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**UNITED NATIONS DEVELOPMENT GROUP
IRAQ TRUST FUND
MPTF OFFICE FINAL PROGRAMME NARRATIVE REPORT
REPORTING PERIOD: FROM 01.2010 TO 09.2012**

<p align="center">Programme Title & Project Number</p> <ul style="list-style-type: none"> Programme Title: Rehabilitation of the Mosul Dairy Plant Programme Number A 5-29 MPTF Office Project Reference Number: 00073652 	<p align="center">Country, Locality(s), Priority Area(s) / Strategic Results</p> <p><i>Country/Region: IRAQ/ 5 Northern Governorates of Iraq.</i></p> <hr/> <p><i>Priority Area # 2: Inclusive Economic Growth</i></p> <p>Formerly under Agriculture and Food Security Sector Outcome</p>												
<p align="center">Participating Organization(s)</p> <ul style="list-style-type: none"> UNIDO 	<p align="center">Implementing Partners</p> <ul style="list-style-type: none"> National counterparts: Ministry of Industry and Minerals, State Company for Dairy Products FOA (through Interagency agreement with UNIDO) 												
<p align="center">Programme/Project Cost (US\$)</p> <p>Total approved budget as per project document: US \$ 2,519,606</p> <p>MPTF /JP Contribution: N/A</p> <p>Agency Contribution: N/A</p> <p>Government Contribution: US \$ 6,000,000</p> <p>Other Contributions (donors): N/A</p> <p>TOTAL: US\$ 8,519,606</p>	<p align="center">Programme Duration</p> <table border="0"> <tr> <td>Overall Duration (<i>months</i>)</td> <td>33 Months</td> </tr> <tr> <td>Start Date (<i>dd.mm.yyyy</i>)</td> <td>11.01.2010</td> </tr> <tr> <td>Original End Date (<i>dd.mm.yyyy</i>)</td> <td>11.01.2012</td> </tr> <tr> <td>Actual End date (<i>dd.mm.yyyy</i>)</td> <td>30.09.2012</td> </tr> <tr> <td>Have agency(ies) operationally closed the Programme in its(their) system?</td> <td>Yes</td> </tr> <tr> <td>Expected Financial Closure date</td> <td>30.09.2013</td> </tr> </table>	Overall Duration (<i>months</i>)	33 Months	Start Date (<i>dd.mm.yyyy</i>)	11.01.2010	Original End Date (<i>dd.mm.yyyy</i>)	11.01.2012	Actual End date (<i>dd.mm.yyyy</i>)	30.09.2012	Have agency(ies) operationally closed the Programme in its(their) system?	Yes	Expected Financial Closure date	30.09.2013
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<p>Programme Assessment/Review/Mid-Term Eval.</p> <p>Evaluation Completed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Date: 27.12.2012 Evaluation Report - Attached <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Date: 14.01.2013</p>	<p align="center">Report Submitted By</p> <ul style="list-style-type: none"> Name: Karl Schebesta Title: IDO Participating Organization (Lead):UNIDO Email address:k.schebesta@unido.org 												

FINAL PROGRAMME REPORT FORMAT

EXECUTIVE SUMMARY

The two year 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 focusing on dairy related element*’. Following a nine months extension the project was completed in September 2012.

Project philosophy

In the context of substituting imported with domestically produced milk and dairy products, 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. The Mosul Dairy Plant, part of the SOE SCDP 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 many 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.

This time the intervention was to embrace a more holistic cow to consumer approach with an overarching strategic focus on capacity building and technology transfer. By outsourcing upstream milk production activities to the Food and Agriculture Organisation (FAO) of the UN, 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.

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 domestic 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.

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 elements 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, notwithstanding the difficult trading situation resulting in the main from fierce competition from imports 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 secure increasing supplies of fresh milk to MDP from local farmers. 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

I. Purpose

- 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 2010, that is after the MDP project was formulated and started.
- Main objective and expected outcomes:
 - Project objective: the purpose of the project is the enhancement of production and productivity within the agricultural sector through focusing on dairy related elements
- Project outcome: Enhanced production and productivity within the agricultural sector (focusing on dairy related elements).
- Project outputs:
 - (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

II. Assessment of Programme Results

i) Narrative reporting on results:

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 downstream rehabilitation of key elements of the MDP business; second the upstream, i.e. milk production part.

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. There is evidence that consumers appreciate the improved quality and availability of the new product lines: cream, processed cheese and yogurt.

It is 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. 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.

- **Outcomes:**

Financial project inputs were sufficient to implement the activities. 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.

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.

- **Outputs:**

- *“MoIM, regional authorities and SCDP staff have improved capacities to develop strategies and plans.”*

Major activities as stated in the Work Plan were achieved like:

- Establishment of a Project Steering Committee involving the main stakeholders for the provision of the strategic direction and oversight
- In depth assessment of the dairy sector in the Northern Governorates (existing farm, animal and processing structure, including availability of feed)
- In depth assessment of the market potential of dairy products produced in the Northern Provinces (local, regional, national and international)
- SWOT analysis of the sector where achieved, while
- Sector vision development, “Because of the specific situation a lot of existing uncertainties, the legal and economical 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”. SC Jan 2012

Following this decision and the prevailing situation the following activities could not be achieved: Deriving the strategy and development of model business plans derived from the strategy, while a business plan for the Mosul Dairy as well as a financial and HRM plan for the Mosul Dairy Plant was delivered.

The activities related to the assessment of the prevailing regulations for raw milk quality and price building, development of a quality and content based pricing scheme for raw milk and awareness raising on the benefits of quality milk production was a joint activity delivered by FAO and the State Company for Dairy Products.

