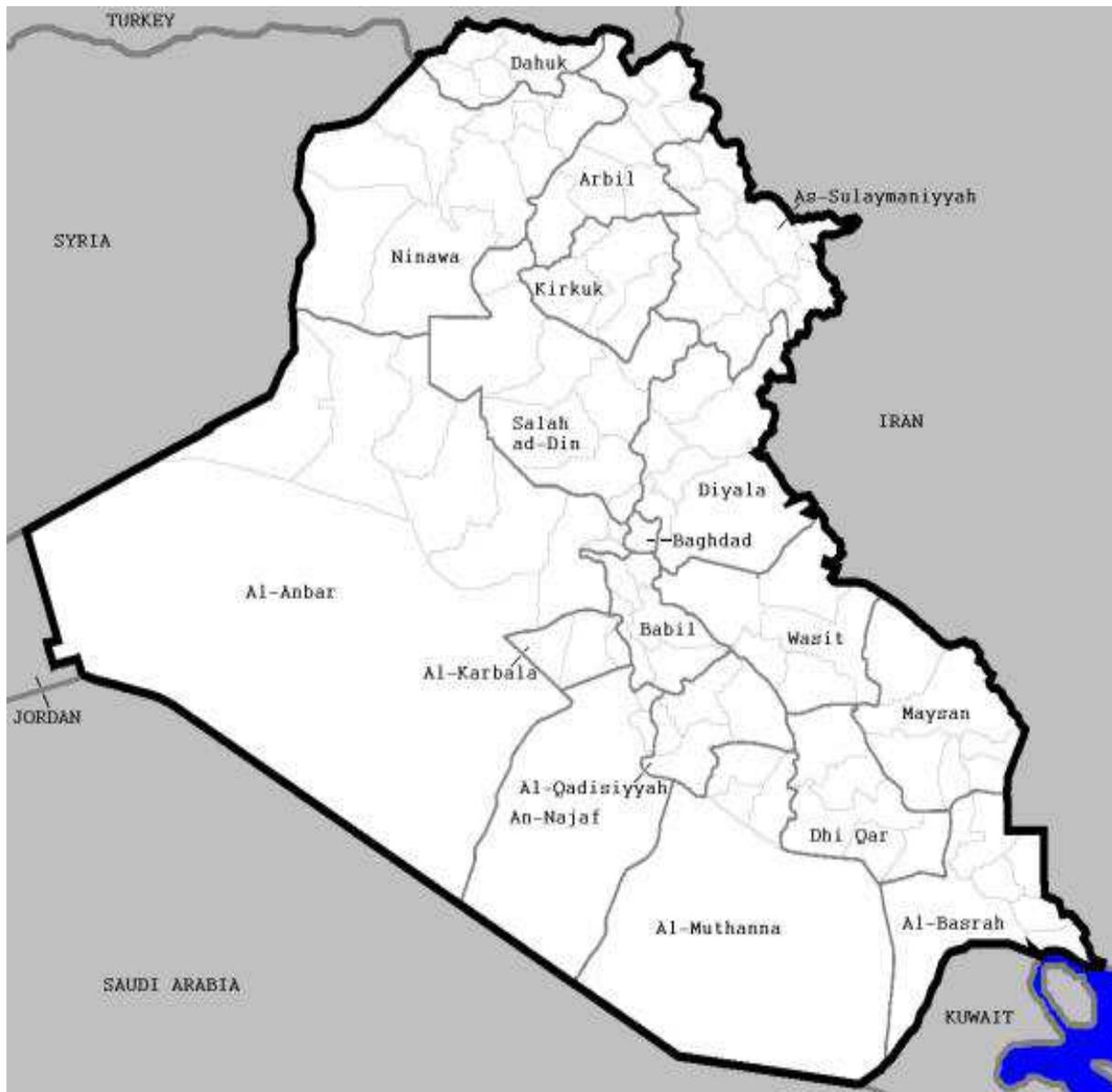
Glossary of Evaluation Related Terms

Term	Definition
Conclusions	Conclusions point out the factors of success and failure of the evaluated intervention, with special attention paid to the intended and unintended results and impacts, and more generally to any other strength or weakness. A conclusion draws on data collection and analyses undertaken, through a transparent chain of arguments.
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance.
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results.
Impacts	Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended.
Indicator	Quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor.
Institutional development impact	The extent to which an intervention improves or weakens the ability of a country or region to make more efficient, equitable, and sustainable use of its human, financial, and natural resources, for example through: (a) better definition, stability, transparency, enforceability and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Such impacts can include intended and unintended effects of an action.
Lessons learned	Generalizations based on evaluation experiences with projects, programs, or policies that abstract from the specific circumstances to broader situations. Frequently, lessons highlight strengths or weaknesses in preparation, design, and implementation that affect performance, outcome, and impact.
Logframe	Management tool used to improve the design of interventions, most often at the project level. It involves

Term	Definition
	identifying strategic elements (inputs, outputs, outcomes, impact) and their causal relationships, indicators, and the assumptions or risks that may influence success and failure. It thus facilitates planning, execution and evaluation of a development intervention. Related term: results based management.
Outcome	The likely or achieved short-term and medium-term effects of an intervention's outputs. Related terms: result, outputs, impacts, effect.
Outputs	The products, capital goods and services which result from a development intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Recommendations	Proposals aimed at enhancing the effectiveness, quality, or efficiency of a development intervention; at redesigning the objectives; and/or at the reallocation of resources. Recommendations should be linked to conclusions.
Relevance	The extent to which the objectives of a development intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donors' policies. Note: Retrospectively, the question of relevance often becomes a question as to whether the objectives of an intervention or its design are still appropriate given changed circumstances.
Results	The output, outcome or impact (intended or unintended, positive and/or negative) of a development intervention. Related terms: outcome, effect, impacts.
Sustainability	The continuation of benefits from a development intervention after major development assistance has been completed. The probability of continued long term benefits. The resilience to risk of the net benefit flows over time.

MAP: Location of Project in Iraq

Source: UNIDO, 2010



Executive Summary

Background

The project FR/IRQ/10/001 *Rehabilitation of the Mosul Dairy Plant* (hereinafter called the MDP project) was approved in December 2009 and started in January 2010. Its purpose (outcome) was *'the enhancement of production and productivity within the agricultural sector through focussing on dairy related elements'*. Following a nine months extension the project was completed in September 2012. This independent final evaluation took place, intermittently, over the period May to December 2012 in order to assess and analyse project results and to make recommendations to government and UNIDO on follow up.

Prior to its destruction in the early 1990s, Iraq had a well-functioning, largely government owned dairy industry operated by the State Owned Enterprise (SOE) for Dairy Products (SCDP), though milk and dairy products were produced largely from imported dairy commodities. In 2007 consumption of milk and dairy products in Iraq was growing at almost twice the speed of production (9.6% compared with 5.2%), driven largely by rapidly rising imports.

Project philosophy

In the context of substituting imported with domestically produced milk, the project was to build on the experience gained under an earlier UNIDO implemented dairy project in the south of the country. The MDP project was to serve the north of the country and, crucially, also smaller scale private dairy companies. As part of the SCDP, the MDP was built in the mid-1970s. By 2010 it was suffering from old age and war damage, obsolete equipment and technologies, and lack of spares causing prolonged breakdowns and concerns about increasingly high product wastage levels, poor food safety and heavy financial losses. MDP is the only large plant in the North of the country serving a potentially huge market with 150 employees due to be made redundant if the plant and the business could not be turned around.

The intervention was to embrace a holistic cow to consumer approach with an overarching strategic focus on capacity building and technology transfer. By outsourcing upstream milk production activities to the FAO, the MDP project planned to leverage FAO's specialised expertise and presence on the ground in Iraq through its leadership of the United Nations Development Group Iraq Trust Fund (UNDG-ITF) Agriculture and Food Security Sector Outcome Team and the on-going FAO implemented *Modernisation and development of the dairy sector cattle in Iraq* project.

Project design and formulation

The logic for the project may thus be partly regarded as substituting an ever-growing reliance on increasingly expensive dairy imports, in turn having a serious

adverse effect on the country's balance of payments. The project thus focussed on re-establishing MDP as a modern efficient facility capable of producing safe, affordable and nutritious processed milk and dairy products for the people of northern Iraq. This market pull was, over time, to be the pathway to push farmers to produce more milk and hence increase their incomes. In so-doing the intervention theory prioritised the changes and pre-conditions that might be sufficiently influenced by the project. This logic contributes to the premise that dairy is an effective driver of reducing poverty and creating jobs. The results framework and indicators in the project document clearly indicated how this logic fits the food security, employment generation goals, and market-oriented agriculture outcomes of the National Development Strategy (NDS) and the International Compact with Iraq (ICI) strategic development framework.

The original project budget was USD 8,519,608 co-financed by the government (USD 6 million delivered through the SCDP); and the UNDG-ITG with Italian earmarked funding (USD 2,519,608 delivered through UNIDO). This was the first time Iraq and Italy had co-financed a project in Iraq. By project close, estimated expenditure against the Iraqi and UNIDO budgets was 71% and 95% respectively.

Project management

From the outset a project oversight mechanism was put in place that overcame the many challenges stemming from the tense security situation prevailing in the Mosul area throughout the project. The Project Steering Committee met every nine months or so but lacked a member from the Ministry of Agriculture (MoA), rather compromising upstream dairy value chain milk production interventions. Overall project management was with the Agro-Industry Branch of UNIDO in Vienna. On the ground project supervision was by a National Project Coordinator (NPC) based at the SCDP head office in Baghdad and the UNIDO team led by a Chief Technical Adviser (CTA) initially from Amman, and later from Finland. Construction works at MDP were supervised by an independent civil engineer contracted by the project. International equipment suppliers contracted by SCDP supervised plant installation at MDP and on-the-job training.

It seems the project design assumed the security situation would improve. It did during the first year (2010), but then deteriorated again so that the PMU (CTA and NPC) could not transfer to Erbil/Mosul. As a result, the important one-on-one coaching and mentoring elements of capacity building and technology transfer did not really happen.

Outputs and outcome

Of the 35 activities employed to deliver the three project outputs almost half were not produced, mainly related to upstream milk production, but also including the dairy sector development plan. Others fell short of expected quality, e.g. the MDP business

plan. More encouragingly almost 70% of the indicators from the results framework were achieved.

Project evaluation

Relevance: the relevance of the project was clearly demonstrated. The project addressed both NDS and UNDG-ITF strategies concerning food security, employment and income improvement for vulnerable households in rural and urban areas, albeit at selected links in the local cow to consumer dairy value chain. Mosul is the second largest city in Iraq with a population of 1.5 million people. Iraq imports about one third of its processed milk and dairy product needs. Given the volatility of global dairy commodity prices since the project was framed in 2009, the relevance of the project was reinforced by sharp international price rises.

Ownership: it was a Government initiated project executed by UNIDO, in close collaboration with the Ministry of Industry and Minerals (MoIM), regional authorities and SCDP, with FAO as the collaborating agency. There was strong ownership along the MDP downstream value chain as well as from private sector dairy actors. Ownership among upstream milk producers is unknown.

Efficiency: operating at a distance from Mosul, the project management team performed well given the prevailing strained working environment and was resourceful in adjusting to the many challenges in maintaining supportive working relations with all stakeholders. Savings on personnel, training and miscellaneous costs were reallocated to procuring much needed services equipment and supplies for MDP. That said the cooperation between UNIDO, MoIM and SCDP was compromised by lack of technical dairy experience at PMU level, which might have resulted in better management of the FAO sub-contracted activities. Not having a representative from MoA, the line ministry responsible for agriculture, primary food and milk production, on the steering committee further compromised milk production activities.

Effectiveness: the effectiveness of the project concerns the extent to which the three outputs delivered the outcome.

Output 1: *MOIM, regional authorities and SCDP staff have improved capacities to develop strategies and plans.* This output was only partly achieved and to date has contributed little to attaining the overarching project outcome. This was largely because the UNIDO and FAO teams decided that the in-depth dairy strategy for the Northern Governorates could not be developed effectively due to the uncertain prevailing legal, economic and security situation, including the lack of fresh milk. The transfer of strategic planning and milk procurement capacity to MDP/SCDP management was thus limited.

Output 2: *Enhanced national capacities for quality and quantity of milk production in Iraq* This output too was only partly achieved. Though the downstream training programme results were significant with almost 180 public and private dairy sector stakeholders participating, many on the milk quality and food

safety courses, upstream dairy farmer and extension staff results are unknown. Fresh milk deliveries to MDP average just over 1,000 litres daily. It is imagined this latter component has laid the foundation for improved capacity in the future thus contributing to the overall project outcome.

Output 3: *Mosul dairy plant rehabilitation support for improved dairy production.*

This was the star project output, contributing significantly the overall project outcome. The MDP is now a modern dairy plant capable of producing high quality milk and dairy products tailored to the northern Iraqi market. That this was output was achieved under such a challenging environment is a tribute to the persistence, ingenuity and hard work of the entire SCDP, MDP and UNIDO project team. In the process 141 jobs have been sustained at MDP.

Impact and sustainability

The project was one of two inter-dependent halves of the dairy value chain in the four Northern Governorates of Dahuk, Erbil, Ninewa and Sulaymaniyah. First, the well-delivered downstream rehabilitation of key parts of the MDP business; second the uncertainty surrounding what the project delivered for the upstream part, i.e. milk production. The sustainability of the project, and its capacity building and modern technology transfer interventions, were thus compromised. MDP production and sales have increased by over 40% since rehabilitation, albeit largely based on using imported raw materials (milk powder and cheese). This occurred in a difficult trading environment caused in the main by fierce competition from imported finished products and the security situation. Net profit for 2011 is reported to be six percent of turnover, returning the MDP business to profitability for the first time since 2003, when imports were much lower. This is the true impact of the project; but it is incomplete impact. Full impact will only come when the security situation allows MDP and the MoA to deliver on increasing supplies of fresh milk to MDP from local farmers, guided by a participatory strategic dairy development plan for the region. And, in so-doing, achieving sustainability and longer term impact to the benefit of improved food security, employment and incomes; and the NDS/ICI priorities of private sector revitalisation and improving quality of life.

Recommendations

The report concludes by recapping project results in terms of its main strengths and weakness, which, in turn, informed the following recommendations.

For UNIDO

- (1) For holistic food value chain projects containing components outside UNIDO's core competence, e.g. primary farm level milk production, tighter results-based contracts with experienced and technically capable organisations should be negotiated to reduce the risk of failure. Notwithstanding the challenging environment in Iraq concerning access to milk producers, a director-level meeting with FAO should be convened aimed at lesson learning for enhanced collaborative project implementation in the future.

