



**Submission Form
To
The Lebanon Recovery Fund Steering Committee**

To be completed by the Recovery and Reconstruction Cell (RRC)

Meeting No:	Date of Meeting:
Item No:	Programme/project

To: Lebanon Recovery Trust Fund Steering Committee	Date of Submission: 13 February 2009
From: Mr Werner Chakkalal Senior Project Coordinator Food and Agriculture Organization of the United Nations (FAO)	Contact: Mr Werner Chakkalal FAO Rome +39-06-57052403 werner.chakkalal@fao.org
Through: Working Group <input checked="" type="checkbox"/> Endorsement <input type="checkbox"/> Comments	Contact: Ms Solange Matta-Saadé FAO Lebanon solange.mattasaade@fao.org
Proposed submission, if approved would result in: <input type="checkbox"/> Continuation of existing programme/project <input checked="" type="checkbox"/> New programme/project <input type="checkbox"/> Other (explain)	Proposed submission resulted from: <input type="checkbox"/> National Authorities initiative within national priorities <input checked="" type="checkbox"/> UN Agency initiative within national priorities <input type="checkbox"/> Other (explain)
Programme/project title: Recovery and Rehabilitation of Dairy Sector in Bekâa Valley and Hermel-Akkar Uplands	
Amount of funds requested for proposed programme/project: US\$2.5 million	
Estimated number of beneficiaries: 300 direct beneficiaries and 300 indirect beneficiaries	
Request against specific earmarking or unearmarked: unearmarked	
Percentage and amount of indirect costs requested: 7%	

1. Background

The 2006 hostilities which took place in south Lebanon, coupled with the soaring price of animal feed and inexistence of milk collection facilities and dairy producer organizations has seriously weakened the productive capacity of dairy smallholders in Lebanon, including the Bekâa Valley and North Akkar. These regions of Lebanon are considered to be the dairy basin, mainly the Bekâa valley providing the main local dairy supply for the country. The number of dairy cows in the Bekâa Valley has decreased dramatically following the high death toll of livestock during the 2006 war and its aftermath and the continuously increasing number of dairy farms shutting down. According to the Ministry of Agriculture (MOA) regional services, the total number of dairy cows has dropped from 25,000 heads to between 15,000 and 18,000 heads in the Bekâa Valley region. This drastic decrease will have a serious negative impact on the country's national production of dairy products and will consequently increase their reliance on dairy imports, worsening the balance of payment of the country, which is already heavily indebted. The dairy industry sector in Bekâa Valley requires special consideration if the industry is to develop and be sustainable.

In the Hermel-Akkar Uplands, villagers from the lower valley bring their animals for grazing to the uplands, rising over 1,800 metres, during the spring-summer transhumance season. These farmers are from the most remote, desolate and resource-poor areas of Lebanon and have a higher level of socio-economic deprivation and despair in the country. The last conflict, together with the meager resources and low-level skills, experience and unhygienic practices has led to a decrease or loss of income from goat and sheep milk and an increase in rural exodus. To secure their survival in an increasingly difficult and harsh environment, the local population is now returning to illicit income-generating activities after several years of eradication. The Hermel Uplands is a major area with a thriving cultivation of illicit crops, causing growing concern to the Government of Lebanon.

Therefore, interventions that could create alternative income opportunities and reduce the dependence on illicit crops are urgently required to provide assistance to vulnerable smallholders in Hermel-Akkar Uplands. Improvement of small ruminants, mainly goats which graze in the agro-ecological zones of those highlands, is the most appropriate opportunity for sustainable productive income-generating activity both in terms of the marketplace and of natural resources.

2. Purpose of Proposed Programme/Project

The aim of this project is to enable the recovery/rehabilitation and assistance to the lives and livelihoods of 300 vulnerable livestock keepers in the Central Bekâa Valley, North Akkar and Hermel-Akkar Highlands who are resource poor and currently have their livelihoods threatened by the recent soaring food prices and high cost of animal production.

The project interventions are focused particularly on strengthening the capacity of milk production while securing the dairy sub-sector and creating for resource poor farmers productive income-generating activities as an alternative to the production of illicit crops. Activities include the distribution of dairy cattle, shamee goats and bucks, rehabilitation of the dairy industry and veterinary service, related animal production inputs and training to strengthen capacity in improved animal production, hygienic dairy production while sustaining the dairy sector through the introduction of forage crops to secure animal feeding.

3. Evaluation of Proposals by the Working Group

Implementability

	2007	2008	2009
Estimated commitments (\$mill)	—	—	—
Estimated disbursements (\$mill)	—	—	—

Does the project correspond to national priorities? Yes No

This project is in line with the Government of Lebanon's early recovery objectives of restoring livelihoods and rehabilitating livelihoods of vulnerable groups. It also falls within the Ministries of Agriculture and Environment main priorities to increase

Project approved by the Ministry of Agriculture.

4. Review by Recovery and Reconstruction Cell (RRC)

Check on Programme/Project Proposal Format Contents

- | | | |
|--|------------------------------|-----------------------------|
| <input type="checkbox"/> Cover sheet (first page) | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| <input type="checkbox"/> Logical Framework | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| <input type="checkbox"/> Programme/Project Justification | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| <input type="checkbox"/> Programme/Project Management Arrangements | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| <input type="checkbox"/> Risks and Assumptions | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| <input type="checkbox"/> Budget | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| <input type="checkbox"/> Support Cost | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

Overall review of programme submission

Recommendations

5. Decision of the LRF Steering Committee

- Approved for a total budget of \$2.5 million
- Approved with modification/condition
- Deferred

Reason/Comments

Elaborate

Chair of the LRF Steering Committee

[Redacted Signature Box]

April 15, 2009

Date

6. Follow-up action taken by the Administrative Agent

- Project consistent with provisions of the Letter of Agreement with donors (if applicable)

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Signature

.....