In total 10 staff from SCDP and private sector was trained on strategy development, development of a business plan as well as in marketing.

- *“Enhanced national capacities for quality and quantity of milk production in Iraq”*

Experts already trained through the pre-running project received refresher training and were assisted by international experts to develop training material for technology, marketing and business administration. In addition

- 12 experts received training on technologies,
- 24 experts from universities and governorates received training on HACCP and Quality management. This training also created the linkage between research and processing. It is considered as an important step to create sustainability as the experts from the universities will include the content of the training into their lectures at the universities.
- In addition 50 staff from dairies participated in the national dairy and food related fairs, while in total 21 participations in different international fairs were enabled through the project.

In the upstream activities following activities were conducted.

- MOI/SCDP 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.
- Training Course on “Dairy farming management and milk processing was conducted in coordination with National Centre for Agricultural research and Extension in Amman, Jordan 5 Iraqi participants from Ninawah governorate participated and acted as head trainer in the follow up trainings in Iraq. The training aimed to provide the participants with the knowledge and skills that contribute to the development of administrative capabilities and raising the effectiveness of their performance, and promoting positive attitudes they have towards their responsibilities in the field of dairy management and milk processing like:
 - Enhance the participant knowledge and capacities in Dairy management.
 - Enhance the participant knowledge in the importance of milk processing.
 - Enhance the participant knowledge in processing methods.
 - Enhance the participant knowledge in the economics of dairy projects.
 - Recognize the importance of using the right methods and tools in measuring milk quality and compositions.
- 500 manuals on quality milk production and focus on focuses on methods of milk sampling, testing, developing a policy on pricing of milk and payment systems were delivered to Mosul dairy plant and the agriculture directorate in Ninewa and disseminated to the beneficiaries.
- The General Authority for extension services and agricultural cooperation in collaboration with the Agriculture Directorate of Nineveh conducted a guiding seminar on "how to care the dairy cows".
- 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. Several ToT trainings and local workshop were successfully carried out by the trainers who attended Amman training course.

These trainings focused on the following topics:

1. Dairy housing, equipment and milking machine.
2. Dairy manure-waste management.
3. Artificial insemination and embryo transfer importance in dairy farm (farm visit).
4. Importance of fat and protein content on dairy products.
5. Overview of milk products in the region.
6. Cheese making – modern methods with high tech. versus traditional methods.
7. Starter types used in milk fermentation or processing.

8. Milk analysis / laboratory.
9. Butter making, Yoghurt making and flavored milk production.
10. Milk spoilage, Milk storage and transportation.
11. Marketing of raw milk and milk products.
12. Milk hygiene.
13. Udder health.
14. Milk transportation with focus on hot periods during the year..

- A continuous discussion on the quality control system with MOI/SCDP is in process and will continue beyond the project cycle.
- 500 farmers received milk churns while farmers with higher milk production capacity were exposed to appropriate milk chilling technologies (cooling tanks) in local fairs.

○ *“Mosul dairy plant rehabilitation supported for improved dairy production”*

Major activities were related to the repair and rehabilitation of facilities but also the procurement of new production lines.

Building on the experience gained in the pre running project for Diwaniya the SCDP was able to conduct the procurement processes with very limited support from UNIDO and contributed to the success of the project. The staff of the MDP but also other branches of the SCDP was trained on the proper use of the new equipment by the suppliers either in their premises or at the factory.

The facilities repair was executed by a local company showing high experience and capabilities in doing such works.

Maintenance plans which were established under guidance of the project will assist the management in running the plants more efficient.

- *Monitoring of the impact of the project activities on income, employment and sector development* was done during the project and also as part of the evaluation. It is important to follow up from The SCDP and the ministry in order to be able to evaluate the long term impact of the project

• **Qualitative Assessment**

Strengths
· 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.

Weaknesses
Absence of the MoA in the project and the PSC
· Limited involvement of private sector dairies.
· Inability to secure fresh milk supplies by MDP -as yet no effect on enhancing milk production and productivity or farming

family income.

· Limited efforts to tackle 'unfair' competition from attractively packaged imported milk and dairy products.

· Shortcomings in developing the MDP business plan;

· Inability to produce a development plan for Northern Iraq.

· Project management from a distance limited the on-the-job coaching and mentoring aspects of capacity building.

ii) Indicator Based Performance Assessment: excerpt of the evaluation report

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

ii) Evaluation, Best Practices and Lessons Learned

- Main challenge was the difficult security situation in the project area which hindered more direct intervention by international staff. In addition access to in different governorates and lack of existing political and economic enabling framework creates a main hindrance of proper achievements as planned.
Project development from distance building on expressions and information from involved persons might lead to over expectations and estimations which lead to non achievement of goals and targets.
Different political opinions and directions of central Government and authorities in Governorates hinder the enforcement of basic changes (e.g. milk quality regulations, strategies)
Different political interests (milk import versus local production) might hamper national development and leave the country open to uncontrolled supply of food which could not be sold at the market of origin.
- Building on local expertise is sometimes time consuming but supporting local ownership and strong identification of the stakeholders with the project
- An important lesson learned from both dairy related projects implemented by UNIDO is the availability and high experience of local expertise in both practical and theoretical work and their ability to contribute to increased impact.



Training course for university teachers,SCDP, private sector staff Small but efficient Project Steering Committee



Milk separation and pasteurization before



Milk separation and pasteurization after



Civil works in progress



Rehabilitated cooling room



New laboratory for product testing



new battery of compressors for cooling



Participants at the Erbil trade fair



Certificate for trainer delivered