



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

<b>To be completed by the Recovery and Reconstruction Cell (RRC)</b>	
<b>Meeting No:</b>	<b>Date of Meeting:</b>
<b>Item No:</b>	<b>Programme/project</b>

*(To be completed by the Participating UN Organisation  
and endorsed by Working Group Chair)*

<b>To:</b>	Date of Submission
<b>Lebanon Recovery Trust Fund Steering Committee</b>	<b>10 October 2007</b>
<b>From:</b>	Contact:
<b>United Nations Development Programme</b>	<b>Mona Hammam UNDP Resident Representative United Nations Development Programme UN-House, Riad El Solh Sq. P.O.Box 11-3216 Beirut Email: <a href="mailto:mona.hammam@undp.org">mona.hammam@undp.org</a></b>
Through: Working Group	Contact: Telephone number, email
<input type="checkbox"/> Endorsement <input type="checkbox"/> Comments	
Proposed submission, if approved would result in:	Proposed submission resulted from:
<input checked="" type="checkbox"/> Continuation of existing programme/project <input type="checkbox"/> New programme/project <input type="checkbox"/> Other (explain)	<input checked="" type="checkbox"/> National Authorities initiative within national priorities <input type="checkbox"/> UN Agency initiative within national priorities <input type="checkbox"/> Other:
Programme/project title: <b>Flood and water management for livelihood recovery in Baalback-Hermel</b>	
Amount of funds requested for proposed programme/project: <b>2,834,880 USD</b>	
Estimated number of beneficiaries: <b>Inhabitants of 2 or 3 flood-affected villages (Fakehe, Jdaide or Ras Baalback), i.e. approximately 25,000 – 30,000 individuals</b>	
Request against specific earmarking: un-earkmarked	
Amount of indirect costs requested: 7%: <b>186,048 USD</b>	

## 1. Background

During the July 2006 conflict, North Bekaa, particularly Baalback-Hermel area was directly affected by the war. Large scale destructions in infra structure, biodiversity and agriculture were reported. Agriculture in that area was directly affected: bombing resulted in big losses in crop yields that were either burned, not harvested or became unmarketable. Public irrigation infrastructure in the Bekaa were damaged. Cattle, goats and sheep were killed either because of shelling or due to starvation and thirst. Targeting of aqua farms in Hermel affected more than 30 fish farmers with an estimated total loss of about 300 tons of fish lost from ponds. In addition, the high security risk during the war stopped forest management activities and lack of fuel encouraged people to cut trees in forests and woodlands. Losses from biodiversity destruction were also enormous and could not be estimated

The conflict exacerbated the numerous existing socio-economic and environmental issues already facing this area. Baalback-Hermel in North Bekaa suffers from drought, poor agricultural productivity, loss of biodiversity, poverty (66% poverty in Hermel and 49% in Baalback) and in some years flooding caused by surface runoff water due to torrential rains, poor soil infiltration and deteriorated vegetation cover. Approximately fifty percent of the population of this area is thought to be employed in the agricultural sector.

The National Action Program to Combat Desertification (NAP), which was developed in 2003 by the Ministry of Agriculture and in collaboration with UNDP and GTZ, classified the Northern part of Bekaa as one of the areas prone to high risks of desertification. This is mainly due to lack of proper land and water management practices, bad rainfall distribution, overgrazing, steep mountains with shallow soil and poor vegetative cover.

Summer droughts and uneven rain distribution are the main reasons for poor agricultural productivity in North Bekaa; most of the rain falls between November and May, leaving long periods of dry conditions and little water for supplementary irrigation in summer. When it rains in early summer or in autumn, rainfall can be very intense causing heavy surface runoff which is exacerbated by the poor soil infiltration rates and loss of vegetative cover due to fires, fuel wood cutting and wars.