Date



**LEBANON RECOVERY FUND
PROJECT DOCUMENT COVER SHEET**

Participating UN Organisation: Food and Agriculture Organization of the United Nations (FAO)	Sector: Agriculture / Livelihoods
Programme/Project Manager Name: Mr Werner Chakkalakal Address: FAO Rome, Italy Telephone: +39-06-57052403 E-mail: werner.chakkalakal@fao.org	Working Group Chair Name: Ms Solange Matta-Saadé Address: FAO Lebanon Telephone: +962-5-924005 E-mail: solange.mattasaade@fao.org
Programme/Project Title: Recovery and Rehabilitation of Dairy Sector in Bekâa Valley and Hermel-Akkar Uplands Programme/Project Number:	Programme/Project Location: Akkar-Hermel Highlands and Central Bekâa Valley
Programme/Project Description: Recovery-rehabilitation programme for 600 vulnerable livestock keepers through the distribution of dairy cattle, shamee goats, rehabilitation of dairy industry and veterinary service, related animal production inputs and training to strengthen capacity in improved animal production, hygienic dairy production and feed resources.	Total Programme/Project Cost: US\$2.5 million LRF: 0 Government Input: 0 Other: 0 Total: US\$2.5 million
	Programme/Project Duration: 24 months
Development Goal and Key Immediate Objectives: The aim of this project is to enable recovery-rehabilitation and assistance to the livelihoods of 400 vulnerable livestock keepers in Central Bekâa Valley and Hermel-Akkar Highlands who are resource poor, with little or no assistance and currently unable to keep up with the highly competitive animal production sub-sector. An additional 400 farmers will draw indirect benefits from the project through veterinary and artificial insemination services as well as training sessions. The proposed project is also aiming to provide alternative income-generating activities to the poorest farmers with the highest level of socio-economic deprivation in Hermel-Akkar highlands in order to reduce their dependence on illicit crops.	
Outputs and Key Activities: <ul style="list-style-type: none"> • assist 200 resource-poor families in North Akkar-Hermel and Central Bekâa through restocking of cows and shamee bucks; • three dairy communities established and organized with activities covering the whole dairy production chain; • two dairy collection centres rehabilitated to secure milk collection and marketing for dairy cattle smallholders in the area; • distribution of dairy equipment to improve standard of milk production, collection and cooling systems; • support to milk collection centres through provision of three milk scan machines for milk analysis and control; • 400 farmers supported to secure animal feeding through distribution of forage seeds to introduce forage crops; • distribution of 1,100 tonnes of feeds and roughage to all project beneficiaries restocked with heifers and goats; • 600 farmers will profit from the AI services through provision of drugs and vaccinations; • 400 direct project beneficiaries will be strengthened through a comprehensive training programme; 200 farmers will benefit indirectly through training and extension materials. 	
Working Group Review Date: _____ RRC Review Date: _____ Steering Committee/Project Approval Group Approval Date: _____	

On behalf of:
FAO

Chair, LRF SC

Name/Title

José M. Sumpsi, Assistant Director-General
Technical Cooperation Department

Mohammad Safadi
Minister of Economy and Trade

Project Sites and Villages

Geographical Area	Central Bekâa & Hermel	North Akkar & Hermel-Akkar Highlands
Villages and Surroundings	<ol style="list-style-type: none"> 1. Nassria 2. Riaq 3. Tourbel 4. Bar Elias 5. Zahlé 6. El Furzul 7. Kfar Zobd 8. TaaNayal 9. SaadNayal 10. TaalBaya 11. Abb Elias 12. Anjar 13. Majdel Anjar 14. Chtaura 15. Jdita 16. Ablah 17. Deir El Ahmar 18. Chlifa 19. Ainata 	<ol style="list-style-type: none"> 1. Tell Abbas 2. Halba 3. Sfeina 4. Elhid 5. Elkbeyet 6. Rahba 7. Tâanieh 8. Hermel 9. Amira, 10. Ain Baydha, 11. Chhaira, 12. Mourabbine, 13. Jbab Lhomer, 14. Marjhine, 15. El Barâach, 16. Ain Obrech



1.0 PROGRAMME/PROJECT JUSTIFICATION

The dairy sector in Lebanon is currently facing serious setbacks and the country is strongly dependant on imports of more than 80 percent of its dairy products. Dairy cows are concentrated in Bekâa Valley and North Akkar, which are considered as Lebanon's dairy basin, ensuring the main local dairy supply for the country. The last conflict (August 2006) had a negative impact and hardship on the livestock sub-sector in Lebanon. The number of dairy cows across Lebanon has decreased dramatically following the high death toll of livestock during the 2006 war and its aftermath and the continuously increasing number of dairy farms shutting down. According to the Ministry of Agriculture (MOA) regional services, the total number of dairy cows has dropped from 25,000 heads to 15,000 to 18,000 heads in the Bekâa Valley region. This drastic decrease has had a serious negative impact on the country's national production of dairy products and thus increased their reliance on dairy imports. This further worsens the balance of payment of the country, which is already heavily indebted. The dairy industry sector in Bekâa Valley and Akkar requires special consideration if the industry is to develop and be sustainable.

The situation of dairy smallholders was aggravated even more shortly after the conflict; livestock keepers faced increased competition due to the high cost of animal feed following the global soaring of oil prices and animal feed ingredients. In addition, individual dairy smallholders were facing a deficiency in milk-marketing organization, collection and cooling systems depending on the existing processing plants and dairy speculators who often fix low milk price to farmers. In the meanwhile, the five milk collection centres established by an IFAD project in Bekâa and Akkar under the ownership of the MOA, had shut down completely.

In the Hermel-Akkar Uplands, villagers from the lower valley bring their animals for grazing to the uplands, rising over 1,800 metres, during the spring-summer transhumance season. These farmers are from the most remote, desolate and resource-poor areas of Lebanon and have a higher level of socio-economic deprivation and despair in the country. The last conflict, together with the meager resources and low-level skills, experience and unhygienic practices has led to a decrease or loss of income from goat and sheep milk and an increase in rural exodus. To secure their survival in an increasingly difficult and harsh environment, the local population is now returning to illicit income-generating activities after several years of eradication. The Hermel Uplands is a major area with a thriving cultivation of illicit crops, causing growing concern to the Government of Lebanon.

Therefore, interventions that could create alternative income opportunities and reduce the dependence on illicit crops are urgently required to provide assistance to vulnerable smallholders in Hermel-Akkar Uplands. Improvement of small ruminants, mainly goats which graze in the agro-ecological zones of those highlands, is the most appropriate opportunity for sustainable productive income-generating activity both in terms of the marketplace and of natural resources.

1.1 Background

FAO's experience in the livestock sector in Lebanon has been defined through previous projects implemented by the Organization, in particular, a Technical Cooperation Project - TCP/LEB/0068 «Introduction of techniques for conservation and improvement of agro-industrial by-products for the feeding of ruminants in the Bekâa Valley» and IFAD-funded project on rehabilitation of the animal production in the Bekâa. This project will complement FAO's livestock project implemented in South Lebanon under the Lebanon Recovery Fund (LRF) - "Early recovery assistance to war-affected, resource-poor livestock keepers in south Lebanon", (OSRO/LEB/702/UNJ) in design, implementation, monitoring and supervision. The methodologies to determine project beneficiaries, procurement procedures, distribution and building capacity are already developed by FAO.