- (2) Prior to this meeting FAO should be officially requested to submit a full final report for the Inter Agency Agreement (IAA) containing recommendations and credible plan for sourcing fresh milk for MDP.
- (3) The evaluators spent an inordinate amount of time obtaining and collating project progress and other reports. Project management should maintain a complete list (and electronic library) of key project reports and documents. This would not only facilitate evaluations but also provide institutional memory and a knowledge base for informing future interventions.

For the Government and SCDP/MDP

- (4) A fully-fledged longer-term milk production enhancement programme should be introduced in the milk sheds around MDP to foster increased local milk production and supply. The programme should be led by the MoA and its local livestock services agencies and, preferably, involve private sector business development service providers. Over time this should also reduce the cost of fresh raw milk to MDP and private dairies resulting from high transport costs from distant milk sheds.
- (5) Running spare parts for all the new imported equipment at MDP should be procured immediately using some of the remaining Government budget. Future orders for imported equipment should include the requisite spares.
- (6) The MDP business plan for 2013 should include realistic strategies and targets that focus on: (i) consumer food safety awareness and promoting the MDP brand; (ii) raw milk collection; (iii) a feasibility study on investing in a new UHT milk line.
- (7) Ways and means need to be found to encourage the fuller involvement of private sector dairy enterprises in the dairy value chain. Elaboration of the strategic dairy development strategy (not produced by the project) should include, inter alia, a bankable investment plan for the Northern Governorates, would facilitate this.
- (8) For interventions with multi-ministry responsibilities each key ministry should be directly involved in project implementation, i.e. the MoA as well as the MoIM.
- (9) MDP and other SDP and private sector dairy plants will need continued support from government if they are to compete on level terms with dairy imports, especially heavily discounted UHT milk of dubious quality, if the fragile dairy sector recovery is to be sustained to the benefit of local consumers (with affordable nutritious domestic milk and dairy products) and milk producers (boosting regular incomes). Such support might include strict enforcement food safety regulations and introducing tariffs on selected dairy imports.

Possible next phase

SCDP and MDP management indicated that another UNIDO project phase is needed to support the addition of a new ultra heat treated (UHT) milk line at MDP. There is no doubt that MDP needs a UHT line to replace the obsolete sterilised milk line and create critical business mass in terms of milk throughput and sales volumes; and in part to offer consumers a safe alternative to imported UHT brands. This request is not supported at this juncture as it is considered the SCDP and MDP teams have gained sufficient experience to design and implement such an investment project themselves. The project achievement at MDP is testament to this opinion. If there

were to be a follow up phase, it should focus on: (i) supporting private sector dairies; and (ii) building fresh milk supplies for MDP and private sector dairies – a form of technical assistance beyond the mandate of UNIDO.

Assessment for Country Evaluation

In the framework of the Iraq Country Evaluation Report the International Evaluator was tasked to assess the MDP project in the light of the *on-going privatization policies of the Iraqi government*. The assessment is included in this report as chapter IX. Given the circumstances, it is concluded the project was right to channel its support through MDP while building capacity and demonstrating new technologies to the dairy industry at large, including at low risk to the private sector.

1. INTRODUCTION

1.1 Background

The project FB/IRQ/10/001 *Rehabilitation of the Mosul Dairy Plant* (hereinafter called the MDP project) was approved on 16 December 2009. Mobilisation proper commenced in January 2010 and the project was completed in September 2012. It was a Government initiated project executed by UNIDO, in close collaboration with the Ministry of Industry and Minerals, regional authorities and State Company for Dairy Products and FAO under an Inter-agency Agreement (IAA) with UNIDO.

The purpose of the project was “*the enhancement of production and productivity within the agricultural sector through focussing on dairy related elements*”. This outcome was to be delivered through two strategic pillars: (i) capacity building and (ii) technology transfer. The project was part of a raft of food security projects being implemented by UNIDO in Iraq under the Government National Development Strategy. Effectively, it was a second phase of an earlier project: *Pilot project for the rehabilitation of the dairy sector in Iraq* implemented by MoIM, SCDP and UNIDO between 2006 and 2009. This project was evaluated in 2010¹, that is after the MDP project was formulated and started.

In accordance with Section 8 (Monitoring, Evaluation and Reporting) of the project document the MDP project is subject to independent final evaluation, the purpose of which is to enable the government, UNIDO and the United Nations Development Group Iraq Trust Fund to assess:

- project relevance with regard to the priorities and policies of the Government of Iraq, the UNDG ITF and UNIDO;
- project effectiveness in terms of the outputs produced and outcomes achieved as compared with those planned;
- efficiency of implementation: quantity, quality, cost and timeliness of UNIDO and counterpart inputs and activities;
- prospects for development impact;
- long-term sustainability of the support mechanisms results and benefits.

Guided by the UNIDO Evaluation Group, the evaluation was carried out by Mr. Riadh Al-Allaf as National Evaluator and Mr. Brian Dugdill as International Evaluator working intermittently over the period May to December 2012.

¹ Independent Evaluation Report. Pilot Project for the Rehabilitation of the Dairy Sector in Iraq. UNIDO project number FB/IRQ/04/003 (Vienna 2010)

1.2 Methodology

The evaluation centres on the expected outcome and three specific outputs of the project as summarised in the fact sheet below. It was conducted in compliance with UNIDO evaluation policy under the terms of reference given in appendix F.

Given the continuing tense situation in the areas where the evaluation was conducted, i.e. Mosul City and the four northern Governorates, to the extent possible the evaluation was inclusive and participatory involving many beneficiaries and stakeholders. The International Evaluator travelled to the UNAMI Northern Iraq compound in Erbil – about 80 km from the MDP in Mosul - for five days from 27 May to 01 June to develop with the National Evaluator the evaluation approach and the field work. The security situation did not allow the International Evaluator to travel outside Erbil. Prior to the Erbil mission the International Evaluator was briefed in Vienna on 24 May by the UNIDO Project Manager and the Consultant, Evaluation Group. A debriefing session was also held in Vienna on 28 June when it was agreed the final evaluation report would be drafted once the Chief Technical Adviser's Final Report and the project Terminal Report were ready. The CTA's Final Report was made available to the evaluation team on 16 August 2012. In October it was decided to go ahead with the evaluation without the benefit of the Terminal Report.

The evaluation approach included review and analysis of relevant information sources including: (i) desk analysis (see appendix B for documents consulted); (ii) survey data; (iii) site visits; (iv) structured and semi-structured face-to-face and written interviews with beneficiaries, including trainers and trainees, stakeholders, project staff; (v) partner agencies; (vi) donor representatives; (vii) project managers; and through cross-validation of data.

Information gathering and interview guidelines were agreed, including the trainee questionnaire. These were contained in the evaluation team's inception report³ and shared with project management and the UNIDO Evaluation Group. The guidelines included a list of project beneficiaries and stakeholders to be interviewed, either directly or indirectly by email/telephone. They were rather wide-ranging as project progress reporting, which followed standard UNDG-ITF reporting requirements, very briefly summarised quantitative and qualitative achievements against objectives and results in tabular format.

Fittingly, the project team arranged for the last training course⁴ to take place in Erbil during the evaluators' field work in May. The evaluation team was thus able to observe first-hand the training as well as meet senior SCDP officials and the National Project Coordinator (NPC), who had travelled from Baghdad, as well as the Iraqi members of

² Report. Rehabilitation of the Mosul Dairy Plant FB/IRQ/10/001. Mr. Jukka Merilainen, CTA, August 2012

³ Inception Report and Workplan. Independent Final Project Evaluation. Rehabilitation of the Mosul Dairy Plant FB/IRQ/10/001. Brian Dugdill, International Evaluator and Riadh Al-Allaf, National Evaluator, May 2012.

⁴ Educational and Vocational Approach into Food Safety Management Systems: 27-31 May, 2012 at the College of Agriculture, Salahaddin University, Erbil.

the Project Steering Committee (PSC) involved in project implementation. A list of stakeholders consulted during the evaluation is given in appendix A.

1.3 Project Summary

Project no:	FB/IRQ/10/001	
Title:	Rehabilitation of the Mosul Dairy Plant	
Starting date:	January 2010	
Planned duration:	24 months, extended to 33 months (September 2012)	
Project location:	Mosul City (Mosul District) and four Northern Governorates of Dahuk, Erbil, Ninewa and Sulaymaniyah	
Project objective:	the purpose of the project is the enhancement of production and productivity within the agricultural sector through focussing on dairy related elements	
Project outcome:	Enhanced production and productivity within the agricultural sector (focussing on dairy related elements).	
Project outputs:	<ul style="list-style-type: none"> (1) Ministry of Industry and Minerals, regional authorities and State Company for Dairy Products staff have improved capacities to develop strategies and plans. (2) Enhanced national capacities for quality and quantity of milk production in Iraq. (3) Mosul dairy plant rehabilitation supported for improved dairy production 	
Beneficiaries:	<p>the project document envisages:</p> <p>Direct: (i) 170 MDP staff (short-term); (ii) 400 staff (longer-term)</p> <p>Indirect: (i) several thousand farmers; (ii) consumers.</p>	
Counterparts:	the responsible line ministry responsible was MOIM who assigned execution to SCDP.	
Management:	project management and supervision was constrained by limited international access to project sites. The structure included: (i) Project Steering Committee (which met outside Iraq); (ii) the Project Management Unit (based at the UNIDO Office in Amman, Jordan); (iii) the National Project Coordinator based at SCDP in Baghdad; (iv) the Chief Technical Adviser initially based in Amman and, from early 2011, home-based in Finland; (v) as per UNIDO procedure the Project Manager was based at UNIDO headquarters in Vienna.	
Budget:	USD 6,000,000	Government of Iraq
	USD 2,519,606	UNIDO (UNDG ITF, Italian contribution)
	USD 8,519,606	Total

2. COUNTRY AND PROJECT CONTEXT

2.1 Context

The situation analysis in the project document indicates that since 2005 UNIDO's experience in Iraq has been significant. In 2009 this experience ran to directly or jointly implementing a raft of nine projects budgeted at almost USD90 million focusing on UNIDO's core competences, namely: (i) private sector enterprise development; (ii) cottage and micro-industries; and (iii) food industry rehabilitation, including dairy.

The MDP project was developed and implemented under a country context dominated by almost three decades of war, economic sanctions and political and sectarian violence. This led to economic isolation and social disruption, and an almost totally collapsed infrastructure and security. When the project was formulated in 2009, the consequential effect on human development prospects and sustainable livelihoods included⁵:

- Poverty: seven million Iraqis (23% of the total population) were reported to live in poverty, spending less than 77, 000 Iraqi Dinars per person per month, or 2.2 US\$ per person per day.
- Youth unemployment: rate was 30%, double the national average, with the economy unable to produce enough jobs to employ the 450,000 Iraqis entering the labour force each year.
- Food insecurity: approaching 16 %, with the proportion of chronically malnourished children under the age of five reaching 22%, and more than one in five children aged under the age of five suffering from stunted growth and 5% from wasting.
- Public Distribution System (PDS): set up by the UN, while providing essential food and nourishment for many people, the PDS is reported to have actually set back domestic food producing capacity as all commodities were sourced outside Iraq.

From March 2011 the CTA's monthly reports indicate a worsening security situation in the Mosul area that was delaying the Iraqi company contracted to carry out the MDP rehabilitation work. The National Evaluator's report also notes the challenges stemming from having a dairy plant and a project in the north of the country managed at a distance from Baghdad with rather wary milk suppliers and consumers living in the north.

⁵ <http://iq.one.un.org/Facts-and-Figures>

2.2 History

Prior to its destruction in the early 1990s, Iraq had a well-functioning, largely government owned dairy industry operated by the State Company for Dairy Products, though milk and dairy products were produced largely from imported dairy commodities, i.e. skimmed milk powder and butter oil.

In 2007 the FAO estimated milk production in Iraq was 630,000 mt – equivalent to approximately 0.63 billion litres of liquid milk equivalent. Over the period 1995 to 2007 annual growth was reported at 5.2%; almost double that of the Near East and North Africa

Table 1

Milk consumption – selected countries			
Milk in the region availability per person	kg/year (2005)	g/day (2005)	Annual % growth (1995-2005)
World	78	210	0.8
Developed countries	196	540	0.5
Developing countries	45	120	2.1
Near East & North Africa:	82	225	0.9
Iran	71	195	2.8
Iraq	43	120	9.6
*Iraq			
Jordan	65	178	0.1
Lebanon	110	301	1.5
Saudi Arabia	86	236	1.9
FAO indicative target	100	270	

Source: State of Food & Agriculture, FAO: 2009 & *Project Market survey (2010)

Region as a whole. On the other hand, largely driven by increasing imports, per capita consumption of milk and dairy products grew even more rapidly by 9.6% annually from 17.2 kg in 1995 to 42.9 kg in 2005 (table 1). The share of total protein from livestock products, including milk, also grew by 5% annually from 9.3% in 1995 to 15.2% in 2005. Over the same period the value of imported livestock products, including milk and dairy products, grew at an annualised rate of 18.8% in value, from USD38.5 million in 1995 to USD245.7million in 2006(The State of Food and Agriculture Livestock in the Balance, FAO 2009).

In the context of replacing imported with domestically produced milk and dairy products, the project was to build on the experience gained under the above-mentioned the UNIDO-implemented Pilot Project for the rehabilitation of the Dairy Sector in Iraq project and, to a lesser extent, the Rebuilding Food Safety and Food Processing Industry Capacity project. The former dairy project was implemented by UNIDO between 2006 and 2009 and mainly supported the rehabilitation of the SCDP Al-Diwaniyah Dairy plant in the south of the country. The MDP project was to serve the north of the country and, crucially, also smaller scale private dairy companies.

MDP was built in the mid-1970s and by 2010 was suffering from old age and war damage, obsolete equipment and technologies, and lack of spares causing many prolonged breakdowns, and concerns about increasingly high product wastage levels and poor food safety. The sterilised milk line was closed down in 2009. The laboratory needed complete refurbishing and modernising. The entire plant was unhygienic, the cold stores were not working and there was no effluent treatment system. Service facilities such as refrigeration were very run down and hazardous with many leaks of the primary refrigerant, ammonia. According to SCDP, MDP is the only large plant in the North of the country serving a potentially huge market with 150 employees due to be made redundant if the plant and the business could not be turned around.

2.3 Positioning

The main counterpart organisation was MoIM, specifically the SCDP responsible for managing the MDP business. Key Iraqi collaborating organisations were to be Universities, the four local Northern Governorate authorities and the MoA for upstream activities related to dairy farming and milk production. The smaller-scale private dairies were to be closely involved under the training programme embracing both project strategic pillars of capacity building and technology transfer. For better understanding of project partners and their responsibilities the Results Framework and Indicators are attached as appendix E.

