



## INTERIM PROGRESS REPORT

<b>Reporting UN Organization</b>	: United Nations Development Programme
<b>Country</b>	: Lebanon
<b>Project No.</b>	: 00059666 and 00069789
<b>Project Title</b>	: Flood Risk Management and Water Harvesting for Livelihood Recovery in Baalback-Hermel, phase I and II
<b>RF Signature date</b>	: 10 October 2007
<b>Project Start date</b>	: Phase I: 01 February 2008 Phase II: 20 February 2009
<b>Project Timeframe</b>	: Phase I: Two years Phase II: Three years
<b>Reporting Period</b>	: 1 April – 30 June 2009

### I. PURPOSE

#### Project Summary & Objectives

The project aims at assisting the Government of Lebanon in its recovery and reform efforts in the conflict-affected and high-poverty region of Baalback-Hermel through better land management practices, namely flood risk reduction and improved access to irrigation water and networks to achieve crop diversification and improve productivity.. This will be achieved through the construction of stone walls, check dams and water collection reservoirs to prevent runoff water from reaching villages and farms and through the restoration of land cover to reduce soil erosion. The objectives related to water management will be achieved through construction of membrane-lined reservoirs to collect unused water from springs, rainfall and snow melts and through installation of water-use efficient irrigation networks and systems that will be used by local farmers to improve their crop diversity and productivity. The project is financed by the Government of Spain through the Lebanon Recovery Fund established on the occasion of the Stockholm Conference, and is in line with the UNDP's development goal of alleviating poverty in rural drylands of the conflict-affected Baalback Hermel area.

#### Project Phases and Expected Outputs

<b>FRM I</b> 2.8 million USD	<ul style="list-style-type: none"> <li>➔ Establishment and Implementation of a flood risk management plan over an area of 94 km<sup>2</sup> in Aarsal and Fakhe region.</li> <li>➔ Water harvesting in North Bekaa and installation of efficient irrigation networks.</li> <li>➔ Crop diversification and improved land cover in North Bekaa.</li> <li>➔ Improved public awareness on flood risks management and training of the target municipality on maintenance of flood management structures.</li> </ul>
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<p><b>FRM II</b> 3.8 million USD</p>	<ul style="list-style-type: none"> <li>➔ Establishment and Implementation of a flood risk management plan over an area of 200 km<sup>2</sup> in Upper Aarsal and Ras Baalback</li> <li>➔ Improved land cover in Ras Baalback and upper Aarsal mountains.</li> <li>➔ Improved soil conservation in Ras Baalback and Aarsal.</li> <li>➔ Improved public awareness on flood risks management and training of the target municipality on maintenance of flood management structures.</li> </ul>
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### Project Linkages to National Priorities and Recovery

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 project's target area (Baalback-Hermel) 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. Moreover, summer droughts and uneven rain distribution are the main reasons for poor agricultural productivity in that area.

The effect of the July 2006 conflict on North Bekaa, particularly Baalback-Hermel area was not to be underestimated. Large scale destructions in infrastructure, biodiversity and agriculture were reported. These led to harder living conditions, more poverty and increased soil erosion threats.

The expected outcomes from the current project particularly those related to water harvesting, increased vegetation cover and higher productivity will serve very well the national efforts and plans aiming at combating desertification and alleviating poverty in North Bekaa. They will also serve the recovery efforts made by the Lebanese government in normalizing the living conditions of rural communities and in restoring the basic needs and infrastructure for practicing sound and profitable agriculture in the affected area.

### Project Implementation Partners

International Partners: Spanish Agency for International Cooperation  
German Agency for Technical Cooperation (GTZ)  
Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD)

National Partners: Ministry of Agriculture  
Ministry of Water & Energy, Bekaa  
Local municipalities and communities

## II. RESOURCES

	Phase I	Phase II
Total budget approved	USD 2,834,880	USD 3,800,000
Disbursements as for June 2009	USD 1,000,086	USD 20,000
Commitments for next quarter	USD 550,000	USD 60,000
Available Balance:	USD 1,834,794	USD 3,720,000

**Budget and Expenditure Breakdown per LRF Category:**

CATEGORY	Phase I		Phase II	
	Total Budget (USD)	Total Exp. to date (USD)	Total Budget (USD)	Total Exp. to date (USD)
<b>1. Personnel</b> (Incl. staff and consultants)	200,000	151,560.19	300,000	-
<b>2. Contracts</b> (Incl. companies, professional services)	250,000	193,587	250,000	-
<b>3. Training</b> (incl. AV printing / production)	50,000	4980.1	50,000	-
<b>4. Transport</b> (local)	20,000	4019.75	30,000	-
<b>5. Supplies and commodities</b> (Incl. IT equipment and rental & maintenance)	50,000	9054.44	40,000	463
<b>6. Equipment (including installation)</b>	2,000,000	558140.43	2,800,000	18,750
<b>7. Travel</b>	50,000	1708	40,000	-
<b>8. Miscellaneous</b>	37,833	11,610.45	24,000	-
<b>9. Agency Management Support (7%)</b>	186,048	65,426	266,000	-
<b>TOTAL</b>	<b>2,834,880</b>	<b>1,000,086.3</b>	<b>3,800,000</b>	<b>20,558</b>