Heavy flooding following torrential rains in the Anti-Lebanon mountains are common in Northern Bekaa. They occur during May-June or later in autumn (October-November). In June 1987, heavy rainfall led to road cuts and destruction of bridges, telephones, electricity and water supply. Villages like Fakehe, Jdaide and Ras Baalback became completely isolated. At the agricultural level, heavy losses were reported for field crops, up to 80% of fruit trees in that area were damaged and a large number of cattle was drowned. Soil erosion was noticed over tens of kilometres (UNDRO report 87/1371, June 1987). They also occurred in June 1994, October 1999, May 2001, twice in 2004 and recently in May 15<sup>th</sup> 2007 where severe soil erosion was reported in addition to the substantial agricultural damage and destruction of several aqua farms along the Assi (Orontes) river.

In 2006, a project was launched in Al'Qaa region by the Ministry of Agriculture and the German Agency for Technical Cooperation (GTZ), in collaboration with the Arab Centre for the Studies of Arid Zones and Dry Lands (ACSAD). The project handled a 10 km<sup>2</sup> water shed area and established check dams, contour bunds and stone walls in addition to 3 collection lakes ranging between 20,000-40,000 cu. meter in volume. Early observations recorded after the recent torrential rains in 2007 showed a good level of flood prevention in that location.

## 2. Purpose of Proposed Project

The objective of the proposed project is to provide assistance to the Government of Lebanon in its early recovery efforts in the conflict-affected agricultural Baalback-Hermel region through flood and water management. This support would make irrigation water more available and thus increase agricultural income to alleviate poverty and improve community living conditions in the region.

### 3. Evaluation of Proposals by the Working Group

Provide concise summary evaluation of proposal against:

<i>General principles and selection criteria</i>		
(a)	Must be explicitly based on Lebanon's national priorities and needs, as noted in the public domain.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(b)	Must fall with the UN's mandate, and must address the Millennium Development Goals, directly or indirectly through a human rights-based approach.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(c)	Must promote and ensure national ownership.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(d)	Must be at an acceptable level of risk, within UN parameters.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(e)	Must fall within the areas of UN's comparative advantage.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(f)	The UN must be an appropriate system to deliver the intervention.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(g)	The UN response must be properly designed for and within the Sector setting, must be effective, coherent, context-sensitive, and cost-efficient and the outcomes, sustainable.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(h)	Must avoid duplication of and significant overlap with the activities of other actors.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(i)	Must build on existing capacities, strengths and experience.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
(j)	Must promote consultation, participation and partnerships.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If one or more of the above criteria is not met, please explain:		

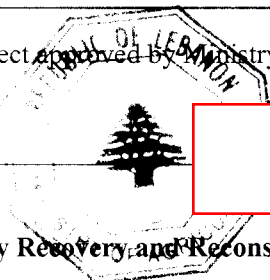
#### Implementability

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

Does the project correspond to national priorities? Yes  No

Please elaborate

Project approved by Ministry of Agriculture (Line Ministry)



on 4 October 2007 (date)

### 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"/> |

- Budget
- Support Cost

- Yes  No
- Yes  No

*Overall review of programme submission  
Recommendations*

Elaborate

**5. Decision of the LRF Steering Committee**

- Approved for a total budget of \$2,834,880**
- Approved with modification/condition**
- Deferred**