By outsourcing upstream milk production activities to the FAO, the MDP project planned to leverage FAO's specialised expertise and presence on the ground in Iraq through its leadership of the UN-ITG's Agriculture and Food Security Sector Outcome Team (AFSSOT) and the on-going FAO implemented Modernisation and development of the dairy sector cattle in Iraq project. Through this project and its regular programme activities it was hoped that FAO would also support development of a nation dairy strategy for Iraq⁶. FAO was sub-contracted to UNIDO under an IAA.

⁶ FAO organised an Expert Consultation Meeting on Small-Dairy Sector Development for experts from Egypt, Iran, Iraq, Jordan, Lebanon, and Syria in Cairo from 12-14 July, 2011. The meeting was to '*focus on jointly assessing the sub-regional capacity in small-scale dairy and reviewing the country reports for preparing national strategies to strengthen the sector and dairy producers associations*'.

3. PROJECT PLANNING

3.1 Identification

The project was a targeted follow up to the earlier dairy project, with outputs related to the entire dairy value chain: upstream milk production and downstream milk and dairy products processing and marketing. It was specifically requested by the Government/MoIM through the SCDP. Both were closely involved in formulation wanting to scale-out the experience gained during the rehabilitation of the SCDP Diwaniyah Dairy Plant. This plant targets southern dairy markets around Baghdad; the Mosul Dairy Plant targets northern markets. The earlier dairy project '*created a model for long-life liquid products*'. The present project '*is now piloting large scale cheese processing and HACCP compliant dairy facilities*'.

3.2 Formulation

A participatory project identification and design process was employed in close collaboration with MoIM and SCDP so as to be consistent with the National Development Strategy, the International Compact for Iraq and Millennium Development Goal One concerning poverty and hunger (see table 2).

Table 2 - NDS/ICI Strategic framework and the MDP project.

Programme Title	Rehabilitation of the Mosul dairy plan
NDS/ICI Priority&Goals	<u>NDS Goals:</u> Pillar 2: Private sector revitalisation and Pillar 3: Improving quality of life <u>ICI Agriculture Sector Goal:</u> To support the development of the agricultural sector to increase food security, generate employment, diversity the economy and preserve the countryside. Create an enabling environment for market-oriented agriculture.
UNCT Outcome	Enabling environment created for sustaining agricultural development and food security.
Sector Outcome	<u>Agriculture and Food Security Outcome 1:</u> Enhanced production and productivity in the agricultural sector <u>Agriculture and Food Security Outcome 2:</u> Enhanced production and productivity in the agricultural sector (<i>focussing on dairy related elements</i>)
Outcome 1	Enhanced production and productivity within the agricultural sector

Source: MDP Project Proposal. Table 1: Results Framework and Indicators y

Summarised from the situation analysis in the project document, the basic rationale for the project includes:

- The importance of the agriculture sector to Iraq as second largest contributor to the economy after oil and provider of employment for 20% of the labour force.
- Food insecurity in rural areas was reported to be high where 70% of the food insecure lived. And where, at that time, about one third of all available food was produced.
- Although the WFP supported PDS was feeding a significant number of Iraqis, the majority of Internally Displaced Persons (72%) were not being reached. It was reported that security problems adversely affected Government efforts to import food. It was hoped that dairy would be taken out of the PDS to stimulate domestic milk production and consumption.
- Economic sanctions and the war were strangling local food production.
- The erstwhile UN Oil for Food programme and the WFP PDS did not permit procurement of domestically produced food.
- Severe decline in livestock numbers due to feed and vaccine shortages. The most noticeable decline over the period 2005 to 2007 being in the production of milk from large ruminants: buffalo milk (down 650%) and cow milk (down 20%), though cow milk still accounted for over 60% of total milk production. Not surprisingly, milk production from small ruminants had increased significantly as small animals are easier to keep and feed during conflict and war conditions. Goat milk production was up 500% and sheep milk up 200%.
- The Iraqi market for milk and dairy products was roughly reckoned at 1.5 billion litres of LME (liquid milk equivalent), excluding an estimated 0.5 billion litres of home consumption, boosted by some 120,000 to 200,000 mt of milk powder imports annually – approximately 1 to 1.6 billion litres of LME. Milk powder is sold directly to consumers as well as to processors (SCDP and private) for reconstitution into ready-to-drink milks such as UHT milk and products such as processed cheese, Laban (yoghurt) and curds (soft cheese). At milk powder prices in 2009 when the project was formulated this was equivalent to a value of USD 680 million, almost three times the total value of all livestock imports reported by FAO in 2006 (section 2.2 above).

3.3 Intervention theory

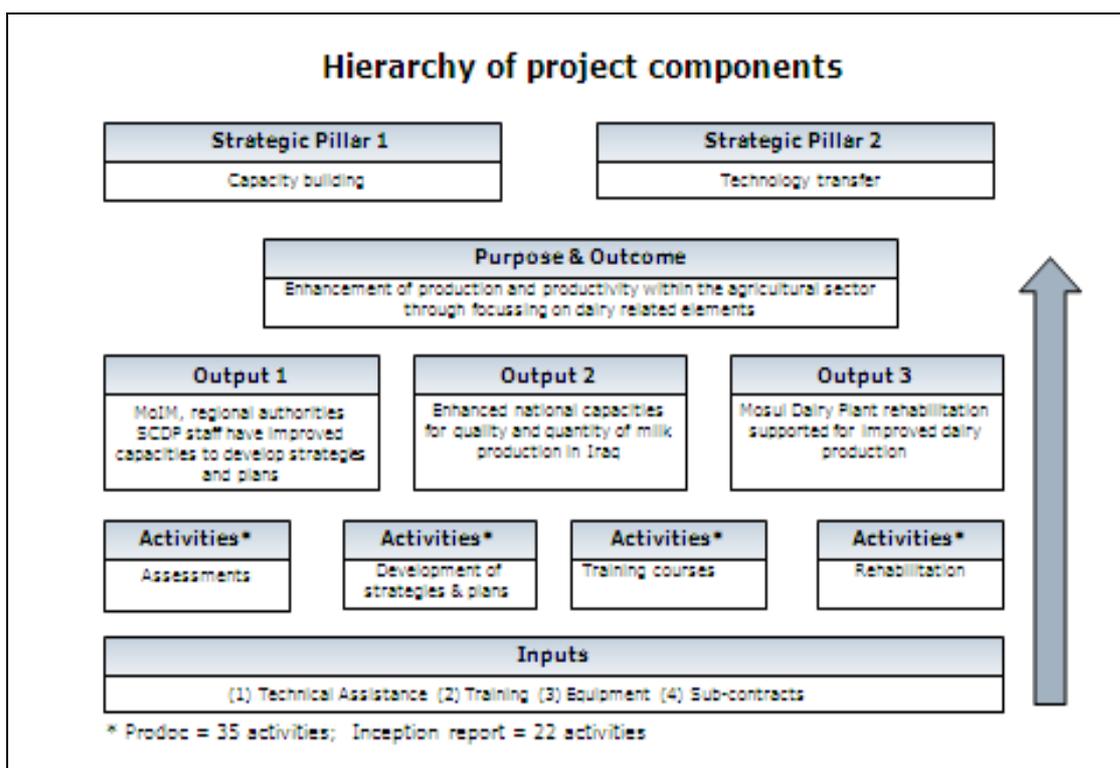
From the foregoing it is evident the logic for the project may be partly regarded as reducing dependence on an ever growing reliance on increasingly expensive dairy imports, in turn having a serious adverse effect on the country's balance of payments. The project thus focused on re-establishing MDP as a modern facility capable of producing safe, affordable and nutritious processed milk and dairy products for the people of northern Iraq. This market pull was, over time, be the pathway to push farmers to produce more milk for MDP and hence increase their incomes. In so doing the intervention theory prioritised the changes and pre-

conditions that might be sufficiently influenced by the project. This logic contributes to the premise that dairy is an effective driver of reducing poverty and creating jobs.

It is clear from the project document that learnings from the earlier dairy project were used to inform MDP project formulation, though it was designed prior to independent evaluation due to the need for continuity by MoIM/SCDP and fast-tracking to take advantage of available UNDG-ITF funding. These learnings were built around a holistic dairy cow-to-consumer dairy value chain approach. The project may thus be considered needs-based and in line with host country priorities. It filled a number of gaps not covered by the earlier project with a theory of change based on a raft of holistic capacity building and technology transfer *critical success factors* that included: (i) *a people centred focus*; (ii) *a flexible delivery model*; (iii) *identification of assets and appraisal of needs at the local level*; (iv) *appropriate and relevant technology transfer and skills development*; (v) *strengthening income flows*; (vi) *adding value to local resources*; and (vii) *promoting market access and linkages*.

The results framework and indicators in the project document clearly indicated how it fits the food security, employment generation goals, are market-oriented agriculture goals of the NDS and the ICI strategic development framework (table 2 and appendix E). Under the two overarching capacity building and technology transfer pillars the means-ends relationship between project purpose (outcome) and the three outputs are supported by adequate activities and inputs (figure 1).

Figure 1 – Hierarchy of project components



3.4 Funds mobilization

The project documents indicates the total budget was USD 8,519,608. The Government were to provide USD 6 million (70%), chiefly for dairy equipment and supplies, in addition to human resources in kind. Other funding was provided to UNIDO via the UNDG-ITF with an earmarked financial contribution from the Government of Italy of USD 2,519,606 (30%).

Since 2004 the Government of Italy has provided UNIDO with over USD30 million of funding to enable the Organization to assist the Government of Iraq in the rehabilitation and revitalization of the agro-industrial sector. Italy has been a strong supporter of reconstruction and revitalization efforts in Iraq. Also the *Pilot Project for the Rehabilitation of the Dairy Sector in Iraq*, with main project activities linked to the Diwanayah Dairy plant was financed by the Government of Italy. However the MDP project was the first to be co-financed by Iraq and Italy.

Section 9 of the MDP project document (Workplans and Budgets) allocated expenditure to the three project outputs and 35 major activities as follows:

Table 3 - Budget allocation by output

Output	Major Activities	Budget	%
1. Strategies & plans developed	13	421300	17

2. Enhanced milk production	15	788,000	31
3. MDP rehabilitated	7	1,310,306	52
Total	35	2,519,606	100

Source: MDP project proposal

4. PROJECT IMPLEMENTATION

4.1 Financial implementation

For the Iraq budget, at the time of the evaluation field work in June 2012, expenditure was USD 4,256,000, or 71% of the original budget. No breakdown was provided by SCDP/MDP, though approximately USD one million of this sum was reported to have been used to procure raw materials from abroad for MDP (see section 5.3 below). Some additional equipment to fully operationalize the lines is currently under procurement. Neither the project document, nor the inception report, nor any project report provide a budget breakdown of how the GOI contribution was to be used.

As of the end of the project, cumulative expenditure against the original UNIDO budget was a 95% ⁷. Table 4 presents estimated expenditure breakdown. It is noted that considerable savings were made on the personnel (including travel), training and miscellaneous cost lines, with the savings largely reallocated to procuring much needed services equipment and supplies for MDP. USD 270,000 was transferred to the collaborating agency (FAO) to execute IAA – see below. To date no financial statement regarding expenditure against the IAA has been received from FAO.

Table 4 - Project Expenditures as of 04 October 2012

Budget line	Budget	Expenditure	%
UNIDO (UNDG-ITF) Component			
19-99 Personnel	816,000	532,697	65
29-99 Subcontracts	1,005,000	1,028,071	102
39-99 Training	232,000	125,053	54
49-99 Equipment	205,470	225,466	110
59-99 Miscellaneous Cost	112,924	82,473	73
Sub-Total	2,371,394	1,993,760	84
Indirect support costs	148,212	139,792	94
FAO IAA		270,000	
Total	2,519,606	2,403,552	95
Iraq Component			
Equipment and supplies	6,000,000	3,256,000	54
Imported dairy commodities		1,000,000	17
Total		4,256,000	71

⁷ Monthly Financial Report as of October 2012. *Rehabilitation of the Mosul Dairy Plant* Project number: FB/IRQ/10/001 (October 2012).

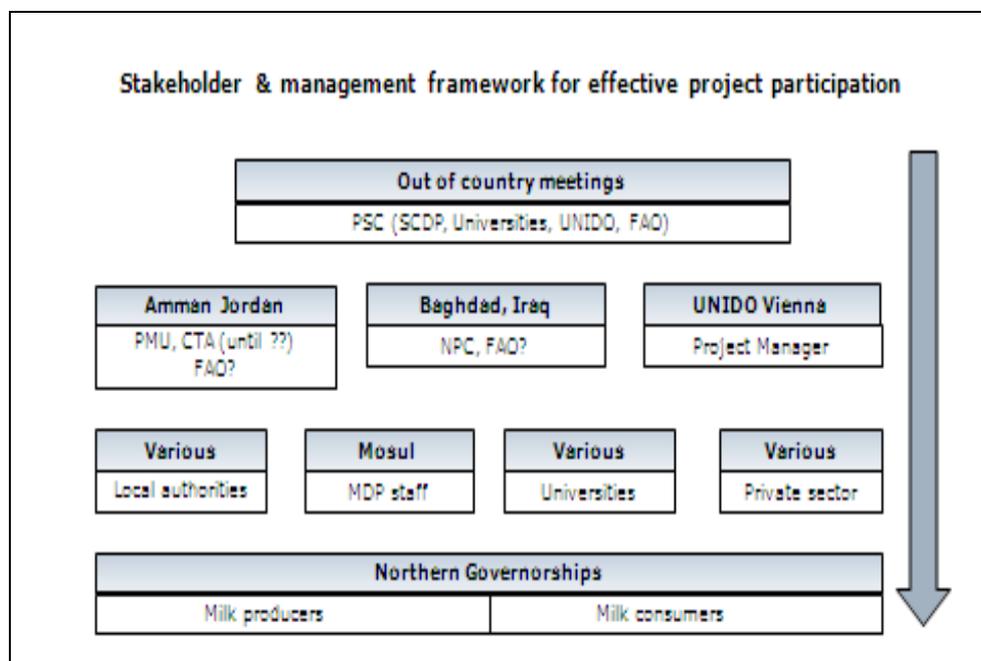
Grand Total	8,519,606	6,659,552	78
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4.2 Management

As the project was effectively a follow-up to the earlier Diwaniyah dairy project, it got off to a timely start as the CTA, the NPC and Project Manager were already in place. The small Project Management Unit, originally to be based in Erbil, continued to be based at the UNIDO office in

Amman on security grounds. It comprised: (i) the full-time CTA based in Amman and home-base in Finland from early 2011; (ii) the NPC based at SCDP head office in Baghdad and travelling to Mosul as and when needed; (iv) part-time administrative support; and (v) the UNIDO Project Manager based in Vienna (figure 2).