2.0 PROGRAMME/PROJECT APPROACH

The problem currently facing Lebanon in the animal production sector stems from its recent political and security unrest, which has created a devastating impact and hardship on the livestock sub-sector throughout the country, particularly in the Bekâa Valley. Damages range from the loss of animals, infrastructure, feed resources, equipment, machinery and revenue income. The scale and scope of the damage had an impact on nearly all livestock farmers in the Bekâa; from a socio-economic point of view, earning a living for the most vulnerable populations in this region has been weakened. These households rely traditionally on livestock activities (which makes up two-thirds of GDP), especially for the poor rural households living in Hermel-Akkar highlands.

The conflict has weakened the productive capacity of animals through the death of and decrease in production of those surviving animals – due to the forced rural exodus and related abandonment of animals, and lack of feed and healthcare during and after the hostilities. According to the “Damage and Early Recovery Needs Assessment of Agriculture, Fisheries and Forestry” conducted by FAO in close collaboration with the Ministry of Agriculture (MOA), the extent of losses is estimated at 700 deceased cows. Furthermore, the situation of dairy smallholders has been aggravated further in later 2006 coupled with the soaring prices of animal feeds.

The typical diet of animals is grain-based and dependent on imported key ingredients such as maize and soybean meal. This has led to no real development of a forage programme in Lebanon. On average, the price of blended feed has sky-rocketed since 2007, jumping from US\$200 per tonne in 2006 to US\$400 in 2007, and reaching just under US\$500 in 2008. More increases are forecast as the current world shortage of feed grains continues; the competition for grain between feed and bio-fuel will intensify the use of more expensive cereal grains for livestock production, increasing the cost of production and making it almost impossible for low income farmers to afford. In the meanwhile, the retail prices for milk did not follow the same trend increasing only from \$0.4 to \$0.6 six cents per litre between 2007 and 2008.

2.1 Dairy sector in Bekâa Valley and North Akkar

The growing demand for milk and milk products in Lebanon had stimulated the development of dairy farms in the fertile Bekâa Valley, where the dairy industry has improved significantly due to the establishment of Liban Lait – a fully equipped dairy processing plant and a well-equipped laboratory producing pasteurized, long-life milk and flavoured milk well appreciated by the consumers. Moreover, the dairy herd has increased through importation and distribution of dairy pregnant heifers to the farmers, undertaken by livestock projects funded by IFAD and USAID in this region.

The commercial dairy sub-sector in Bekâa Valley reached its peak between 2000 – 2005 when the four milk collection centres in Bekâa Valley were functioning well and collecting almost 100,000 litres of milk per day resulting in adequate milk supply to the dairy and cheese processing plants. Cattle herds in the dairy farms are mainly grade Holstein Friesian blood with predominantly small and medium size farms managed under semi-intensive systems.

Furthermore, there is a poor link between production and processing due to the inexistence of a milk-marketing organization. The five milk collection centres established by the IFAD project in Bekâa and Akkar in 1999, which belong to the MOA, have completely shut down, whereas they were once receiving more than 100,000 litres of milk daily when operational. Therefore, individual dairy smallholders are facing a low standard of milk production, collection and cooling systems depending on the existing processing plants (producing local cheese, laben, labneh and other dairy products) which often lead to fixing low milk price for farmers.

In general, these processing plants are below standard from the standpoint of economic and technical efficiency, where the cost of production is high and the products are of low competitive advantage,

allowing the imported cheese and butter to dominate the Lebanese market. The lack of milk supply, as well as the poor milk quality, is the main hindrance to the largest dairy factory in the Bekâa. Liban Lait, which is currently operating below 20% capacity and processes only the production coming from its own dairy farms (approximately 25,000 litres of milk per day). Therefore, this sector of the dairy industry requires special consideration if the industry is to develop and be sustainable.

2.2 Goat rearing in Hermel-Akkar Uplands

The Hermel-Akkar areas, located in the northern region of Bâalback, represent the highest poverty indicators in Lebanon's rural areas. Hermel-Akkar uplands range between 1,500 to 3,000 metres above sea level and are the most desolate and under developed parts of the country, with a high level of ecological vulnerability. The population living there has also one of the lowest income levels and elevated levels of socio-economic deprivation.

Considering the existing topography with mountainous hills and sylvo-pastoral areas with steep and mostly inaccessible land, the rearing of local goats is playing a key role for the poorest farmers in Hermel-Akkar Highlands, providing their subsistence requirements for dairy products, especially in the following villages: Amira, Ain Baydha, Chhaira, Mourabbine, Jbab Lhomer, Marjhine, El Barâach, Ain Obrech and Tâanieh. It is based on a system of transhumance moving during the lactation period in spring-summer to alpine pasture, available after snow-melt on the high tops and hills above 1,300 metres. This location provides quality grazing from April to November. During the harsh winter period in the highlands, the goat flocks retreat to the Bekâa Valley.

During the 2006 hostilities, physical damage and losses Hermel-Akkar uplands were not spared and intensely targeted by air bombardment since those mountainous zones are adjacent to the border with Syria. Therefore the goat stockbreeders were heavily damaged by the conflict during their transhumance in the highlands. The physical damage and loss was estimated at 5,000 heads in the areas.

Furthermore, the inexistence of milk collection infrastructure accentuated by the remoteness and the steep roads leading to transhumance small ruminant flocks in Hermel-Akkar uplands are major constraints to milk marketing. Milk production in the region from goats and sheep from April to October is estimated between two to six tonnes per day (with peak in May/June). However, most resource-poor families are selling milk at low prices to dairy merchants while others provide transportation to the cheese processing plants in urban centres (Hermel, Tripoli, Bâalback, Zahlé, and Beirut). Most of the milk brought into urban centres is often rejected due to unhygienic processing and poor storage quality as a consequence due to the low hygienic standards of production, collection and cooling systems. Therefore, considerable post-harvest losses occur with negative impacts on producers' income.