**Reason/Comments**

Elaborate

Oct 10, 2007  
Date

**6. Follow-up action taken by the Administrative Agent**

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

.....  
Signature

.....  
Date

**LEBANON RECOVERY FUND  
PROJECT DOCUMENT COVER SHEET**

Participating UN Organisation: <b>United Nations Development Programme (UNDP)</b>	Sector: Agriculture / Environment
Programme/Project Manager <b>Name: Edgard Chehab</b> <b>Address: UNDP Lebanon</b> <b>Telephone: +961 (0)3 240034</b> <b>E-mail: edgard.chehab@undp.org.lb</b>	<b>Working Group Chair</b> <b>Name:</b> <b>Address:</b> <b>Telephone:</b> <b>E-mail:</b>
Programme/Project Title:  <b>Flood and water management for livelihood recovery in Baalback-Hermel</b>	Programme/Project Location:  <b>North Bekaa, Baalback-Hermel</b>
<b>Programme/Project Description:</b>  The project aims at supporting early recovery efforts in the conflict-affected Baalback-Hermel region by better flood and water management to improve agricultural productivity.	Total Programme/Project Cost:  <b>LRF: 2,834,880 USD (equiv 2,000,000 Euros)</b> <b>Government Input:</b> <b>Other:</b> <b>Total: 2,834,880 USD (equiv 2,000,000 Euros)</b>
Programme/Project Duration: 20 months.	
<b>Development Goal:</b> Improving land management and increasing agricultural productivity to support early recovery efforts and alleviate poverty in Baalback-Hermel. <b>Immediate Objectives:</b> 1. Restoration of livelihoods in conflict-affected poor rural areas in North Bekaa 2. Improving land and water management to increase agricultural productivity and reduce agricultural and social damages resulting by frequent flash floods in the region	
<b>Outputs and Key Activities:</b> <ul style="list-style-type: none"> <li>• Construction of walls, dams and water-collection reservoirs to reduce the risk of flooding in Baalback Hermel region.</li> <li>• Installation of water-saving irrigation networks and water-use efficient irrigation systems to improve water availability and increase crop production and diversity.</li> <li>• Restoration of vegetative cover (including agricultural crops) and forestation trees that were destroyed by the July conflict in order to reduce soil erosion.</li> </ul>	
Working Group Review Date: _____ RRC Review Date: _____ Steering Committee/Project Approval Group Approval Date: _____	

On behalf of:  
UNDP

### 3. Logical Framework

Objectives	Measurable indicators	Means of verification	Important assumptions
<p><b>Development Objective</b></p> <p><i>Improving land management and increasing agricultural productivity to support early recovery efforts and alleviate poverty in Baalback-Hermel.</i></p>	<ul style="list-style-type: none"> <li>- Damage caused by surface runoff and floods reduced.</li> <li>- Agricultural production increased</li> <li>- Poverty reduced</li> <li>- Livelihoods restored</li> </ul>	<ul style="list-style-type: none"> <li>- Assessment of damage caused by floods</li> <li>- Survey of farmers' and Baalback-Hermel population' feedback</li> </ul>	<p>Continued government support and follow up by the implementing institution.</p>
<p><b>Immediate Objectives:</b></p> <p><i>R Restoration of livelihood in conflict-affected poor rural areas in North Bekaa</i></p> <p><i>Improving land and water management to increase agricultural productivity and reduce agricultural and social damages resulting by frequent flash floods in the region</i></p>	<p>Farmers income improved</p> <p>Area of land converted or restored</p>	<ul style="list-style-type: none"> <li>- Rapid rural socio-economic appraisal</li> <li>- Mapping of land Cover</li> </ul>	<p><b>(Immediate Objective to Development Objective)</b></p> <p>Beneficiaries properly use and maintain the constructions and irrigation networks.</p> <p>Local communities get sufficient awareness and training to insure sustainability of the project.</p>
<p><b>OUTPUTS:</b></p> <p><i>Constructions of dams, walls and bunds to reduce risk of damage caused by floods (runoff water).</i></p> <p><i>Installation of water-use efficient irrigation networks to improve water availability and increase crop production and diversity.</i></p> <p><i>Restoration of vegetative cover (including agricultural crops) and forest trees on mountain slopes.</i></p>	<p>Number of dams, walls and bunds constructed</p> <p>Number of farmers benefiting from irrigation facilities.</p> <p>Availability of irrigation water increased</p> <p>Reduction in surface runoff water</p> <p>Crop yield and type increased</p> <p>Forest cover increased</p>	<p>Survey of beneficiaries in target areas.</p> <p>Development of surface runoff coefficient maps</p> <p>Assessment of irrigation water quantities and availability</p> <p>Mapping of land cover</p> <p>Survey of agricultural lands including crop types and yields</p>	<p><b>(Outputs to immediate objectives)</b></p> <p>Improper maintenance of reservoirs and constructions</p> <p>Political or tribal disagreements</p>
<p><b>ACTIVITIES:</b></p> <p><i>1. Survey and analysis of soils and topography of areas affected by surface runoff water and floods in North Bekaa.</i></p> <p><i>2. Construction of check dams, contour trenches, bunds and stone walls in order to reduce runoff water velocity and its erosive activity and improve soil infiltration rates and soil moisture.</i></p> <p><i>3. Construction of water collection reservoirs to collect water from rain and snow melt</i></p> <p><i>4. Restoration of land vegetative cover, pastures and forests to reduce soil erosion</i></p> <p><i>5. Provision and installation of water-efficient irrigation systems for use in agriculture.</i></p>	<p><b>INPUTS:</b></p> <p>100,000</p> <p>950,000</p> <p>400,000</p> <p>150,000</p> <p>250,000</p>	<p>Land surveys/mapping and soil analysis</p> <p>Surveys/photos of construction</p> <p>Assessment of water run-off</p> <p>Organization of workshops and field visits</p> <p>Before and after land cover maps</p> <p>Survey of irrigation systems and assessment of</p>	<p><b>(Activity to output)</b></p> <p>Low level of collaboration from local communities and municipalities</p> <p>Political unrest and availability of labour force</p> <p>Landownership problems</p>