Figure 2 – Stakeholder & management framework for effective project participation



The Project Steering Committee provided guidance and oversight. It was set up with members representing: (i) MoIM as chair; (ii) Kurdistan Regional Government/Northern Governorates; (iii) SCDP; (iv) universities; and (v) Italian Cooperation. The project management team were represented by: (i) NPC; (ii) FAO/UN; (iii) UNIDO Project Manager; and (iv) CTA as member Secretary. The Ministry of Agriculture did not send a member. The first PSC meeting was held in Beirut in December 2010, when its terms of reference were adopted. Based on UNIDO experience of other projects in Iraq the PSC resolved to meet quarterly. In the event, three meetings were held over the extended 33 month project life.

Implementation kicked off with a working group meeting held in Vienna in March 2010 to mobilise the project. Once the SCDP Market Study was available towards

the end of 2010 its findings were used to inform the project inception report and workplan. This was adopted by the PSC at its first meeting in December 2010, subject to the workplan being adapted to take on board the delay in starting the out-sourced FAO components. It is not clear if an updated workplan was prepared for 2012.

The inception report supplied an updated situation analysis of the four Northern Governorates in the project command area with a pragmatic strategy for delivering each output, including the cross-cutting issues of human rights, gender equality, the environment and employment generation. Somewhat confusingly, to deliver the outcome and outputs, the inception report collapsed the 35 major activities into 22, divided into the four main categories listed below, while keeping the original 35 major activities in the workplan (and the CTA's Final Report).

- (1) Assessments (5 activities)
- (2) Development of Strategies and Plans (8 activities)
- (3) Training courses (6 activities)
- (4) Rehabilitation (3 activities)

FAO was a member of the PSC right from the start and attended all meetings. The Inter-Agency Agreement between UNIDO and FAO covering the ten major activities related to milk production was not signed until January 2011. By June 2012, FAO assessed it had '*achieved*' seven out of the 10 activities, with the other three '*under process*' (see appendix C). However the CTA's Final Report (August 2012) reports the status of all major activities assigned to FAO as '*will be submitted by FAO*'.

The third PSC meeting held in Istanbul in January 2012 resolved to extend the project by nine months to September essentially: (i) to allow FAO more time to complete its sub-contracted milk production and productivity enhancing activities, which required access to farmers in areas where the security situation made this tough; (ii) to enable SCDP to bring the two MDP milk collecting centres at Al-Taji and Samara on line to collect and ship fresh milk to MDP; and (iii) to complete the outstanding training programme. These milk collecting centres are located 400 km and 200 km respectively south of Mosul on the road to Baghdad. The minutes of the fourth PSC meeting were not available to the evaluators.

Table 5 - Meeting and reporting milestones

Year	Milestone
2009	Dec Project signed
2010	Jan Project start Mar Minutes of First Working Group meeting (Vienna) July Project Brochure Project Progress Report (Mar-Jun 2010) Jun Counterpart study tour (5 days) to Nordic Dairy Congress in Finland Dec 1 st PSC meeting in Beirut (Minutes: April 2011) Inception report and work plan (Undated) SCDP- MDP Market Study
2011	Jan UNIDO-FAO IAA signed Mar 2 nd PSC Meeting in Istanbul (Minutes: April 2011) Apr Project Progress Report (Jun-Dec 2010) Jul Final Report MDP Component 1: Civil and Electrical Works Jul Rehabilitation of MDP (Mar-Jun 2011) (Undated) CTA transferred to part-time assignment home-based in Finland (Undated) SCDP-MDP Business Plan for 2011
2012	Jan 3 rd PSC meeting in Istanbul (Minutes: January 2012) Project extended by nine months up to September Rehabilitation of MDP Final report Feb MDP Maintenance Plan Apr Project Progress Report (Jun-Dec 2011) May Annual Progress Report (2011) Aug CTA final report

As far as can be ascertained project management prepared three semi-annual progress reports and one annual project report for 2011 in the standard brief (4-page) UNDG-ITF format. The CTA prepared a more detailed Final Report for the entire project period. This was basically a narrative report with an activity ‘*Statement of Achievements*’ and annexes containing: (i) the market study; (ii) the MDP business plan for 2011, minus the financial plan; (iii) some training course evaluation reports; and (iv) the summary technical report of work to be done by the local consultant contracted to oversee the MDP civil, electrical and mechanical rehabilitation works. The report contained no analysis, no conclusions, no recommendations and no breakdown/variance analysis of project expenditure. At the time of writing (October 2012) the Terminal Report was not available.

In addition to the CTA’s two-page Monthly Progress Reports, key project management and reporting milestones are listed in table 5. A more comprehensive, but incomplete list of reports and documents produced by the project team is attached as appendix B. Collating this list was time-consuming for the evaluators as the project does not appear to have maintained a complete list (and electronic

library) of key project reports and other documents. Certainly there was no list in the CTA’s final report. With some notable exceptions, the general quality of reporting was poor.

4.3 Outputs and outcome

Financial project inputs were sufficient to implement the activities. Actual expenditure was less than planned. However the project team was not able to deliver some activities, e.g. the dairy sector development plan. Others fell short of expected quality, e.g. the MDP business plan. It is of course possible that some quality was ‘lost in translation’ from Arabic to English, and vice versa. The CTA’s Final Report provides an objective assessment of the 35 activities employed to deliver the three outputs and the outcome of the project (summarised in table 6). No in depth assessment of output or outcome delivery is provided, robbing the project of first-hand experience. The evaluators present a more detailed assessment of achievements in relation to the MDP project inputs-activities-outputs-outcome causal chain in the next chapter.

Table 6 - Activity delivery overview

Output	Status (September 2012)			Total
	‘Achieved’	‘Not achieved’	‘Will be submitted by FAO’ ^a	
1.	5 (38%)	4 (31%)	4 (31%)	13
2.	8 (53%)		7 (47%)	15
3.	6 (86%)	1 (14%)		7
	19 (54%)	5 (14%)	11 (31%)	35
^a As of September 2012, not yet submitted.				

Source: CTA Final Report, August 2012.

5. ASSESSMENT OF PROJECT PERFORMANCE

The evaluators' overall quantitative assessment of project delivery against the 16 indicators contained in the Results Framework is provided in appendix D and summarized in table 7 below. Over two thirds were achieved. The Results Framework required 'Enhanced national capacities for quality and quantity milk production in Iraq' and the workplan allocated ten activities for this purpose (outsourced to FAO). However only one indicator, 'Quality based raw milk price system introduced' under output 1, indirectly addressed upstream milk production and productivity.

It was not possible to interview milk producers trained by, or involved in the project to gain insight into project assessment including ownership, effectiveness and sustainability. As indicated above, all ten major milk production activities were assigned to FAO under the IAA. Delivery for all is reported in the CTA's Final Report as: 'will be submitted by FAO'.

5.1 Relevance

The project is clearly in line with the priorities and policies of the Iraqi Government, which specifically asked for the focus to be on MDP. Overall its purpose (outcome) and related outputs are judged highly relevant to the national and international development frameworks for Iraq as well as the mandates of Italian Cooperation, the UNCT and UNIDO. The project addressed both NDS and UNDG-ITF strategies concerning food security, employment and income improvement for vulnerable households in rural and urban areas, albeit at selected links in the cow to consumer dairy value chain. To this end the project supported the achievement of MDG 1 targets concerning extreme hunger and poverty in Iraq. Mosul is the second largest city in Iraq with a population of 1.5 million people.

Table 7 - Indicator delivery overview

Output	Status (September 2012)			
	Achieved	Not Achieved'	Pending feedback from FAO'	Total
1.	3 (60%)	1 (20%)	1 (20%)	5
2.	6 (67%)	2 (22%)	1 (11%)	9
3.	2 (100%)			2
	11 (69%)	2 (12.5%)	2 (12.5%)	16

The dual pillar approach of capacity building and technology transfer was relevant, as was the focus on both the upstream milk production and downstream milk processing and distribution elements of the dairy industry value chain. Unfortunately the project was not able to efficiently combine these two elements during its short life span. Based on the evaluators' experience, a general rule of thumb is that it takes eight to ten years to revive milk production in post-conflict situations. It should be said that the UNIDO team disputes this statement. Nonetheless, it was ambitious to plan that milk supplies to MDP could be revived over the short lifespan of the project. In any case output 2 (Enhanced milk production) only had indicators and activities related to training, not the amount(s) of milk produced and delivered to MDP.

Iraq imports about one third of its processed milk and dairy product needs, including dairy commodities for reprocessing at MDP and private dairies, especially milk powder. Given the volatility of dairy commodity prices since the project was formulated in 2009, the relevance of the project is reinforced by sharp international price rises (figure 3). When the project was formulated the average price of one litre of imported UHT milk was IQD 1,500 (128 US cents). Today (2012) the retail price is down to around IQD1000 (85 US cents) as more and more countries in the region dump UHT milk approaching its sell-by date at low prices. On the other hand, because milk is in such short supply around Mosul, the MDP catchment area, the farm gate price for one litre of fresh raw milk has increased significantly to IQD1,500 (128 US cents), making it uneconomic to procure fresh milk locally - a risk that could not have been foreseen during project formulation. Further constraints affecting MDP's competitiveness, and that of the dairy processing sub-sector in general, were identified during the marketing study (see appendix C).

Figure 3 – FAO international dairy price index



5.2 Ownership

There has been strong ownership at the highest level by MoIM, SCDP and MDP, who initiated the project. Given the significant resource contribution of the Iraqi government to the project, both human and financial, exceptional national ownership was plain to see. This impression is gained not only from inspection of the revamped MDP processing facility and meeting selected training and study tour programme participants from the private sector and universities as well as SCDP/MDP, but also from substantive interaction with both public and private sector dairy actors.

5.3 Efficiency

The evaluators assessed efficiency in terms of quality of management and use of inputs to deliver the project outputs and outcome. Operating at a distance from Mosul, the project management team performed well given the prevailing risky and tense working situation in Northern Iraq throughout the project. It seems the project design assumed the security situation would improve. It did during the first year (2010), but then deteriorated again so that the PMU (CTA and NPC) could not transfer to Iraq. As a result, the important on-the-job coaching and mentoring elements of capacity building and technology transfer did not really happen.

Even so, the team was resourceful in adjusting to the many challenges in maintaining supportive working relations with key project stakeholders and national consultants and contractors. The PSC undertook its oversight and coordination roles efficiently to ensure smooth project implementation. The PSC became crucial for implementation as it was also the forum where the project management team (CTA and NPC) came together. Its high level membership, and the direct involvement of many of the members in implementation, e.g. in equipment procurement and the training courses, facilitated timely decision making for adapting the project to changing circumstances.

Savings were made on the personnel training and miscellaneous costs budget lines. These were largely reallocated to procuring much needed services equipment and supplies for MDP. Though laudable, it is not clear how project management or the PSC reallocated the savings as there was no budgets realignment in the inception report and workplans; and no expenditure analysis or list of project personnel inputs in the CTA's final report. It is also understood that SCDP used its own resources to revamp the Al-Taji and Samara milk collecting centres – further confirmation of the strong ownership of the project.

That said the cooperation between UNIDO, MoIM and SCDP was compromised by lack of technical dairy experience at PMU level, which might have resulted in better management of the FAO sub-contracted activities. Not having a representative

from MoA, the line ministry responsible for agriculture and food production, on the PSC further compromised milk production activities. SCDP and the project did attempt to address the lack of fresh milk by building/revamping milk collecting centres where there was surplus milk available at Al-Taji and Samara. At the time of evaluation Al-Taji was shut down due to lack of milk, caused by feed shortage. It is expected Samara will be delivering fresh milk to MDP by the end of 2012.

Given the quality of some of the strategic planning documents produced it appears that either the scopes of work were inadequate, or the consultants engaged were relatively inexperienced or mentoring oversight from the project team was lacking – not surprising given the burden of project management from a distance. The transfer of strategic planning capacity to MDP/SCDP management was thus limited.

Risk management and sustainability issues were both adequately addressed in the project formulation process. But no project exit strategy appears to have been developed.

5.4 Effectiveness

The effectiveness of the project concerns the extent to which the purpose or outcome of the project has been achieved. The purpose, or outcome of the project was: *'the enhancement of production and productivity within the agricultural sector through focussing on dairy related elements'*. The effectiveness of the three outputs designed to deliver this outcome are considered below.

Output 1: 'MOIM, regional authorities and SCDP staff have improved capacities to develop strategies and plans'

The evaluators concur with the CTA's assessment that five activities were achieved. These were associated largely with project and SCDP organisation, i.e.: (1.1) setting up the PSC; (1.3) the in-depth market study; (1.4) the SWOT of the dairy sector, contained in the market study; (1.8) the business plan for MDP; and (1.9) the development of financial and HR plans for MDP, contained in the business plan.

The market study provided a set of general conclusions, summarised in appendix C . From the documentation seen by the evaluators it does not appear that these were used to guide the MDP business plan for 2011, which appears impossibly ambitious based on the assumption in the financial plan that all lines would operate at full capacity from the outset. This is confirmed by achieving just one fifth of target production and sales in 2011, admittedly before the revamping was completed (tables 9 and 10). The study did however provide a useful overview of the downstream dairy industry milk in the Northern Governorates. There were 17 medium and large units of which 16 were in private hands and competing with

MDP. Their combined daily milk processing capacity was 180 mt with the private dairy throughput averaging 67% and MDP 33%. The study identified a further 38 small- and micro-dairy enterprises in the region, mainly ice cream processor-retailers. The study does not define enterprise size. A follow-up business plan for MDP was prepared for 2012.

The overarching activities relating to dairy sector development were not achieved, namely: (1.5) sector development vision; (1.6) deriving the strategy; and (1.7) developing model business plans from the strategy. The PSC at its third and final meeting in January 2012 agreed as follows: *Because of the specific situation a lot of uncertainties are existing. As the legal and economical [sic] framework which is necessary for a clear strategy does not exist it is almost impossible to derive a clear strategy. As it appears at the moment besides the enabling framework it is necessary that the Government, especially the Ministry of Agriculture has to address the feeding situation as well as the extension and veterinary services. The FAO component of the project and other interventions from their side will support this idea. In addition it is necessary to link the farmers directly to the factory in order to avoid costs of intermediate traders (Source: CTA's Final Report, August 2012).*

The important activities for boosting the raw milk supply to MDP, sub-contracted to FAO, are all recorded in the CTA's Final Report as *'will be submitted by FAO'*, namely: (1.2) in-depth milk production assessment in the Northern Governorates; (1.10) raw milk regulation and price building; (1.11) the quality based producer milk pricing scheme; (1.12) milk quality campaign. As far as can be ascertained a scheme for: *'Monitoring of the impact of project activities on income, employment and sector development'* was not put in place (activity 1.13).