FAO's proposed outputs and activities aim to provide assistance to resource-poor farmers as follows:

- a. Supporting and securing the vulnerable dairy smallholders in Bekâa Valley and Hermel-Akkar areas, mainly those who are unable to keep up with the serious competition in the sub-sector (central Bekâa, North Akkar and Jrud Hermel);
- b. Increase the supply of locally produced and safe dairy products, increasing income to dairy producers and improving their productive capacity through recovery and rehabilitation of the main dairy sector in Lebanon;
- c. Providing better living conditions to affected transhumant population in Hermel-Akkar highlands agro-ecological zones, where are witnessed the most remote, desolate and poorest farmers with the higher level of socio-economic deprivation and despair in Lebanon, increasingly returning to the production of illicit crops. Goat rearing is the most appropriate opportunity for alternative crop production and income-generating activities both in terms of the marketplace and of natural resources;
- d. Improving the food security, nutritional and economic status of low income rural families;
- e. Creating groups of smallholder dairy farmers in rural areas, as well as livestock extension workers, trained in dairy cattle and goat husbandry particularly forage based production, animal and farm management, milk production, handling and basic processing;
- f. Strengthening the capacity of Ministry of Agriculture to support small holder dairy and goat development.
- g. The major interventions aim to have an immediate impact in order to help: (i) restore the livelihoods of low-income households in Central Bekâa Valley and North Akkar, traditionally based on dairy activities and (ii) reduce reliance on illicit crops of those vulnerable goat smallholders in Hermel-Akkar Uplands. Thus, the most important interventions will be carried out on restocking and distribution of animals (dairy cows and goats) as well as the provision of necessary equipment for milk cooling, handling and processing.
- h. Emphasis will also be placed on accompanying measures that have the greatest potential to contribute to rapid improvements and sustainability of livestock productivity in the project areas: (i) setting up three active dairy communities (Barr Elies, North Akkar and Hermel highlands), (ii) rehabilitation of two milk collection centres in Central Bekâa and North Akkar, (iii) establishment of one small-scale goat/sheep cheese processing plant with milk collection facilities for the transhumant small ruminants in Akkar-Hermel Uplands; (iv) provision of feeds forage seeds, (v) provision of small equipment for milk hygiene and processing, (vi) provision of semen for reinforcing artificial insemination services, (vii) provision of veterinary drugs to cope with potential diseases and vaccination campaign and (viii) training to strengthen capacity to strengthen the livestock husbandry skills of project beneficiaries.

3.0 PROJECT APPROACH, ACTIVITIES AND EXPECTED BENEFITS

The aim of this project is to enable the recovery-rehabilitation and assistance to the livelihoods of **300 vulnerable livestock keepers** (almost one-third of whom are female-headed families) from Central Bekâa Valley, North Akkar and Hermel-Akkar Highlands, who are currently unable to keep up with the serious competition in the sub-sector. **An additional 300 farmers will draw indirect benefits** from the project through veterinary and artificial insemination services as well as training sessions. The proposed project therefore aims to provide the basic needs for livestock keepers and farmers to resume production and income-generation activities

Furthermore, the proposed project will work in consultation with UNDP in Chatura under the "Art Gold Program / Bekâa sub office" which is performing a variety of activities in West Bekâa and Rashaya. The FAO project will particularly implement complementary activities; in particular, FAO will oversee the distribution of animals, inputs as well as technical interventions related to dairy communities upstream (milk production, collection, cooling systems and milk hygiene), whereas UNDP Chatura "Art Gold Program" will oversee interventions mainly on the organization of dairy communities, marketing of dairy products and management of the revolving fund (arisen from delivery of inputs and supplies to project beneficiaries granted at reduced prices) to enable sustainability of project activities and future development strategies.

To encourage privatization of the dairy sector industry, the project plans to establish committees at both regional and district level for interaction with private sector as well as establishing linkages with the Chamber of Commerce of Zahle, CDR and with other projects and private enterprises related to dairy sector such as Liban Lait and dairy producers in North Akkar

The project will collaborate closely with dairy communities to enable prompt action to be taken to implement the activities. The dairy communities will be supported with concentrate feeds, dairy equipment, semen doses for artificial insemination, veterinary drugs, forage, etc. All inputs and supplies provided by the project to farmer beneficiaries (except live animals) will be distributed through the dairy communities so as dairy communities to sustain their activities.

The project will also collaborate closely with the existing MOA facilities / services in the target areas and contribute to strengthen and reinforce the capacities of the available facilities and delivered services; particularly for activities related to AI, veterinary drugs and vaccines in full cooperation with dairy processing plants and dairy communities.

In summary, the dairy community (with the support and the supervision of the project and MOA facilities / services) will supply the following inputs:

- animal husbandry inputs;
- ingredients for feed concentrates;
- forage seeds and fertilizer;
- forage and straw;
- extension services;
- AI services;
- animal health care;
- record keeping service;
- irrigation equipment for forage production;
- almasilium milking cans;
- small refrigerated tanks.

Each small farmer participating in the programme through the project/dairy community will be checked on site for the following:

- dairy cattle or goats
- labour;
- feeds, mainly forage facilities; and
- animal housing facilities

The project will establish a contract system, binding the dairy community and the project and will provide details on their mutual contributions and on their mutual share of final results. The project will assign an assistant to each dairy community to support operational procedures. Terms and conditions relating to the initial deposit of funds (obtained from the delivery of inputs and supplies to project beneficiaries) in a special account and securing to replenish the fund shall ensure the continuity of the

scheme once the project ends. Financial reporting to both the Government and Executive Agencies (FAO – UNDP) shall be done regularly to monitor the operation of the fund and ensure its success.

3.1 Development of Activities

The proposed interventions aim to bring a rapid and comprehensive support to the cattle and goat smallholder dairy farmers in Bekâa Valley and Hermel-Akkar Highlands, who suffered direct or indirect physical damage and losses related to war-conflict and currently are threatened by the recent soaring food prices and high cost of production.

The project interventions plan to focus on improving the capacity of milk production while securing the dairy sub-sector in Bekâa' Valley and creating an alternative productive income-generating activity to illicit crops for the poorest farmers in Hermel-Akkar Uplands. The planned activities are: distribution of dairy cattle, shamee goats, rehabilitation of dairy industry and veterinary service, related animal production inputs and training to strengthen capacity in improved animal production, hygienic dairy production while sustaining the dairy sector through the introduction of forage crops to secure animal feeding and building capacity and training of farmers.