6. Organization of grazing activities in target areas	70,000	irrigation water quantities Assessment of grazing activities	
7. Raising public awareness on agricultural water management issues and sustainable land management.	40,000	Questionnaires	
8. Training of local farmers and concerned municipalities in maintenance of constructed structures, water reservoirs and irrigation networks	40,000		

#### 4. Project Justification

Most of the attention from the recovery support is going to the severely and mostly affected regions in South Lebanon and South of Beirut; although the Baalback-Hermel area in Bekaa was directly and indirectly affected by the war but did not receive the attention it deserves. Besides the direct damage caused by the war in Bekaa, substantial losses were also reported in the agricultural sector, the main source of income for people in that region.

The early recovery support to the war affected communities should comprise of actions not only aiming at immediate recovery and reconstruction but also oriented towards socio-economic development of the affected areas. Accordingly, in the area proposed, funds should be made available to farmers not only to resume the pre-conflict economic activities but also to improve their production systems and income generating capacity.

One way to achieve this is through improving water and land management practices in North Bekaa where irrigation water is scarce and as a consequence crop productivity and diversity is low. Provision of modern and water-use efficient irrigation systems together with the establishment of hill lakes and water harvesting reservoirs could offer a means to improve the availability of irrigation water in summer and hence would lead to more crop per drop. This however, should be accompanied by proper training of farmers on how to maintain and use this system in a sustainable way.

In addition, flash floods due to torrential rains have increased in recent years in North; at least 8 occurrences over the past 20 years, 5 of them occurred during the past 6 years. The floods cause enormous damages in agriculture, aqua farms and rural communities in general. Recent floods in May 2007 affected several aqua farms in Baalback-Hermel and resulted in the death of around 500 tons of fish. Flood protection practices in North Bekaa are not at an acceptable level; only local retaining walls have been executed on some rivers and were constructed to prevent collapsing of river's walls rather than to mitigate from floods.

The threats and damage caused by the floods in Baalback-Hermel area are expected to increase after the July conflict in 2006. This is mainly because of the direct and indirect damage that affected the forest and vegetation cover in that region (about 400 hectares of Junipers trees were partially affected by fires in this area), thus soil erosion is expected to increase and water retention by the vegetation to decrease, all what could potentially lead to more severe and erosive power of runoff water when torrential rain occurs since the roots of trees and crops hold the soil firmly together and prevent such erosion. Such floods result in the loss of the topsoil, the most fertile layer of soil needed for plant growth.

In this regard, the project will also work on the restoration of vegetative cover on the slope hills in Baalback-Hermel. Nurseries for propagation of forest trees endemic to the region will be established, priority should be given to wild fruit trees which are historically grown in the region such as wild

pistachio, wild almonds and wild pears. Efforts will be done to rehabilitate the pastures and organize grazing activities in the region. Forage drought tolerant shrubs such as *Atriplex* and others will be planted near the stone walls and contour bunds where soil moisture is expected to be more available.