This output was only partly achieved and to date has contributed little to attaining the overarching project outcome.

Output 2: 'Enhanced national capacities for quality and quantity of milk production in Iraq'

This was the main dairy value chain capacity building output of the project supporting upstream milk production activities, sub-contracted to FAO, and downstream milk collection, processing and distribution activities directly implemented by UNIDO. The UNIDO team successfully delivered all the downstream training activities, including TOT training as summarised in table 8. In total 179 SCDP/MDP and private sector dairy stakeholders participated in the project sponsored and equipment supplier training programme. No disaggregated record of male and female trainees appears to have been kept. However, more than half the participants at the course witnessed by the evaluators were women.

The raft of downstream courses and study tours built on the training programme of the earlier dairy project, this time with special focus on the MDP. For continuity the

same trainers and TOTs were involved, especially for the courses on modern dairy technologies, GMPs and food safety, including system auditing for ISO 19011, 2001. Training programme course content was reviewed and found satisfactory. The trainee selection procedures for trainees were also deemed appropriate. At first private sector dairy owners were reluctant to release staff for training but soon found the courses valuable.

Table 8 - Downstream milk MDP capacity building programme

Course	Venue & Dates	No. Participants	Remarks
TOT: Strategy Development	Baghdad 5 days Mar/2011	11 (from MOIM, SCDP, MDP & other dairies, universities, private sector)	98% assessed course as good/v. good.
Enterprise management, marketing	Baghdad 5 days May/2011	27	96% assessed course as good/v. good.
TOT: New dairy technologies and HACCP	Baghdad 5 days May/2011	15 (from MOIM, SCDP, MDP & other dairies, universities, private sector)	
Marketing & business administration	Baghdad 5 days May-Jun/2011	15	80% assessed course as good/v. good.
HACCP, ISO,GHPs, GAPS, GLPs	Erbil 5 days May 2012	24 (SCDP, universities, private sector)	Assessment after 6 months. Evaluation team in attendance
Sub-total		92	
International study tours	8 venues 3-5 days May10/Mar12	17	Italy, Finland, Germany (twice), France (twice)
National study tours	Erbil 3-4 days Oct & Nov/2011	50	
New yoghurt and cheese line orientation	Italy 6 Oct\2011	6 (4 from MDP; 2 from SCDP Baghdad)	Course: (i) too short Most of time taken up with travelling; (ii) no preventative maintenance
New effluent treatment plant orientation	Turkey 10 days	10 (4 from MDP; 6 from SCDP/DDP)	Highly appreciated practical course arranged by the Turkish company providing MDP effluent system
New cheese line orientation	Germany 4 Mar 2012	4 (1 from MDP; 3 from SCDP/DDP)	Another highly practical course.
Sub-total		87	
Total		179 participants	

Source: NPC; CTA Final Report.

Fifteen SCDP and private dairy trainees were interviewed using the guidelines developed by the evaluation team⁸. The majority considered the courses and study tours as needs-based and were able to put their newly acquired skills to practise

⁸ Appendix D, Inception Report and Workplan. Independent Final Project Evaluation. Rehabilitation of the Mosul Dairy Plant FB/IRQ/10/001. Brian Dugdill, International Evaluator and Riadh Al-Allaf, National Evaluator, May 2012.

upon return to work. A common issue was that courses were too condensed, i.e. too short and too packed with new information. The course on HACCP and food safety was especially appreciated as it was the first of its kind in the country, led by an experienced practical food scientist from Beirut University. One of the overseas study tours was for six participants to Italy for on-the-job training on the new cream and yoghurt lines. There was criticism of this as being: (i) too short (most of the time was taken in travelling); and (ii) too theoretical and operational (not enough time was devoted to preventative maintenance). The absence of the customary coaching and mentoring that an Iraq-based CTA would have provided also militated against getting the most out of the training programme.

Very limited information was available about the seven upstream milk production capacity building activities, other than the summary provided by FAO to the evaluators, through the CTA (appendix D). In the CTA's Final Report all FAO activities are recorded as *'will be submitted by FAO'*. However the FAO summary indicated that two trainings were organised by FAO, namely: (i) *'Dairy farming management and milk processing'* in Amman from 23 to 30 January, 2012 - five participants from Ninewah Governorate attended; and (ii) *'Several ToB trainings and local workshops were successfully carried out by the trainers who attended the Amman course'* in addition to *'a guiding seminar on how to care the dairy cows'*. It is not clear how many extension staff or farmers were trained from the Mosul area.

Though the downstream dairy capacity building programme was well-executed, again the output was only partly achieved. The evaluators were unable to interview any upstream FAO capacity building programme participants. It is imagined this latter component has laid the foundation for improved capacity in the future thus contributing to the overall project outcome.

Output 3: 'Mosul dairy plant rehabilitation support for improved dairy production'

Under the project the obsolete and run down MDP was refurbished with new cream, processed cheese and yoghurt lines, as well as energy, water and effluent treatment services. This involved complex civil, electrical and mechanical works. The work was inspected by the National Evaluator and found to comply with specification and acceptable price range. The UNDO civil and electrical contractors carried out their work to high standard developing close working relationships with MDP staff.

The Government procurement system was used to procure the dairy equipment. Unfortunately none of the three new production lines was supplied with spare parts. It is reported that approximately USD one million of the Government contribution was used to procure raw materials from abroad such as cheddar

cheese (for the new processed cheese line), full-cream milk powder (used for the other product lines) and packaging materials for the revamped MDP lines. Some additional equipment to fully operationalize the lines is currently under procurement. It is also understood that SCDP used its own resources to revamp the Al-Taji and Samara milk collecting centres.

The CTA's Final Report indicated six of the major activities 'achieved'. The only activity reported as 'Not achieved' is the 'Development of repair and maintenance plan for the existing level' at MDP as this was not needed. Following completion of the majority of the rehabilitation work a basic maintenance plan was developed for MDP in February 2012⁹.

There is no doubt this was the project's star output, contributing significantly the overall project outcome. The MDP is now a modern dairy plant capable of producing high quality milk and dairy products tailored to the northern Iraqi market. Though the plant is not yet HACCP compliant, MDP staff, other private sector dairy company staff, and Erbil and Mosul University Food Departments have an understanding of what is involved in the certification process. That this output was achieved under such a challenging environment is a tribute to the persistence, ingenuity and hard work of the entire SCDP, MDP and UNIDO project team. Though no new jobs were created, 141 jobs have been secured at MDP; part way to achieving the target that 'At least 400 workers, men and women will find jobs in the MDP'.

Fresh milk deliveries to MDP average just over 1,000 litres daily (table 8). The MDP business plan for 2013 should include a milk procurement strategy that targets local milk collection in addition to milk from the distant Al-Taji and Samara milk collecting centres.

Table 9 - MDP Production Plan for 2011 and 2012 with outcome for 2011 (mt)

Product	2011		2012	
	Plan	^d Outcome	Plan	^{d,e} Outcome
Cream	150	73 (47%)	228	65
^a Rafidain cheese (500g)	100	27 (13%)	100	114
^b Safa cheese(250 g)	100		100	
Yogurt	1,500	281 (19%)	1,400	124
Total	1,850	381 (21%)		
^c Fresh milk	3,277	391 (9%)		

^aProcessed; ^bSoft; ^cShortfall covered by imported milk powder, butteroil and cheese; ^dExcludes small quantities on Shineena and butteroil that don't appear in the plan; ^eJan-Jun only.

Source: MDP, 2012

⁹ Rehabilitation of Mosul Dairy Plant. Maintenance Plan. Eng. Md. Yousif Noori, National Expert Civil Engineering (February 2012)

Table 10 - MDP Dairy Product Sales (Pre-and Post-Rehabilitation)

Item	Unit	2010 (pre-rehab)	2011 (Post-rehab)	Growth	2012 (First 6 m)
Production	Mt	272	393	44%	231
Sales	Mt	258	375	45%	225
Value	IDQ million	476.0	647.4	36%	438.3

Source: MDP, 2012

5.5 Sustainability and impact

The earlier dairy project '*created a model for long-life liquid products*'. The present MDP project '*is now piloting large scale cheese processing and HACCP compliant dairy facilities*.' It was a project of the two inter-dependent halves of the dairy value chain in the four Northern Governorates of Dahuk, Erbil, Ninewa and Sulaymaniyah. First, the well-delivered downstream rehabilitation of key elements of the MDP business; second the uncertainty surrounding what the project delivered for the upstream, i.e. milk production part. The sustainability of the project, and its capacity building and modern technology transfer interventions, were thus compromised.

On the downstream side, the main focus of the project, the MDP business is expanded and returned to profitability, implying that consumers in the region have access to more nutrition milk and dairy products. The evaluators found anecdotal evidence that consumers appreciate the improved quality and availability of the new product lines: cream, processed cheese and yogurt.

It was very encouraging to see that MDP production and sales have increased by over 40% since rehabilitation, notwithstanding the difficult trading situation resulting in the main from fierce competition from imports and the security situation (tables 9 and 10). Net profit for 2011 is reported to be six percent of turnover, returning the MDP business to profitability for the first time since 2003, when imports were much lower. This is the true impact of the project; but it is incomplete impact. Full impact will only come when the security situation allows MDP and the MoA to deliver on increasing supplies of fresh milk to MDP from local farmers, guided by a participatory strategic dairy development plan for the region. And, in so-doing, achieving sustainability and longer term impact to the benefit of improved food security, employment and incomes; and the NDS/ICI priorities of private sector revitalisation and improving quality of life.

To maintain this encouraging momentum MDP and the private sector will need (indirect) support from Government to compete with often heavily discounted imported UHT milk approaching the end of its shelf-life/sell-by date and would have had to have been destroyed in the country of origin. Indirect support

measures might take the form of strict enforcement of food safety regulations and introducing tariffs levies on selected dairy imports.

It is thus hugely disappointing that MDP's new product lines (cream, processed cheeses and yoghurt) are produced almost exclusively from imported dairy commodities, signifying the overall project outcome was not achieved. The MDP and private sector dairy businesses are sustainable at present, but only if they have continued access to imported dairy commodities – a risky business model. The overall sustainability of the project, and its contribution to NDS/ICI food security and employment generation outcomes, goals and priorities is thus still a work in progress.

Sustainability was also to include the cross-cutting issues of human rights, gender equality, the environment and employment generation. While there are no dedicated activities or indicators covering these issues to a certain extent the environment issue was addressed through the installation at MDP of a modern dairy waste/effluent treatment plant. It is usual for well-managed dairy plants to use about 1.5 litres of water for each litre of milk processed. Treated water and effluent from the new effluent plant is now used for crop irrigation – a practical demonstration of nutrient recycling.

It was planned that *'At least 400 workers, women and men, will find jobs in the Mosul Dairy Plant. The dairy will be a partner for several thousand milk producing farmers. The project will help create jobs in several sectors related to the food producing chain, like transportation, storing, retail etc.'*¹⁴¹ male and female employees are currently on the MDP payroll. As sales and production are ramped up at, including supplying the planned Primary School Feeding Scheme and the armed forces, MDP expects to take on a further 61 employees for a second shift. A fine achievement as there is currently 25% unemployment in Mosul area.

5.6 Conclusion

To sum up the results assessment, the evaluation team has endeavoured to identify the project's main strengths and weakness to guide to its recommendations (table 11).

Table 11 - Summary of project strengths and weaknesses

Strengths	Weaknesses
<ul style="list-style-type: none"> • The project was timely and relevant; and aligned to national (NDS), UNDG-ITF, UNCT and UNIDO plans and priorities. • The project supported a sub-sector with high potential for growth, nutritional impact, employment and income generation. • The project worked with an existing well-resourced SOE that was hugely committed to making it a success. • High standard of the revamping work at MDP; and demonstrating modern dairy effluent treatment technologies on the environment. • Improved quality of MDP’s new lines: cream, processed cheese and yoghurt. • MDP returned to profitability. • Promotion of women’s involvement in the dairy value chain • UNIDO’s previous experience of supporting the food and dairy sub-sectors in Iraq, and its core competence in the downstream dairy industry value chain. • Cow milk the right choice given consumer preference and dominant contribution to overall milk production in the country. • The project has strengthened the capacities and technical knowhow of SCDP, MDP and university teaching staff. • Strong and involved PSC. 	<ul style="list-style-type: none"> • Absence of the MoA in the project and the PSC, and the ineffective sub-contracting of milk production activities to FAO compromised achieving the project outcome. • Focus on the SOE MDP and limited involvement of private sector dairies. • Limited efforts to tackle ‘unfair’ competition from attractively packaged imported milk and dairy products. • Inability to secure fresh milk supplies by MDP - as yet no effect on enhancing milk production and productivity or farming family income. • Shortcomings in developing the MDP business plan; inability to produce a development plan for Northern Iraq. • Cooperation with other development agencies only partly successful. FAO? • Project management from a distance limited the on-the-job coaching and mentoring aspects of capacity building.

5.7 Possible next phase

The MDP project was effectively a second phase of the earlier Diwaniyah Dairy Plant project. SCDP and MDP management indicated that another project phase is needed to support the addition of a new UHT milk line at MDP. There is no doubt that MDP needs a UHT line to replace the obsolete sterilised milk line and create critical business mass in terms of milk throughput and sales volumes; and in part to offer consumers a safe alternative to imported UHT brands. This request is not supported as it is considered the SCDP and MDP teams have gained sufficient experience to design and implement such a project themselves. The project achievement at MDP is testament to this opinion. If there were to be a follow up phase it should focus on: (i) supporting private sector dairies; and (ii) building fresh milk supplies for MDP and private sector dairies – a form of technical assistance beyond the mandate of UNIDO.

6. RECOMMENDATIONS

Given that the evaluation team is not recommending a next phase, the following recommendations aim to build on project strengths to overcome its weaknesses.

6.1 For UNIDO

- (1) For holistic food value chain projects containing components outside UNIDO's core competence, e.g. primary farm level milk production, tighter results-based contracts with experienced and technically capable organisations should be negotiated to reduce the risk of failure. Notwithstanding the challenging environment in Iraq concerning access to milk producers, a director-level meeting with FAO should be convened aimed at lesson learning for enhanced collaborative project implementation in the future.
- (2) Prior to this meeting FAO should be officially requested to submit a full final report for the Inter Agency Agreement (IAA) containing recommendations and credible plan for sourcing fresh milk for MDP.
- (3) The evaluators spent an inordinate amount of time obtaining and collating project progress and other reports. Project management should maintain a complete list (and electronic library) of key project reports and documents. This would not only facilitate evaluations but also provide institutional memory and a knowledge base for informing future interventions.