3.2 Implementing activities with dairy farmers in Central Bekâa and North Akkar

3.2.1 Dairy cattle redistribution/restocking

The project will provide smallholders with technical assistance and support in the fields of milk hygiene, cooling and milk collection, dairy farm management, forage production, animal nutrition, artificial insemination, and animal health. Through the project, **200 pregnant heifers** (5 to 7 months pregnancy for partial restocking of lost dairy cows) will be purchased from the international market. It is proposed that 200 affected and / or poor families will receive one heifer per household. Priority will be given to: (i) war-affected farmers, (ii) female headed households, war widows, and (iii) poor livestock families with handicapped family members. The dairy cattle will be provided to families with experience in rearing animals. Modalities and conditions for farmer beneficiaries are presented in the section "target project beneficiaries"

3.2.2 Provision of equipment to improve standard of milk production, collection and cooling systems with rehabilitation of two milk centres (Central Bekâa and North Akkar)

The above mentioned equipped centers are currently non-operational. As such, the project expects to rehabilitate these two milk collection centers in Central Bekâa (Barr Elias) and North Akkar that are equipped with milk collection, cooling, milk quality control and other services needed by dairy farmers. The MOA would provide each milk collection point with cooling truck for milk transport (already provided by IFAD project). It is proposed to organize **two dairy communities** (one dairy producer association for each collection point) with leading dairy producers carefully identified among local dairy producers. It is foreseen that each milk collection centre could be managed by a selected active dairy community as to introduce and encourage the Local private partnership.

However, this approach is highly dependant on the prior approval of the Ministry of Agriculture, the council of ministers and the parliament. Otherwise a contingency plan will be aiming at establishing new posts.

Concerning dairy equipment, the project will supply dairy communities with the followings:

- 500 almasilium milking cans, cap. 20 lit (250 cans / centre)
- Detergent and sterilization products
- 50 milking machines
- Two milk scan machines for milk analysis and control at the milk collection centre
- 50 milk control kits

The project will procure and install 50 milk tanks (with a capacity of 500 and 1000 litres) for 50 dairy farmers in order to improve milk quality through appropriate cooling systems. The milk cooling tanks will be established and managed by leading dairy farmers receiving milk from neighboring farmers. In addition, the project will provide 25 leading women-headed households who are processing their milk into 'Laben' and 'Labneh' for sale and family consumption with 25 units of small equipment for milk handling, hygiene and basic milk processing (each unit is composed of: one small scale milk pasteurizer, gas heated, capacity: 150 litres; one horizontal refrigerator: capacity 400 litres; one milk accessory set including thermometer, agitator and milk filter; one water chilling tank: capacity 250 litres and two milk jars: capacity 20 litres). All project beneficiaries will be provided with one mastitis hygienic kit (teat cup with iodine) and detergent for milk machine.

3.2.3 Provision of Semen for artificial insemination

The project will reinforce artificial insemination services in MOA and especially in project areas, through the provision of 10 000 semen doses for artificial insemination (Friesian-Holstein). The project will provide milk collection centres with complete AI sets with training veterinarians/technicians people to work with dairy communities.

3.2.4 Provision of veterinary drugs to cope with potential diseases and vaccination campaign

The animal health status of dairy cows and small ruminant in the project areas is critical because of the inadequate veterinary services and health cover in the region. The project will particularly assist the MOA veterinary services in Bekâa, North Akkar and Hermel-Akkar Highlands as well as the dairy communities with appropriate veterinary drugs and supplies to set up a national campaign of vaccination, treatment and control of the major diseases, pneumonia, endo- and ecto-parasitism, foot and mouth disease, brucella, enterotoxemia, Anaplasmosis and Peroplasmosis, pneumonia and infectious bronchitis, mastitis, metritis, foot rot, and other animal diseases.

3.2.5 Provision of feed concentrate and forage

The dairy smallholders in Bekâa Valley are facing severe competition because of the soaring costs of animal feed. The project will support the beneficiary families receiving pregnant heifers with some feed concentrate and forage through dairy communities. Therefore, 200 project beneficiaries receiving pregnant heifers (one pregnant heifer / household) will be supplied, shortly before distribution of animals, with 1 tonne of concentrate feed and 2 tonnes of forage (alfalfa and corn silage). Farmers will be supplied through the dairy communities under the project supervision.

3.2.6 Provision of forage seeds for promoting forage crops

The price of animal feed has increased dramatically since 2007 which is discouraging several dairy smallholders. Many are beginning to shut down their farms and many farmers do not have the required machinery for planting and harvesting forage crops. Thereby, the project will give high priority to promoting an extensive programme on forage development in the fertile Bekâa and in North Akkar so as to secure the dairy producers while improving the competitiveness of the sub-sector and alleviate the increasing feed dependence of the dairy farmers. The project will set up with all project beneficiaries' on-farm forage demonstration building on the successful outcomes of the FAO technical cooperation project implemented in Bekâa Valley during 2001 – 2003.

The project will focus on the forage species proven under Mediterranean conditions especially those which can be established in rainfed areas in mixtures with annual legumes: Oat/Barley-Vetch/Peas for hay and silage; moreover Sudanese sorghum, alfalfa, Italian ryegrass, berseem and corn silage will be promoted under irrigation. The project will also support dairy communities in forage production and marketing through forage contracts with project beneficiaries in Bekâa Valley and in North Akkar.

The project will purchase forage seeds as follows: 100 tonnes of oat seeds; 100 tonnes of vetch seeds, 100 tonnes of barley seeds; 10 tonnes of sorghum seeds; 5 tonnes of alfalfa seeds, 5 tonnes of Berseem seeds and 30 tonnes of corn.

3.3 Implementing activities with poor-resource farmers in Hermel-Akkar Uplands

3.3.1 Distribution of Shamee breed bucks to upgrade local Baladi flock and distribution of female Shamee goats

Goats of the local "Baladi" breed are traditionally managed under open grazing and extensive systems with low milk production (150 – 200 litres / lactation). Farmers show a strong interest in genetic improvement for milk production. The Shamee breed is easily adapted to harsh conditions and has an excellent potential for high fertility, growth and milk production. It has been successfully tested in similar conditions and was introduced in South Lebanon under the project (OSRO/LEB/702/UNJ).

The project will supply **100 goat farmers from Hermel-Akkar Highlands with 200 improved Shamee bucks (one to two years old), where each farmer will receive two males** to upgrade his baladi female flock. The result will be at least doubling milk productivity. Fifty progressive female-headed households among those goat farmers, with facilities to grow forage, will receive small five Shamee pure breed pregnant goats (eight to ten months old).