## 5. Management Arrangements

### Implementation Arrangements

The following implementation arrangements will be undertaken:

- 1- Preparation of a realistic and achievable project workplan in collaboration with all project partners.
- 2- Collection of information related to studies and surveys executed in North Bekaa. The project will collaborate with and build on the partnership between MoA, GTZ and ACSAD and the work they did in Al-Qaa to prevent floods, lessons will be learned and mistakes will be avoided.
- 3- New field surveys will be done only if needed with local and regional consultants and appropriate target sites and water sheds will be identified, followed by preparation of the technical study.
- 4- Similar field visits will be made to identify suitable sites for construction of hill lakes where there is a good potential for collection of rain water and snow melts and where beneficiaries are found.
- 5- In parallel, awareness workshops will be made for local communities on subjects related to flood prevention, soil erosion, desertification, maintenance of constructions and irrigation systems and importance of and protection vegetative cover.
- 6- Purchase of needed equipment including 4X4 vehicle, Backhoe loader, irrigation supplies, lake material etc..
- 7- Constructions of stone walls, contour bunds, check dams and collection lakes will be done in parallel in different selected sites (number to be specified by surveys and budget).
- 8- Construction of water reservoirs and irrigation systems in selected sites
- 9- Establishment of nurseries for wild fruit trees, Junipers trees and forage species.
- 10- Work in collaboration with municipalities and local NGO's if available on forestation, pastures rehabilitation and specify their roles and responsibilities in their maintenance and protection from grazing.
- 11- Continuous technical follow-up and monitoring by UNDP, MoA, MoEW and other project partners will be undertaken during the various implementation phases to ensure the objectives of the programme are met and lessons learned are documented.
- 12- UNDP will financially monitor and report on all disbursements of the programme and will ensure continued reporting to the Government of Lebanon and the Donor Country. Financial disbursements will be based on UNDP procedures.

### Project Timeframe

The implementation of the proposed programme is 20 months.

### Project Partners

The programme shall involve several concerned parties to ensure proper implementation of the programme's phases. These parties are the following:

- **Government of Spain:** Donor country and international technical backstopper to the proposed programme



- **United Nations Development Programme** : Implementation agency (technical, management, supervision) of the proposed programme
- **Ministry of Agriculture**: National project partner (supervision and execution through the NAP to combat desertification project).
- **Ministry of Energy and Water** : information sharing and coordination
- **German Agency for Technical Cooperation (GTZ)**: sharing of information and studies based on GTZ's similar experience in the project.
- **Local Experts** : Local consultants, focal points and supervisors
- **Municipalities and local communities** : National public institutes or entities and individuals benefiting from the proposed programmes

## 6. Analysis of risks and assumptions

The barriers and risks that could face the execution of the proposed project include:

- a- Landownership problems of selected sites and agreements among beneficiaries on sharing of water resources and benefits.
- b- Improper operation and maintenance of irrigation networks, reservoirs and walls.
- c- Low level of interest from the local communities in the proposed measures to prevent floods.
- d- Insufficient amounts of precipitation and snow fall during the rainy season.
- e- Insufficient government support and follow up to ensure sustainability after the termination of the project.
- f- Political instability
- g- Difficulties in securing enough labour workers for doing the constructions.

In order to manage and minimize these risks, the following measures will be done by the project:

- a- Project site selection will be done in consultation with the municipalities and local communities
- b- The project will ensure adequate amounts of training and awareness for local communities.
- c- Constructions and field work to be made during winter time and not to match with peaks of farming activities and harvest time.
- d- Ensure proper coordination among the relevant project stakeholders and partners.
- e- Intensify inputs and human resources to meet the deadline for work completion.

## 6. Project Budget

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

CATEGORY	ITEM	UNIT COST	NUMBER OF UNITS	TOTAL COST (USD)
<b>1. Personnel</b> Incl. staff and consultants				200,000
<b>2. Contracts</b> Incl. professional technical services				250,000
<b>3. Training</b>				50,000
<b>4. Transport (local)</b>				20,000
<b>5. Supplies and commodities</b>				50,000
<b>6. Constructions, field work and equipment.</b>				2,000,000
<b>7. Travel</b>				50,000
<b>8. Miscellaneous</b>				37,833
<b>9. Agency Management Support (7%)*</b>				186,048
<b>TOTAL</b>				2,843,880

The above-mentioned budget of **2,834,880 USD (equiv 2,000,000 Euros)** will be fully funded by Government of Spain through direct contribution to the Lebanon Recovery Fund