6.2 For the Government and SCDP/MDP

- (4) A fully-fledged longer-term milk production enhancement programme should be introduced in the milk sheds around MDP to foster increased local milk production and supply. The programme should be led by the MoA and its local livestock services agencies and, preferably, involve private sector business development service providers. Over time this should also reduce the cost of fresh raw milk to MDP and private dairies resulting from high transport costs from distant milk sheds.
- (5) Running spare parts for all the new imported equipment at MDP should be procured immediately using some of the remaining Government budget. Future orders for imported equipment should include the requisite spares.
- (6) The MDP business plan for 2013 should include realistic strategies and targets that focus on: (i) consumer food safety awareness and promoting the MDP brand; (ii) raw milk collection; (iii) a feasibility study on investing in a new UHT milk line.

- (7) Ways and means need to be found to encourage the fuller involvement of private sector dairy enterprises in the dairy value chain. Elaboration of the strategic dairy development strategy (not produced by the project) should include, inter alia, a bankable investment plan for the Northern Governorates, would facilitate this.
- (8) For interventions with multi-ministry responsibilities each key ministry should be directly involved in project implementation, i.e. the MoA as well as the MoIM.
- (9) MDP and other SDP and private sector dairy plants will need continued support from government if they are to compete on level terms with dairy imports, especially heavily discounted UHT milk of dubious quality, if the fragile dairy sector recovery is to be sustained to the benefit of local consumers (with affordable nutritious domestic milk and dairy products) and milk producers (boosting regular incomes). Such support might include strict enforcement food safety regulations and introducing tariffs on selected dairy imports.

7. ASSESSMENT FOR COUNTRY EVALUATION

In the framework of the Iraq Country Evaluation the International Evaluator was tasked to assess the MDP project in the light of the *on-going privatization policies of the Iraqi government*. This assessment is delivered below.

In 2009 Iraq was reported to have some 67 state owned enterprises, which included 240 factories employing between 100 and 4,000 workers each (Reuters, 2009). The SCDP and MDP were part of this state-owned empire, struggling to operate war-damaged facilities with antiquated technologies and equipment. Policies to privatise SOEs were first mooted almost a decade ago after the war. The initial attention was to be on the oil industry and other heavy industries such as steel-making and car assembly which, subject to WTO agreement, were to be provided with import tariff support. However, it is understood the legislation to enact privatisation policy was not in place when the MDP project started in 2010. Moreover, the global economic downturn in 2008-2010 is reported to have killed any immediate plans for privatisation. While it is not clear whether SCDP, or specifically the MDP, was on the privatisation agenda at that time, food companies often remain as SOEs long after other SOEs are divested on food security or food staple grounds.

Nevertheless, in late 2010, MoIM produced an Investment Opportunity concept note for MDP wherein: *The Ministry of Industry and Minerals / Investment Department invites Investors and international Competent Companies to invest in rehabilitation of the State Company for Dairy products/ Mosul Dairy Plant, that is to finance and implement the activities of rehabilitation of the plant according to modern technology of Dairy production technology, to operate and manage the factory at the investors expenses against a share of product*. The document contained short sections on: (i) plant history; (ii) investment concept; (iii) plant data; economic data; (iv) investment cost (USD18 million); (v) special care points; and (vi) evaluation criteria.

During interviews with senior SCDP officials, including the General Manager, in May 2012 the evaluators were told that SCDP was currently pursuing a potential public-private partnership with an Italian dairy company. By successfully rehabilitating the MDP, turning it into a profitable entity, it may be said the project contributed to making the enterprise a more attractive business proposition to potential investors, local and foreign.

As far as applying a more private sector-oriented approach is concerned, with the situation under which the project was formulated and implemented, it is difficult

to see what more might have been done. Given the government's insistence on providing support to MDP, the formulators and implementers did well to involve the private sector in its capacity building programme. Though Pillar 2 of the NDS targets *Private sector revitalisation*, when the project was formulated would the government have made USD 6 million available for private sector investment?

It is the international evaluator's view that using milk powder in place of fresh milk did not crowd out smaller private dairies. Like MDP, these enterprises were and are also largely using imported milk powder as their basic raw material; or to supplement what little fresh milk is available for yoghurt and cheese making. It might be argued that the project's failure to mobilise more fresh milk collection provided an opportunity for smaller private dairies to exploit the little milk available through marketing fresher-tasting, fresher-quality product lines.

Given this situation analysis, including the increasingly difficult security environment in the Northern Governorates during the life of the project, the project was right to channel its interventions through the MDP as it also built capacity and demonstrated new technologies to the dairy industry at large and at low risk to the private sector. With the benefit of hindsight, a project designed today would perhaps have endeavoured to put more focus on the private sector.

As a comparison, the UN provided substantial project support (grant and loan) back in the late 1980s to rehabilitate the parastatal Uganda Dairy Corporation after the country's prolonged and devastating civil war. Other SME dairies also tapped the capacity building and technology transfer components of the project. Though the revived Corporation business strategy in 1989 called for the company to be privatised, it was not until 2006, some 17 years later that it was sold, due mainly to milk being classed as a food staple. The Kenyan dairy industry was deregulated in 1990. At that time it was planned to sell off the SOE Kenya Cooperative Creameries Limited. Today, some 22 years later privatisation has still not happened, largely for political reasons.

Appendix A - Places visited and persons consulted

Name	Title	Organisation	Place Met
MOIM/SCDP			
Mr. Yousif Taher	General Manager Chair PSC	SCDPMOIM	Erbil
Mr. Mohammed Al-Waale	National Project Coordinator Member PSC	SCDPMOIM	Erbil and Mosul
Mr. Jalal Adean Shaikh Zada	Manager	MDP	Mosul
Mr. Hikmat Ali Sadiq	Production Chief	MDP	Mosul
Mr. Adnan Abdul Sattar	Mechanical Engineer	MDP	Mosul
Mr. Ahmad Zaki	Mechanical Engineer	MDP	Mosul
Universities			
Mr. Sadar Sardary	Dean, College of Agriculture	University of Salahaddin	Erbil
Mr. Ali Qasim Hasan	Member PSC (representing Mosul Governorate)	University of Mosul	Erbil and Mosul
Mr. Amjad Soulaka	Professor, College of Agriculture Member PSC (representing KRG)	UOS	Erbil
Dr. Hussein Dib	Project Trainer	University of Beirut	Erbil
Mr. Amer Salit	Professor, Food Science Dept.		
Trainees			
26 project trainees attending the FSMS Training Course from private sector, MDP, SCDP, Universities	People involved in FSMS and quality control	MDP SCDP Private dairies Universities	Erbil
4 trainees from MDP who attended the training course in Turkey on the operation and maintenance of the waste water treatment Plant	Different MDP management posts	MDP	Mosul
4 trainees who attended the course on operation and maintenance of the production lines for cream and yoghurt in Italy	Manager of the MDP. Mechanical Engineers Process Engineer.	MDP	Mosul
1 trainee who attended the training course in Germany on cheese packing machine.	Engineer at MDP	MDP	Mosul
Many trainees trained inside Iraq on the training courses in Baghdad or Erbil on subjects such as marketing, production UHT etc.	Different posts at MDP	MDP	Mosul
Private Sector			
Mr. Ehan Ferey Doon	Owner	Mersin Dairy Company (Mosul)	Erbil
Some shopkeepers selling MDP dairy product	Shop owners	Mosul Shops	Mosul
UNAMI			
Mr. Sokol Kondi,	Head of Office	UNAMI-Erbil	Erbil
Ms. Susan Martin	Northern Hub Coordinator	UNAMI-Erbil	Erbil
UNIDO			
Mr. Erik Lagefoged	General Manager Swedish Academy for Training	UNIDO	Erbil
Mr. Karl Schebesta	Project Manager	UNIDO	Vienna
Ms. Michaela Fleischer	Consultant, Evaluation Group	UNIDO	Vienna
Mr. Varghese Simon,	Evaluation Group	UNIDO	Vienna

Appendix B - Documents consulted

Programme Document, Rehabilitation of the Mosul Dairy Plant, Project number: FB/IRQ/10/001 (2009).

Progress Report: March to June 2010 (July 2010).

Progress Report: June to December 2010 (April 2011)

Progress Report: June to December 2011 (April 2012).

Annual Report 2011, Rehabilitation of the MDP, UNDG-ITF Project A5-29, 2012.

Project Brochure (July 2010).

Market study, State Company for Dairy Product, Mosul Dairy Product, Sana M. Jawad, National Consultant (2010)

Inception Report, Rehabilitation of the Mosul Dairy Plant, Project number: FB/IRQ/10/001 (December 2010).

Minutes of First Working Meeting, UNIDO Vienna (March 2010)

PSC Meeting Minutes, Beirut Lebanon (December 2010)

PSC Meeting Minutes, Istanbul, Turkey (March 2011)

PSC Meeting Minutes, Istanbul Turkey (January 2012)

Monthly Report No. 2: Execution ratio of Rehabilitation of the MDP (April 2011)

Monthly Report No. 3: Execution ratio of Rehabilitation of the MDP (June 2011)

Business Plan, Mosul Factory, SCDP (2011)

Project Steering Committee Meeting Minutes: (i) 1st - December 2010; (ii) 2nd - March 2011 (iii) 3rd - January 2012.

Project Update. PPT presentation to the 1stPSC Meeting (December 2010)

Project Update. PPT presentation to the 2ndPSC Meeting (April 2011)

Project Update. PPT presentation to the 3rd PSC meeting (April 2011)

Project Workplan (April 2011)

List of Equipment in Kind from Italy (Date?)

MDP Plan Drawings (February to August 2010)

Rehabilitation of MDP Mechanical Works, PPT Presentation (August 2010).

Rehabilitation of MDP Electrical Works, PPT Presentation (August 2010).

Rehabilitation of MDP Civil Works, PPT Presentation (August 2010).

Terms of Reference for Sub-Contract 1. Civil and electrical works. Mosul dairy FB/IRQ/10/001 Rehabilitation of the Mosul dairy plant (October 2010)

TOR for Sub-Contract 2. Rehabilitation of Cooling Facilities Mosul dairy FB/IRQ/10/001Rehabilitation of the Mosul dairy plant (October 2010)

Bill of Quantities (BOQ) Civil Works, Al-Taji Milk Cooling Centre, October 2010.

BOQ Equipment. Al-Taji Milk Cooling Centre (October 2010).

BOQ Laboratory Equipment. Al-Taji Milk Cooling Centre (October 2010).

Al Taji Centre, PowerPoint Presentation (October 2010).

PowerPoint Presentation: Assessment (1) Rehabilitation of the Mosul Dairy Plant (2) Rehabilitation of Al-Taji Cooling Center (FB/IRQ/10/001 1751). Eng. Mohammed Yousif Noori, National Expert Civil Engineering (May-November 2010).

15 Weekly reports April to December, 2011.National Expert Civil Engineer. Based on the work of Mohammed Noor (National Expert Civil Engineer) & Jukka Merilainen (CTA)

27 CTA Monthly Reports: February 2010 to May 2012, Jukka Merilainen, (CTA.
 MDP Final Report on Component 1: Civil and Electrical Works. A. Aza M. Amin, Project Manager, AZA Co. for general contracting co. ltd (July 2011).
 Rehabilitation of MDP. Maintenance Plan. Eng. Mohammed Yousif Noori, National Expert Civil Engineering (February 2012).
 Rehabilitation of MDP. Final Report: March-June 2011. Eng. Mohammed Yousif Noori, National Expert Civil Engineering (July 2012).
 Rehabilitation of MDP. Final Report December: 2011-January 2012. Eng. Mohammed Yousif Noori, National Expert Civil Engineering (January 2012).
 Iraq Investor Guide 2010 MOIM (2010).
 Investment Opportunity, SCDP Mosul Dairy Plant (October 2010).
 List of Trainees. Training Course for New Technologies and HACCP in Baghdad: 22 to 26 May, 2011.
 List of Trainees. Training Workshop on Enterprise Management, Marketing and Business Administration: 29 May to 02 June, 2011.
 Inter-agency Letter of Agreement between UNIDO and FAO (signed January 2011).
 FAO PPT Presentation to the 3rd PSC Meeting (January 2012)
 Workplan for FAO sub-contracted activities (contained in PowerPoint presentation made to Third PSC meeting (January 2012).
 Terms of Reference, Independent Final Evaluation of the UNIDO Project: *Rehabilitation of the Mosul Dairy Plant*, Project number: FB/IRQ/10/001, Period covered: 2010-2012 (May 2012).
 Training Course Programme: Educational and Vocational Approach into Food Safety Management Systems, Erbil 27-31 May 2012 (May 2012).
 Monthly Financial Report as of October 2012. *Rehabilitation of the Mosul Dairy Plant* Project number: FB/IRQ/10/001 (October 2012).
 CTA Final Report, including Training Reports. *Rehabilitation of the Mosul Dairy Plant* Project number: FB/IRQ/10/001 (August 2012).
 Independent Evaluation Report. Pilot Project for the Rehabilitation of the Dairy Sector in Iraq. UNIDO project number FB/IRQ/04/003 (Vienna 2010).