3.3.2 Support to dairy hygiene collection and milk processing

The project proposal will establish a small-scale goat/sheep cheese processing plant with facilities for milk collection. The project will organize and support one dairy goat / sheep community in Hermel-Akkar Highlands based in Amira village for management and service delivery to farmers. The purpose is to initiate good practices in milk collection, cooling, milk quality control, milk transport as well as dairy processing. The project will particularly emphasize on support of dairy community for marketing of dairy products (cheese, aricha, laban, labneh) to enhance the income value of their dairy products. The project will promote the concept of Regional label (Produit du Terroir): Hermel-Akkar uplands delicious dairy goat products through certification, packaging and marketing

Procurement and installation of the following equipment and supplies is planned:

- Building and equipment of one small-scale goat milk collection centre and cheese processing plant (capacity: 2 tons)
- One simple cabin pickup 4WD for milk collection (capacity: 1 ton)
- One frigorific van for transport and marketing of dairy products (cheese, laban, labneh, aricha)
- Two Generators for dairy processing plant (12 Kw)
- One hundred almasilium milking cans (capacity: 20 litres)
- One hundred almasilium milking cans (capacity: 10 litres)
- Two hundreds milk buckets (capacity: 20 litres)
- Detergent and other chemicals
- One milk scan machine for milk analysis and control at the milk collection centre

3.3.3 Provision of veterinary drugs and vaccines to goat farmers.

The project will provide the dairy goat community within the dairy processing plant with appropriate veterinary drugs and supplies to set up a national vaccination and treatment campaign and control of the major goat and sheep diseases such as endo- and ecto-parasites, foot and mouth disease, brucella, enterotoxemia, pneumonia and infectious bronchitis, and other animal diseases.

3.3.4 Provision of feed concentrate and forage

The project will support the 100-beneficiary families receiving Shamee goats with 100 tonnes of barley (1 tonne/goat farmer). In addition, the project will establish a small-scale unit for multi-nutrient feed blocks as a strategic supplement to grazing in the Hermel-Akkar highlands.

3.3.5 Support to water reservoirs and provision of forage seeds for promoting forage crops

The project will improve pasture and grazing lands with grass species adapted to harsh cold winter and higher-elevation hilly areas which were technically proven in similar conditions. The project will focus on the establishment of perennial grasses mixed with legumes such as Tall fescue (*Festuca arundinacea*); Cocksfoot (*Dactylis glomerata*); *Phalaris arundinacea*; Perennial ryegrass, (*Lolium perenne*); strawberry clover (*Trifolium fragiferum*); Red clover (*Trifolium pratense*) and White clover (*Trifolium repen*). These species will thrive on slopes, marginal land as well as on waterlogged lands producing high vegetative biomass for goat feeding. Moreover, they have the ability to spread vigorously with their robust, rhizomatous perennial roots contributing significantly to the control of soil erosion and run-off through the provision of a permanent vegetation cover.

The landscape of Hermel-Akkar Uplands above 1,800 metres is mainly characterized by steep hills with lower terraces and valley bottoms with fertile and wet patches where water is mainly coming from snow-melt. Amira and Marjhine areas are the most suitable for summer cash crops. It is planned that the project will introduce some intensive, short-term, high-yielding fodders, especially annual grasses and legumes to be sown in spring such as: multi-cut oats; vetches (*Vicia* spp.); multi-cut sorghums and maize varieties with good "stay-green" characteristics. The project will support 10 farmers from Amira and Marjhine villages for construction and equipment of small water reservoirs.

The project will purchase forage seeds as follows: one tonne of various species of perennial grasses and legumes for pasture improvement; four tonnes of vetch; five tonnes of oats; two tonnes of sorghum and one tonne of corn.

3.4 Capacity Building

The main purpose of the project is to provide the vulnerable dairy smallholders in Bekâa and the poorest farmers in Hermel-Akkar Highlands with animals, rehabilitation of dairy industry and related animal production inputs to secure and resume their productive capacity and income generation revenues. However, the project is taking this occasion to bring a sustainable improvement in the different components of animal through the introduction of appropriate technologies and training of participating farmers.

Technical assistance is urgently needed to secure dairy sector in the project areas for two main reasons. In fact most of livestock farmers are smallholders with limited skill, highly amplified by the apparent weak linkage between the producers and the extension service of MOA which is a great concern to the overall agricultural issue in Lebanon, since the Lebanese MOA's budget shares less than 0.6% of the national budget.

All project beneficiaries will attend the training sessions which will cover all interventions: large and small ruminant management, forage development, animal feeding, animal health, milk handling, hygiene and milk processing. Also, at least 1,000 farmers will benefit indirectly from the project through training sessions and practical demonstrations.

3.5 Targeted project sites

The project area covers two distinct social and geographical areas: (1) the main Lebanese dairy regions in Central Bekâa Valley, Hermel and North Akkar and (2) Hermel-Akkar uplands above 1,500 metres, which are the most remote, desolate, under developed and poorest parts of the country. The following table shows the precisely villages which will be targeted by the project:

Geographical Area	Central Bekâa & Hermel	North Akkar & Hermel-Akkar Highlands
Villages and Surroundings	20. Nassria 21. Riaq 22. Tourbel 23. Bar Elias 24. Zahlé 25. El Furzul 26. Kfar Zobd 27. TaaNayal 28. SaadNayal 29. TaalBaya 30. Abb Elias 31. Anjar 32. Majdel Anjar 33. Chtaura 34. Jdita 35. Ablah 36. Deir El Ahmar 37. Chlifa 38. Ainata	17. Hermel 18. Amira, 19. Ain Baydha, 20. Chhaira, 21. Mourabbine, 22. Jbab Lhomer, 23. Marjhine, 24. El Barâach, 25. Ain Obrech 26. Tâanieh 27. Tell Abbas 28. Halba 29. Sfeina 30. Elhid 31. Elkbeyet 32. Rahba



3.6 Targeted beneficiaries

The project will benefit from experience gained from the FAO project "Early recovery assistance to war-affected, resource-poor livestock keepers in south Lebanon" (OSRO/LEB/702/UNJ), using criteria for transparent beneficiary selection. Identification of project beneficiaries will be undertaken through intense investigation in all selected villages by the project team, with support of leading livestock farmers, livestock farmers' association, dairy communities, Municipality' s officers and MOA officers when available.

Identification will target the needy among cattle and goat smallholder dairy farmers in Central Bekâa Valley, North Akkar and Hermel-Akkar Highlands who suffered direct or indirect physical damage and losses related to war-conflict and currently are threatened by the recent soaring food prices and high cost of production. The main criteria will consider farmers who are dependent on livestock production and remained on their farms. All those criteria will be elaborated in extensive questionnaire. The priority will be given to women headed households, war widows; poor livestock families with a handicapped child, providing the family is able to rear animals.

The following direct beneficiaries are targeted:

- **200 vulnerable households will receive one imported pregnant dairy heifer.** Each household will benefit from rehabilitation of milk collection centres and veterinary service, related animal production inputs and training to strengthen capacity in improved animal production, hygienic dairy production while sustaining dairy sector through introduction of forage crops to secure animal feeding and building capacity and training of farmers.
- **100 goat farmers from Hermel-Akkar Highlands** will receive two shabee bucks each to upgrade their Baladi female flock (procurement of 200 shabee bucks), among these 100 farmers, the project will provide 50 progressive female-headed households with five shabee purebred pregnant goats (procurement of 250 female shabee goats). All families will benefit from the establishment of the small-scale dairy processing plant for milk collection, processing and marketing. They will benefit also from veterinary service, related animal production inputs and training to strengthen capacity in improved animal production, hygienic dairy production.
- **Additionally, 300 livestock producers** will indirectly benefit from training, improved veterinary services and artificial insemination services.

3.7 Expected outcomes

By the end of the project, participating farmers will return to some form of normalcy in their lives and the project's aim is to have these households be in an even better position to independently improve their income and employment opportunities. The immediate and subsequent outputs of the project are as follows:

- a. improved dairy production, covering the whole dairy production chain through complementary interventions: restocking, inputs and training, with good opportunities for gainful employment and decrease in the need for internal/external migration, mainly for the youth;
- b. increased milk production in the country with decreased reliance on imports as well as improved standards of food safety through the availability of better milk quality using appropriate cooling system and milk handling;
- c. establishment of three active dairy communities to independently follow up a core group of trained smallholder dairy farmers, able to provide dairy industry leadership and share their expertise with other farmers;

- d. improved farm management skills acquired through a comprehensive training programme for 600 farmers (300 beneficiaries and 300 indirect) with increased Government and NGO's capacity to support small farmers;
- e. improved food security by increasing the efficiency of the dairy component and improved nutritional status of low income rural households (particularly women of childbearing age and children) as a result of increased incomes and consumption of animal products;
- f. Improved dairy breeding stock as a result of an extensive artificial breeding programme and introduction of 450 shamee breed (200 shamee bucks and 250 shamee goats);
- g. core group of 100 active women headed-families empowered in Central Bekâa Valley, North Akkar and hermel-Akkar Highlands, to efficiently manage dairy cattle and goats for income generation with increasingly more active role to ensure family survival;
- h. improved animal health and veterinary services through provision of vaccines and drugs.

4.0 Contribution towards the attainment of the MDGs

The project will have a direct contribution to the attainment of the Millennium Development Goals, and in particular to goal 1 *"Eradicate extreme poverty and hunger"* and to goal 3 *"Promote gender equality and empower women"*. This will be achieved through its activities as it assists in the recovery and rehabilitation of dairy sector supporting the livelihoods of vulnerable livestock keepers in Bekâa Valley and Hermel-Akkar Highlands of Lebanon and by paying special emphasis on women-headed households. Indirectly, the project will make a contribution to goal 4 *"Reduce child mortality"*, goal 5 *"Improve maternal health"* and goal 7 *"Ensure environmental sustainability"*.

5.0 Timeline of the activities

The project implementation period is of 24 months. An indicative work plan for the project is attached in Annex 1, detailing when activities will be implemented on a quarterly basis. A more detailed work plan will be produced in the first month of project implementation.

6.0 MANAGEMENT ARRANGEMENTS

6.1 Implementation modalities

The project activities will be implemented under the supervision of a Project Management Unit (PMU) headed by FAO TCES and project activities will be undertaken in Central Bekâa Valley, North Akkar and Hermel-Akkar Highlands. While FAO will oversee the implementation of distribution of animals, inputs as well as technical interventions, UNDP Chatura "Art Gold Program" will oversee interventions mainly on organization of dairy communities for marketing of dairy products and management of the inputs to enable sustainability of project activities after project lifetime.

The PMU will be managed by Project Manager (FAO international livestock consultant) with sound experience in Lebanon, particularly in project areas and familiar with activities related to recovery assistance to war-affected livestock keepers. MOA will nominate a National Coordinator (livestock or veterinary specialist) on a full-time basis.

The PMU will be supported by national consultants specialized in dairy production and milk handling. The PMU will coordinate and establish linkages, through the Division of Livestock and Animal Health of MOA, with other service providers, at the regional or municipal levels, such as agricultural colleges, local government units and NGOs working in project areas.

Upon project start-up, the Project Manager will liaise with the MoA National coordinator and other stakeholders to review developments and set strategies in the livestock sector in Central Bekâa Valley, North Akkar and Hermel-Akkar Highlands and produce a detailed work plan to reflect the new situation and, the required actions and activities.

The PMU will carefully supervise selection of beneficiaries, on-site distribution to all beneficiaries as well as establishment and organisation of dairy communities. Municipalities with good leadership, commitment to development, good transparency and progressive community organization will be extensively involved. The Project Management Unit will check delivery on farm sites.

The contribution of the MOA to the project will be in-kind. The Ministry of Agriculture will be the government counterpart agency responsible for the project and will assist all consultants and experts in the performance of their assigned tasks. Duty-free procurement will be facilitated in a timely manner. The MOA will particularly facilitate the project in organizing dairy communities through leasing the milk collection centres as well as the delivery of milk cool tankers owned by MOA.

The nature of the designed project activities will ensure sustainability after the lifespan of the project through the technical and financial support to dairy communities that will generate some financial liability from commercial activities and services to the farmers. The 24 months time frame will put in place all the proper measures required for a comprehensive implementation of the activities and that dairy communities are up on their feet and with proper income enabling them to ensure the continuity of the scheme once the project ends.

The activities are designed in a manner not to incur any financial liability to the MOA budget even after the lifespan of the project. Extension services after project completion by MoA are recommended in order to help ensure sustainability. Considering the urgency of the situation faced by small farmers in the Bekâa Valley and Hermel-Akkar Highlands, the project will be implemented over 24-month period covering: project coordination, procurement of inputs, rehabilitation of two milk collection centres, distribution, technical assistance, monitoring, and implementation of training programmes, impact assessment and reporting.