Appendix C - Market study Mosul dairy plant -

Conclusions (2010)

- Based on the results of the dairy market research and surveys we can conclude that:
- Dairy market is developing on daily basis and there is a need for closer follow up on market movements within the sector.
- Import is still dominating dairy market about 70% but there is a good progress in Mosul plant after the rehabilitation.
- Different segments of the market in local dairy sector are underdeveloped especially products of long duration that require better packaging and labelling like: UHT milk, UHT Yogurt, cream and Variety of White, Yellow aged and local special Cheese which will give the lines of UHT in Mosul plant a good chance in sealing the new products .
- Green market is perceived as place for new compete kinds of products especially with the good reputation of the state products.
- Development and improvement of packaging by the adoption of modern techniques is required.
Consumers in Mosul and Kurdistan are ready to accept new dairy products, but in this field the competition of the import is very high and local competitors lack proper technology and quality of products.
- The state company in general not very aggressive with its promotion, logo, labelling and pricing of their products allowing import to dominate the market. Especially consumers are looking for freshness, expiry date, presentation of the product.
- The company have to find a new mechanism in marketing throw companies specialist in marketing to ensure selling the whole production in a wider geographic area in addition to contracts with government agencies such as the Ministry of Education and Health....etc.
- The Company needed a an advertisement campaign by a specialized company to advertise correctly on new products before they are released
- Trust of consumer about locally produced dairy products is increasing slowly partly due to inconsistency of quality and lack of knowledge about hygiene practices at the dairy plant. Consumer awareness is needed to increasing on healthy and safe dairy products.
- Main consumers of dairy products (UHT milk, yogurt, cream) are children so more consideration is required for this market segment especially for size of package.
- Yogurt as a dairy product is produced in dairy plants and at home but imported yogurt has longer duration and better packaging making product more trustworthy within consumers.
- White cheese is a product that is consumed on regular basis still the variety of cheeses is high because there is lack of consistent quality and supply.
- More emphasis should be placed on willingness of the company to change and improve health and safety standards to be able to convince consumer that locally dairy products are of equal or better quality than imported ones.
- Training of employee by specialized companies

Source: Market Study, State Company for Dairy Products, Mosul Dairy Product, Sana M. Jawad, National Consultant (2010)

Appendix D - Achievement against Results Framework Indicators

Programme Title:	Rehabilitation of the Mosul Dairy Plant							
NDS/ICI priority/goal(s):	<p><u>NDS Goals:</u> Pillar Two: Private Sector revitalization Pillar Three: Improving the Quality of Life <u>ICI Agriculture Sector Goal:</u> To support the development of the agriculture sector to increase the food security, generate employment, diversify the economy and preserve the countryside. Create an enabling environment for a market oriented agricultural sector.</p>							
UNCT Outcome	Enabling Environment Created for Sustaining Agricultural Development and Food security							
Sector Outcome	Agriculture and Food Security Outcome 1: Enhanced production and productivity in the Agricultural Sector. Agriculture and Food Security Outcome 2: Environment for sustainable employment generation is created in Iraq							
Outcome 1	Enhanced production and productivity within the Agricultural Sector (focusing on dairy related elements).			NDS / ICI Priorities: Private Sector revitalization				
IP Outputs	UN Agency Specific Output	UN Agency	Partner	Indicators	Source of Data	Baseline Data	Indicator Target	Achievement
Output 1: MoIM, reg. authorities and SCDP staff have improved capacities to develop	MoIM, reg. authorities and SCDP staff have	UNIDO	MoIM, Reg. Authorities, SCDP	Number of MoIM, reg. authorities and SCDP staff trained on strategy development	Training report	0	10	Yes
				Percentage of	Post training		80%	Yes

strategies and plans	improved capacities to develop strategies and plans			MoIM, reg. authorities and SCDP staff fully satisfied with the quality of the training in terms of relevance and usefulness	participants' assessment			
				Dairy sector development plan for the northern Governorates in Iraq drafted	Final document	No	Yes	No
				Business plan for the sustainable rehabilitation of the Mosul dairy plant drafted	Final document	No	Yes	Yes but poor quality
				Quality based raw milk price system introduced	Quality control reports by MDP	Existing pricing system	Price differentiation according to determined raw milk quality	No
Output 2: Enhanced national capacities for quality and quantity of milk production as well as dairy	Enhanced national capacities for quality and quantity of milk production in Iraq	UNIDO	MOIM, MOA UB, US,SCDP Private sector	Number of trained trainers on milk and cheese processing as well as extension service staff	Training report	18 trainers on milk processing, 0 cheese processing, extension service staff to be determined during inception phase	24 for milk 15 for cheese 50 for extension service to farmers	Yes
				Percentage of trainees fully	Post training participants'		80%	Yes

management in Iraq				satisfied with the quality of the training in terms of relevance and usefulness	assessment			
				Number of trainers trained on marketing and business administration	Training report	To be identified during the inception phase	15	Yes
				Percentage of trainees fully satisfied with the quality of the training in terms of relevance and usefulness	Post training participants' assessment		80%	Yes
				Number of universities in target Governorates offering dairy focused training courses	Training curricula	To be determined in course of the inception phase	All Universities in the focus Governorates identified by the development strategy	Yes
				Number of SCDP and private sector staff trained in enterprise management, marketing, administration and new technologies used	Training reports	To be determined in course of the inception phase	3 managers 20 marketing staff 50 administrative staff 100 technical staff	?

				in the dairy sector				
				Percentage of trainees fully satisfied with the quality of the training in terms of relevance and usefulness	Post training participants' assessment		80%	Yes
				Number of staff participating in national and international dairy related events	End of activity reports	To be determined in course of the inception phase	National 50 International 20	Yes
				Number of International R&D institutions involved in the Iraqi dairy sector development	Contacts/Reports	To be determined in course of the inception phase	Involvement of at least three international institutions in the sector development	?
Output 3: Mosul dairy plant rehabilitation supported for improved dairy production,	Mosul dairy plant rehabilitation supported for improved dairy production,	UNIDO	MOIM, SCDP, Private sector	Mosul Plant facilities repaired	TOR, purchase order, tender documents, project progress report	Existing specs at UNIDO and SCDP	MDP facilities repaired according to international standard	Yes
				MDP energy and water supply as well as residues treatment rehabilitated	TOR, purchase order, tender documents, activity reports	Existing specs at UNIDO and SCDP	Yes	Yes

Appendix E - Request for Information on UNIDO-FAO IAA (21/6/2012)

(Information provided by FAO through CTA)

	Task	Status
1.	Conduct in cooperation with UNIDO an in-depth assessment of the dairy sector in the Northern Governorates (existing farm, animal and processing structure, including availability of feed)	Achieved. An assessment was conducted for the dairy cow owners, farmers and breeders in Nineveh province on the level of districts, sub districts and villages to obtain baseline data on the total number of breeders, Average tenure (number of cows / number of breeders), number of Cows, number of calves, number of Bulls, number of births and number of deaths.
2.	Assess the prevailing regulations for raw milk quality and price building.	Achieved MOI/GSCD in coordination with FAO has agreed on certain regulations and incentives for the milk producer according to the quality of the milk delivered to the processing plant
3.	Develop a quality and content based pricing scheme for raw milk	Achieved <i>The same as in 2</i>
4.	Raise awareness on the benefits of quality milk production among farmers, milk distributors, collection centers and dairies	Achieved Training Course on "Dairy farming management and milk processing was conducted in coordination with National Center for Agricultural research and Extension in Amman, Jordan from 23 to 30 January 2012. (5) Iraqi participants from Ninewah governorate were participated.
5.	Develop and disseminate information material for quality milk production	Under process. Around 1000 manual copies about quality milk production will be disseminating to the beneficiaries in one month time.
6.	Assess the existing extension services for the dairy sector	Achieved Assessment of the existing extension services in the dairy sector was conducted and was followed by training course for the extension services staff to build their capacity in this field
7.	Provide training for updating skills of extension service providers	Achieved. Several ToB trainings and local workshop were successfully carried out by the trainers who attended Amman training course. General Authority for extension services and agricultural cooperation in collaboration with the Agriculture directorate of Nineveh, had conducted a guiding seminar on "how to care the dairy cows"
8.	Develop and introduce an incentive system encouraging quality milk production	Achieved. <i>AS in 2</i>
9.	Develop and enforce a reliable quality control system	Under process. A continuous discussion on the quality control system with MOI/GSCD is in process
10.	Any other activity as may be required by the Project and being related to extension service and quality milk production	Under process. Procurement of a number of Milk cans will take place in June-July, the procurement process was initiated, and the goods will be delivered in July.
	Any other comments?	

Appendix F - Terms of Reference

Independent Final Evaluation of the UNIDO Project

“Rehabilitation of the Mosul Dairy Plant”

Project number: FB/IRQ/10/001

Period covered: 2010-2012

I. GENERAL BACKGROUND

Since 1980, Iraq has been embroiled in long-running geo-political disputes and conflicts that have significantly reversed her earlier human development gains. Since then, Iraq’s human and economic development indicators have fallen from some of the highest in the region to some of the lowest. The conflicts have furthermore caused enormous social, cultural and economic harm. The country has suffered significantly from the neglect and degradation of its infrastructure, environment, and social services.

Recovery of Iraq's agricultural sector is considered critical for the economic revival of the country. Several factors present challenges both to national and international efforts to revitalize the agriculture and agro industrial sector in Iraq. Among them are lack of modern technologies and working practices, damaged food processing enterprises and low productivity of food producing and processing units and enterprises.

The high quality food needed to supplement the essential food basket, including those necessary to provide the needed bio-available micronutrients, are animal based foods - meat, fish, eggs and dairy products - and fruits and vegetables. Most of these are imported at present. Only a few of them are locally produced. Some of these food items are categorised as expensive and are beyond the purchasing power of most Iraqis. Such food is not only expected to improve nutrition but, if provided from local production, is expected to also stimulate the agricultural sector.

The rehabilitation of the food-processing sector is considered to offer an effective means of consolidating employment and income generation in both the rural and urban areas. Such activities also have the potential to improve the nutritious situation of the population and contribute to public health.

Dairy is considered a good chance of establishing a food processing sector in Iraq. It is potentially attractive to foreign companies able to transfer state-of-the-art food processing technology to Iraq. Dairy is expected to be able to pave the way for such a process and act as a catalyst for the dissemination of new technologies and best practices creating a wave of modernization in the food processing in Iraq.

II. PROJECT INFORMATION

According to the Project Document, the project pursues the enhancement of production and productivity within the agricultural sector by focusing on dairy-related elements. It builds

on the experience gained in the “Pilot project for the rehabilitation of the Dairy Sector in Iraq”¹⁰ as well as the project “Rebuilding Food Safety and Food Processing Industry Capacity”¹¹.

The geographical focus of the project under evaluation is on 4 Northern Governorates, namely Ninewa, Dahuk, Erbil and Sulaymaniyah Governorate. It aims at assisting the Government of Iraq (GoI) in elaborating a dairy sector strategy for these provinces allowing sustainable investments for the utilization of locally produced milk, strengthening the human resources along the dairy value chain and supporting the rehabilitation of damaged physical infrastructure. In particular, the project pursues to rehabilitate the Dairy Plant in Mosul¹² (Ninewa Governorate) in order to improve milk (especially cheese) processing and to establish a viable and reliable partner for dairy farmers. In addition, the project pursues, *inter alia*, to develop a quality-based milk pricing system, to raise awareness among farmers to improve their commitment to quality production, to strengthen capacities in dairy plants (SOE, esp. in the Mosul Dairy Plant, as well as private sector) and to include universities in the activities in order to secure the same level of knowledge and to adapt existing curricula for dairy-related education.

According to the project document, the project strategy is based on two pillars:

1. Capacity building:
 - Institutional capacity building involving staff from Ministry of Industry and Minerals (MoIM) and Ministry of Agriculture (MoA) as well as regional authorities, staff from the State Company for Dairy Products (SCDP) and Universities
 - Human resources development, involving staff from private and public sector as well as farmers
2. Technology transfer:
 - Facilities rehabilitation according to international standards allowing the application of Hazard Analysis and Critical Control Point (HACCP) conform processing
 - Investment of new processing lines

The project document mentions the following expected **outcomes**:

- Contribution to a sustainable dairy sector development based on economic conditions thus contribution to the establishment of a competitive dairy sector in Iraq. By strengthening the sector through increased production and economic

¹⁰ This project has been implemented by UNIDO between 2006 and 2009 and supported the rehabilitation of a dairy plant in Ad-Diwaniyah, the capital of the Al-Qadisiyah province. It has been evaluated by UNIDO in 2010. The project “Rehabilitation of the Mosul Dairy Plant” pursues to provide refresher trainings to trainers that have been trained during this project.

¹¹ This project has been jointly implemented in Iraq by WHO, FAO and UNIDO under the UNDG ITF between 2006 and 2008. *Inter alia*, this project supported the rehabilitation of the hygiene and personnel rooms in the Mosul Dairy Plant, whereas the project under discussion here, as far as rehabilitation is concerned, focuses on the rehabilitation of the production rooms.

¹² “The Mosul dairy plant is one of the four plants under the auspices of the State Company for Dairy Products (SCDP), a company related to the Ministry of Industry and Minerals. It was established in the early 1970th and received support from UN during the setup and start-up period. Main areas of production were sterilized milk in glass bottles, processed cheese, yogurt and cream. The Mosul dairy plant also received support for the upgrading of its personnel related hygiene system through the Food Safety project.” (Project Document)

processing, it is expected that food imports could be replaced by local produce, thus contributing to increased food security.

- Standard conform facilities and production technologies at the state of the art would contribute to increased food safety and consumer confidence in Iraqi products.
- Focusing on cheese production and utilization of the buffalo milk available in the region would create the connection to the growing international market for this special product.
- Furthermore the project is expected to contribute to the establishment of a sound mix of small and big production facilities allowing responding properly to the challenges of the internationalized markets.
- The project pursues to address both institutional and human capacity gaps and facilitate industrial development in Iraq.
- Another focus of the project is to improve the raw milk quality and the introduction of a quality based reliable milk pricing system.

The expected **outputs** are the following:

1. MoIM, regional authorities and State Company for Dairy Products (SCDP) staff have improved capacities to develop strategies and plans
2. Enhanced national capacities for quality and quantity of milk production in Iraq
3. Mosul dairy plant rehabilitation supported for improved dairy production

The rehabilitation of the Mosul Dairy Plant is expected to secure the existing 170 long-term jobs in the factory and lead to a total employment of up to 400 people in long-term jobs. At a later stage, the dairy factory is expected to become a partner for thousands of farmers on purchasing their milk as well as people working in logistics, transportation and retail sectors. The project should thus contribute to making viable again the local supply and value chain for milk. In addition, the population in the market area should benefit from safe products that should then be available on the market. The Ministries, the regional authorities of the 4 Governorates and the SCDP are expected to benefit from the capacity building activities of the project.

The project management arrangements are as follows: The main implementing Agency is UNIDO with some subcontracts to FAO, aiming to ensure cooperation with on-going activities in the upstream parts of the Iraqi dairy value chain (see below). According to the Inception report, the project is managed through a Project Management Unit (PMU) based in Erbil, which is responsible for the day-to-day implementation and coordination of project activities. The PMU is supported by the UNIDO-Iraq Country Programme Office in Amman as well as from UNIDO HQ in Vienna. The PMU staff consists of a Chief Technical Adviser (CTA) (initially based in Amman with frequent stays in Erbil), a National Project Coordinator (NPC) and basic administrative support. Short-term international and national consultants are recruited for specific activities.

According to the Inception Report, UNIDO's main project partner is the Ministry of Industry and Minerals (MoIM)¹³. In addition, close cooperation has been foreseen with the Ministry of Agriculture (MoA) and local authorities of the Northern Provinces. Furthermore, the project pursues close cooperation with the Agriculture and Food Security Sector Outcome Team (AFSSOT), especially with the FAO project on the "Modernization and Development of the Dairy Cattle sector in Iraq" and the "Private Sector Development Program" in which UNIDO has a main role, and universities. Apart from that, it aims at building partnerships between the private (entrepreneurs and farmers) and public sector.