6.2 Procurement arrangements and distribution to beneficiaries

The procurement arrangements of live animals and related inputs will be based on FAO's Rules and Regulations with all transparency of transaction: (i) Preparation of technical specifications and delivery conditions (Clearance FAO headquarters), (ii) Invitation to Bidding and (iii) Selection by Official Committee. Identification of project beneficiaries will be undertaken under transparent selection using clear criteria and through thorough field investigation conducted by the project team. The PMU will carefully supervise on-site distribution to all beneficiaries through the dairy communities.

6.3 Monitoring and evaluation

Close monitoring and evaluation of project activities, including implementation progress and expenditure, are essential, given the nature of the project. In conjunction with the National Coordinator and the national and international consultants, the Project Manager will be responsible for monitoring and follow-up of project activities. Given the nature of the project, close and frequent supervision, especially during the initial stages of implementation, will be required. The monitoring and evaluation will be coordinated by the Project Management Unit and undertaken on a regular and continuous basis. Relevant information on the project's activities and achievements will be collected, processed and disseminated to all key stakeholders of the project.

7.0 ANALYSIS OF RISKS AND ASSUMPTIONS

The volatile political and security situation in Lebanon could negatively impact the efficient implementation of the project. No other critical factors are foreseen to negatively impact the

project since the project was developed in full consultation of the MOA and other relevant partners. Furthermore, representatives of beneficiary groups will be involved in all the decision-making processes at each stage of implementation. These measures will minimize project risk and help to enhance ownership, trust, and sustainability.

8.0 PRIOR OBLIGATIONS AND PRE-REQUISITE

The government will facilitate access by the project personnel to official documents and meetings with government officials, the private sector and academia, as required. Duty-free procurement will be facilitated in a timely manner.

9.0 LEGAL CONTEXT

The proposed project will be implemented in line with the standard arrangements between FAO-UNDP and the Government of Lebanon.

2. LOGICAL FRAMEWORK:

Objectives	Measurable Indicators	Means of Verification	Important Assumptions
<p>Development Goal: Improve the food security, nutritional and economic status of low-income rural families by supporting vulnerable livestock smallholders through restocking and distribution of animals.</p>	<ul style="list-style-type: none"> - Restored animal production activities; - Increased food security in households. 	<ul style="list-style-type: none"> - Government Statistics - Mid-term Review - PMU reports - M&E reports - Gender Assessments 	<p>Security situation in the country improves or remains stable allowing project activities to be implemented as scheduled.</p>
<p>Immediate Objective: Enable recovery and rehabilitation and provide assistance to the livelihoods of vulnerable livestock keepers (one-third are female headed households).</p>	<ul style="list-style-type: none"> - Project is implemented efficiently and in accordance with the work plan and timing; - Animal production income generation activities restored; - Proper animal health care measures implemented. 	<ul style="list-style-type: none"> - Project progress reports; - Supervision reports; - M&E reports; - List of farmers receiving livestock; - Training. 	<p>- Stable security situation and accessibility of the project area.</p>
<p>Output 1: Support resource-poor livestock keepers through restocking of dairy cattle, shamo goats, shamo bucks, beehives) and rehabilitation of dairy industry infrastructure and veterinary services.</p>	<ul style="list-style-type: none"> - Action Plan agreed upon by all stakeholders; - Improved household income; - Farmers receiving animals and beehives restocking and resuming livestock activities; - Women-headed households receiving livestock. 	<ul style="list-style-type: none"> - Action plan report; - Government statistics on household income; - Project M&E reports; - Project technical reports; - List of women-headed households receiving livestock and farm inputs. 	<ul style="list-style-type: none"> - Stable security situation and accessibility of the project area; - Availability of input from potential suppliers (quantity, quality, timeliness and location) as required for smooth implementation of project activities; - Key people in local committees actively support the project.
<p>Output 2: Animal production improved through provision of supplementary livestock feeds and improved healthcare.</p>	<ul style="list-style-type: none"> - Improved household income; - Better public health status as a result of improved access to high-quality dietary protein from good quality pasteurized milk; - Improved dairy breeding stock (both in terms of quality and availability) as a result of an artificial breeding programme. 	<ul style="list-style-type: none"> - Government statistics on household income; - Government reports of public healthcare and nutrition status; - Project M&E reports; - Project technical reports. 	<ul style="list-style-type: none"> - Stable security situation and accessibility of the project area; - Availability of input from potential suppliers (quantity, quality, timeliness and location) as required for smooth implementation of project activities; - Key people in local committees actively support the project.

THE PROGRAMME/PROJECT BUDGET

The budget would utilise the Standard Format agreed by UNDG Financial Policies Working Group.

CATEGORY	ITEM	TOTAL COST USD
1. Personnel	Int'l Consultant (Project Manager)	460,000
	Int'l Finance/Admin/Procurement Officer	
	National Consultants	
	Administrative & financial assistant	
	One driver / security logistic	
	Programme / Operations backstopping	
2. Contracts	Contracts	100 000
	Locally Recruited Labour	
3. Training	Seminars, Workshops, On-farm demonstrations, Manuals, Posters, Leaflets	140,000
4. Travel	- Duty travel others	170,000
	- Consultants: International	
	- Consultants: National	
	- Travel: Training	
	- Air Travel	
5. Supplies + commodities	One simple 4-WD pickups (for milk transport in Akkar-Hermel Highlands)	50,000
	One frigorific van for dairy milk transport (Akkar-Hermel highlands)	
6. Equipment	Pregnant Heifers	1,252,500
	Shamee Goats (including bucks)	
	Forage Seeds	
	Feeds	
	Semen for AI	
	Veterinary drugs and vaccines	
	milk equipment & supplies (for milk handling, cooling, testing at farm and milk collection point levels)	
	Milk equipment & supplies for North Akari-Hermel Highlands (including equipment for milk handling at farm level and for small-scale cheese processing plant)	
7. Technical Support	- Technical supervisory services	75,000
	- Evaluation	
	- Report costs	
8. Miscellaneous	General Operating Expenses	89,000
	Sub-total:	2,336,500
9. Agency Support Cost	7%	163,500
Project Budget Total UNDG-ITF		2 500 000

* The rate will be within the UNDG agreed range of 5% to 9%, with overall expected average of 7%, of the total of categories 1-8. To the maximum extent possible such costs should be integrated into categories 1-7 if appropriately determined as "direct costs attributable to the programme/project" thereby reducing the overall indirect cost rates.