According to the Inception Report, project stakeholders are represented in a Project Steering Committee (PSC). Its main functions and responsibilities are to "(i) advice the project on strategic directions of support activities to be provided; (ii) ensure the effective cooperation between all involved stakeholders; and (iii) advise the effectiveness of the on-going activities, including the annual work plan". Besides the Ministries (MoIM and MoA) and the local authorities of the Northern Governorates, the Inception reports mentions that also a representative of the farmers delivering their milk to the Mosul dairy plant as well as from the Agricultural Department of the University of Sulaymaniyah will be invited to join the PSC. Furthermore, UNIDO as well as FAO nominated a member for the PSC:

III. PROJECT BUDGET AND PROJECT DURATION

The total project budget amounts to US\$ 8,519,606. It is funded by the multi-donor UN Trust Fund for Iraq (UNDG ITF) from an Italian earmarked contribution (2,519,606 US\$). The Government of Iraq contributes 6 million US\$ for purchasing equipment for the rehabilitation of the Mosul Dairy Plant.

Initially, the project had been approved for a period of 24 months from October 2009 until September 2011 This initial duration has been extended until June 2012.

IV. EVALUATION PURPOSE

The purpose of the evaluation is to assess the:

1. Project relevance with regard to the priorities and policies of the Government of Iraq, the UNDG ITF and UNIDO;
2. Project effectiveness in terms of the outputs produced and outcomes achieved as compared to those planned;
3. Efficiency of implementation: quantity, quality, cost and timeliness of UNIDO and counterpart inputs and activities;
4. Prospects for development impact;
5. Long-term sustainability of the support mechanisms results and benefits;

The evaluation should provide the necessary analytical basis and make recommendations to the Government, to the donor and to UNIDO for the closure of the project and for ensuring

¹³The MoIM has allocated 6 Million US\$ for equipment for the rehabilitation of the Mosul Dairy Plant. UNIDO pursued to provide technical assistance for the preparation of the specifications for the identified equipment to be purchased with these funds.

its sustainability. The evaluation should also draw lessons of wider applicability for the replication of the experience gained in this project in other projects.

V. METHODOLOGY AND SCOPE OF THE EVALUATION

The evaluation will be carried out in keeping with agreed evaluation standards and requirements. More specifically it will fully respect the principles laid down in the “UN Norms and Standards for Evaluation” and Evaluation Policies of UNIDO.¹⁴ The evaluation shall determine as systematically and objectively as possible the relevance, efficiency, achievements (outputs, prospects for achieving expected outcomes and impact) and sustainability of the project. To this end, the evaluation will assess the achievements of the project against its key objectives, as set out in the project document and the inception report, including a review of the relevance of the objectives and of the design. It will also identify factors that have facilitated or impeded the achievement of the objectives.

While maintaining independence, the evaluation will be carried out based on a participatory approach, which seeks the views and assessments of all parties. It will address the following issues:

Project identification and formulation:

- The extent to which a participatory project identification process was applied in selecting problem areas and counterparts requiring technical cooperation support;
- Clarity and realism of the project's development and immediate objectives, including specification of targets and identification of beneficiaries and prospects for sustainability.
- Clarity and logical consistency between, inputs, activities, outputs and progress towards achievement of objectives (quality, quantity and time-frame);
- Realism and clarity in the specification of prior obligations and prerequisites (assumptions and risks);
- Realism and clarity of external institutional relationships, and in the managerial and institutional framework for implementation and the work plan;
- Likely cost-effectiveness of the project design.

Project relevance:

- Relevance to GoI development priorities and needs;
- Relevance to priorities of the UN system in Iraq;
- Relevance to UN and UNIDO priorities at large, in particular to poverty reduction;
- Relevance to donor priorities;
- Relevance to development needs of the agriculture and dairy sectors;
- Relevance to consumers;

Project ownership:

- The extent to which the project was formulated with the participation of the national counterpart and/or target beneficiaries;

¹⁴ All documents available from the websites of the UN Evaluation Group: <http://www.uneval.org/>

- The extent to which counterparts have been appropriately involved and have been participating in the identification of their critical problem areas, in the development of technical cooperation strategies and in the implementation of the project ;
- The extent to which agreed counterpart contributions and other inputs from the Government (including Governorates) have been received and the extent to which the project's follow-up is integrated into Government budgets and workplans.

Project coordination and management:

- The extent to which the national management and overall field coordination mechanisms of the project have been efficient and effective;
- The extent to which the UNIDO based management, coordination, quality control and input delivery mechanisms have been efficient and effective;
- The extent to which monitoring and self-evaluation have been carried out effectively, based on indicators for outputs, outcomes and objectives and using that information for project steering and adaptive management;
- The extent to which changes in planning documents during implementation have been approved and documented;
- The extent to which coordination envisaged with any other development cooperation programmes in the country has been realized and benefits achieved.
- The extent to which synergy benefits can be found in relation to other UNIDO and UN activities in the country.

Efficiency of Implementation:

Efficiency and adequacy of project implementation including: availability of funds as compared with the provisional budget (donor and national contribution); the quality and timeliness of inputs delivered by UNIDO (expertise, training, equipment, methodologies, etc.) and the Government as compared to the work plan(s); managerial and work efficiency; implementation difficulties; adequacy of monitoring and reporting; the extent of national support and commitment and the quality and quantity of administrative and technical support by UNIDO.

Effectiveness and Project Results:

Full and systematic assessment of outputs produced to date (quantity and quality as compared with work plan and progress towards achieving the immediate objectives); The quality of the outputs produced and how the target beneficiaries use these outputs, with particular attention to gender aspects; the outcomes, which have occurred or which are likely to happen through utilization of outputs. In particular, this includes an analysis of the likely effects of micro-enterprise industry activities as a means of creating employment and raising household incomes.

Prospects to achieve expected outcomes, impact and sustainability:

Prospects to achieve the expected outcomes and impact and prospects for sustaining the project's results by the beneficiaries and the host institutions after the termination of the project, and identification of developmental changes (economic, environmental, social) that are likely to occur as a result of the intervention, and how far they are sustainable.

Cost-effectiveness of the Project

Assess whether the project approach represented the best use of given resources for achieving the planned objectives.

Recommendations for a possible next project phase, or replication elsewhere

Based on the above analysis the evaluators will draw specific conclusions and make proposals for any necessary further action by Government and/or UNIDO and/or the UN or other donors to ensure sustainable development, including any need for additional assistance and activities of the project prior to its completion. The mission will draw attention to any lessons of general interest. Any proposal for further assistance should include precise specification of objectives and the major suggested outputs and inputs.

VI. EVALUATION TIMING AND MAIN TASKS

The evaluation is scheduled to take place in May and June 2012.

The evaluation will be carried out through analyses of various sources of information, including desk analysis, field visits, survey data, and interviews with counterparts, beneficiaries, donor representatives, programme managers and through the cross-validation of data. In view of the particular aspects of this evaluation particular attention will be given to the elaboration of a strategy for field surveys, the elaboration and test of questionnaires and the implementation of the surveys in line with agreed professional and impartiality standards.

The evaluation will encompass the following main tasks:

1. Desk study of available documents; definition of an evaluation plan that sets out in a detailed manner the concept and schedule for the evaluation. That plan shall include a definition of the evaluation methodology with a catalogue of project specific evaluation questions, to which the evaluation should provide answers; this methodology will have to be discussed and agreed within the evaluation unit of UNIDO;
2. Interviews with the UNIDO project manager and Evaluation Officer in Vienna (in early May); interview with the CTA (over the phone);
3. Organization of a kick-off meeting in Erbil during a training conducted by the project (tentatively in mid-May), involving national and international project staff, counterpart representatives and the international and national evaluator; the evaluators will conduct interviews among project staff and stakeholders;
4. Analytical review of the economic, political and security conditions in the region of intervention (drawing on information received from policy makers, and also other UN Organizations and providers of technical assistance in Iraq and in the region, e.g.) and assessment of the relevance, needs orientation and realism of the project design and implementation (gathering information from project stakeholders and private sector players in the region);

5. On-site visit of the dairy plant; interviews with counterparts and project staff; verification of the quality of the civil works, of the lay-out, quality and appropriateness of the production equipment and the quality of its installation;
6. Execution of a market study and verification of the viability and sustainability of the business plan for the dairy plant; verification of the availability and sustainability of production inputs; assessment of the entire range of pursued activities and outputs; assessment of the likelihood that the expected benefits and side-benefits are achieved;
7. Design and execution of a survey among trainees (staff of MoIM, regional authorities, SCDP, key staff from dairies) and trainers; this survey would address a representative sample of at least 10% of trainees/trainers, if possible more; this survey shall assess *inter alia*: the profile of the trainees and trainers and to what extent the selection of these matches the objective of the project to enhance national capacities for milk production in Iraq and the quality of the training;
8. Organization of a debriefing at UNIDO HQ in Vienna, where the team leader will present raw results and preliminary findings to the Project Manager and staff and collect their feed-back;
9. Production of a first draft evaluation report and submission of this report to the UNIDO Evaluation Group and the UNIDO project manager for feed-back;
10. Incorporation of comments into a second draft and submission of this draft to the government, project participants and stakeholders for comments;
11. Incorporation of comments into final draft.

Tentative schedule for the evaluation:

Month	Activities
May/June 2012	<ul style="list-style-type: none"> - Desk study of available documents; - Briefing of the International Consultant by UNIDO EVA and the Project Manager in UNIDO HQ in Vienna; - Meeting of the International and National Evaluator with project personnel and counterparts in Erbil; - writing of a detailed evaluation plan and concept - Visit of the project site and interviews with project staff and counterparts by the National Evaluator
June 2012	<ul style="list-style-type: none"> - Drafting of evaluation report, incorporation of comments; debriefing mission of the International Evaluator to Vienna (mid- to end-June); completion of the final report (end of June)

VII. SERVICES REQUIRED

The evaluation will require the following functions, competencies and skills:

1. Evaluation team leader with documented experience in:
 - a. Designing and managing complex evaluations;

- b. Leading multi-disciplinary and multi-cultural teams of evaluators;
- c. Development projects in food industry, particularly dairy-related projects;
- d. Designing and supervising qualitative and quantitative field surveys;
- e. Preparing evaluation reports in line with agreed UN and DAC standards;
- f. Drafting reports in English (excellent drafting skills to be demonstrated).

2. National Evaluator with documented experience in executing:

- a. Industrial Development projects;
- b. Evaluations in Arab speaking countries;
- c. Qualitative and quantitative field surveys;
- d. Interviews in Arab language with the entire range of stakeholders;

The evaluation team must have the necessary technical competence and experience to assess the quality of the technical assistance provided under this project in the area of dairy rehabilitation and management and developing strategies for the dairy sector.

The execution of the evaluation will require full command and control of the specific situation in Iraq and full respect of the UN security rules for Iraq. The ability to carry out field operations in Iraq is a key requirement and must be demonstrated.

The evaluation team leader will be responsible for elaboration of an evaluation strategy, including the design of field surveys and elaboration of questionnaires; guiding the national evaluator for his/her field work in Iraq; analysis of survey results; gathering of complementary information from project staff, collaborators and stakeholders through telephone interviews and other means; and preparing a presentation of conclusions and recommendations as well as a final evaluation report.

The national evaluator will be responsible for carrying out the field surveys (under the guidance of the team leader). The field surveys will provide the foundation for the evaluation and must therefore be executed in line with the highest standards of professionalism and impartiality.

The above-mentioned functions, competencies and skills may be distributed among several persons in the evaluation team. Team members may be located in different countries but an effective coordination mechanism will have to be demonstrated. Evaluation team members must be independent and not have been involved in the formulation, implementation or backstopping of the project.

The UNIDO Evaluation Group will be responsible for the quality control of the evaluation process and report. They will provide inputs regarding findings, lessons learned and recommendations from other evaluations, ensuring that the evaluation report is in compliance with established evaluation norms and standards and useful for organizational learning of all parties.

The project office in Amman will logistically and administratively support the evaluation team to the extent possible. However, it should be understood that the evaluation team is responsible for its own arrangements for transport, lodging, security etc.

VIII. CONSULTATIONS AND LIAISON

Liaison of the evaluation team with the Iraqi authorities will be provided by an official nominated by the Government of Iraq.

The evaluation team will maintain close liaison with the representatives of UNIDO, other UN agencies and UNDG as well as with the concerned national agencies and with national and international project staff. The evaluation team is free to discuss with the authorities concerned anything relevant to its assignment. However, it is not authorized to make any commitments on behalf of the Government, the donor or UNIDO.

IX. LANGUAGE REQUIREMENTS

Local interviews and surveys will be conducted in Arabic. All data and interview reports must be translated into English. The evaluation report must be delivered in English.

X. REPORTING

The evaluation report shall follow the structure given in Annex 1. Reporting language will be English. The executive summary, recommendations and lessons learned shall be an important part of the presentations to be prepared for the debriefing session in Vienna.

The draft report shall be submitted to the UNIDO Evaluation Group for initial review and consultation who will share it with the project officer for feedback and comments. The consultation also seeks agreement on the findings and recommendations. The evaluators will take the comments into consideration in preparing the final version of the report.

The evaluation will be subject to quality assessments by UNIDO Evaluation Group. These apply evaluation quality assessment criteria and are used as a tool for providing structured feedback. The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality (Annex 2).

Appendix G - Addendum to Terms of Reference

IRAQ COUNTRY EVALUATION
Job Description
International Evaluator (Dairy Specialist)
IRAQ Country Evaluation (XP/IRQ/12/001 – SAP ID: 120150)

Post title: International Evaluator
 Estimated duration: 3 days (over period 17 to 21 December 2012)
 Starting date required: 17 December
 Duty station: Home based

Duties of the International Evaluator:

The International Evaluator (Dairy Specialist) conducted the evaluation of the project B/IRQ/10/001– Rehabilitation of the Mosul Dairy Plant. This project includes the rehabilitation of a major State Owned Enterprise (SOE) in the dairy sector of Iraq. The SOE/private sector question is a general issue of fundamental importance under the on-going country evaluation for Iraq. Additional evidence is required how UNIDO positioned itself in this matter over the past five years.

Under the present contract, the international evaluator should, more specifically, clarify the projection in the context of the situation of the Iraqi dairy sector and on-going privatization policies of the Iraqi Government. The international evaluator should advise whether it was justifiable to focus on one single SOE instead of applying a more private sector oriented approach and whether the projection may have led to undesirable impacts. In particular it should be clarified whether the Mosul Dairy Plant, by using milk powder at world market prices, potentially crowds out existing local dairy value chains in the agro and private sector instead of developing them.

The International Evaluator will carry out the following duties:

Duties	Duration	Location	Deliverables
Subchapter for Country Evaluation Preparation of a subchapter on the above-mentioned questions to be included in the Mosul Dairy Plant and Iraq Country Evaluation reports	3	Home based	Subchapter for Iraq Country Evaluation and Iraq Country Evaluation reports

Qualifications:

- University Degree in a relevant field
- In-depth experience in industrial development (dairy sector)
- Solid evaluation skills
- Strong English language drafting skills

Languages:

- English

Absence of Conflict of Interest:

- According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/projector theme under evaluation.