### III. Results: Progress per activities

Project Outputs	Activities	Progress to date	Targets for 2009	Status for 2009
<b>1. Project Management and Coordination</b>	1.1 Technical, financial and operational Management. 1.2 Promote synergies with relevant on-going projects in target area. 1.3 Exchange of information and coordination meetings	<ul style="list-style-type: none"> <li>Tendering process for procuring the services of technical backstoppers for flood management (phase II) in process: request for proposals will be launched early July.</li> <li>Several coordination meetings were made with the project's partners including meetings with GTZ, ACSAD and the Municipality of Aarsal.</li> <li>On-going close coordination is being done with the local farmers and land owners in Aarsal for the construction of the stone walls and check dams.</li> <li>Field monitoring visit of UNDP's Deputy Resident Representative to Aarsal and meeting with the Municipality (Annex I).</li> </ul>	<ul style="list-style-type: none"> <li>Strengthened coordination with project stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>On going</li> </ul>
			<ul style="list-style-type: none"> <li>Coordination with Municipality of Ras Baalback for phase II implementation</li> </ul>	<ul style="list-style-type: none"> <li>Planned for Q3</li> </ul>
			<ul style="list-style-type: none"> <li>Termination of contracts for contractors for excavations and Walls construction.</li> </ul>	<ul style="list-style-type: none"> <li>Planned for Q4</li> </ul>
			<ul style="list-style-type: none"> <li>Recruitment of Experts for development of flood mgt plan for phase II.</li> </ul>	<ul style="list-style-type: none"> <li>TORs written, RFP in preparation.</li> </ul>
			<ul style="list-style-type: none"> <li>Submission of quarterly progress reports</li> </ul>	<ul style="list-style-type: none"> <li>Two reports submitted, two others planned for Q3 and Q4</li> </ul>
			<ul style="list-style-type: none"> <li>Recruitment of the contractor for establishment of two water harvesting structures.</li> </ul>	<ul style="list-style-type: none"> <li>Planned for Q3</li> </ul>
			<ul style="list-style-type: none"> <li>Termination of ACSAD's contract (phase I).</li> </ul>	<ul style="list-style-type: none"> <li>Planned for Q4</li> </ul>
<b>2. Flood Risk Management and Reduction</b>	2.1 Data collection and identification of target area. 2.2 Modeling of target area and generation of maps. 2.3 Constructions for flood control and prevention. 2.4 Monitoring, evaluation and impacts assessment	<ul style="list-style-type: none"> <li>Excavation works continued in hafirs number 7, 16, 11, and 13, approximately 27500 cubic meter of material were excavated during the months of May &amp; June, thus bringing the total amount of excavations to date to 168,500 Cubic meters (equivalent to 56 % of the total requested quantity).</li> <li>Embankments are being constructed at the four mentioned hafirs and Spillways construction were initiated at hafir 7 where stone layers were lined according to specifications.</li> <li>No major issues experienced in this reporting phase during the excavation works.</li> <li>A major part of the excavations in Hafirs number 10 and 11 were done by local farmers from Aarsal using their own machinery, thus fulfilling the project requirements of local community involvement to the maximum extent possible.</li> <li>The total number of stone walls completed during the</li> </ul>	<ul style="list-style-type: none"> <li>Data collection and identification of target site for phase II.</li> </ul>	<ul style="list-style-type: none"> <li>Planned for Q3 &amp;Q4</li> </ul>
			<ul style="list-style-type: none"> <li>Excavations of 8 flood water collection reservoirs in Aarsal</li> </ul>	<ul style="list-style-type: none"> <li>60 % of excavations completed. 40% remaining for Q3</li> </ul>
			<ul style="list-style-type: none"> <li>Constructions of 185 stone walls in Aarsal</li> </ul>	<ul style="list-style-type: none"> <li>40% of walls constructed, 60% remaining for Q3 &amp; Q4</li> </ul>
			<ul style="list-style-type: none"> <li>Development of a flood mgt plan for Ras Baalback (phase II)</li> </ul>	<ul style="list-style-type: none"> <li>Planned for Q3 and Q4</li> </ul>
			<ul style="list-style-type: none"> <li>Determine the number and locations of stone walls for phase II.</li> </ul>	<ul style="list-style-type: none"> <li>Planned for Q3 &amp;Q4</li> </ul>

		<p>reporting reached 55 walls, most of which (53) were accepted by the project following field verification visits with the project consultant and staff.</p> <ul style="list-style-type: none"> <li>The total length of the completed walls was 2759 meters which makes around 32% of the total lengths of the walls (8675 meters)</li> </ul>		
<b>3. Water Harvesting and Irrigation Networks</b>	3.1 Field surveys and assessment of water resources	<ul style="list-style-type: none"> <li>Two final target sites were selected for the establishment of artificial ponds, one in Deir Al-Ahmar (approx. 35,000 m<sup>3</sup>) and one in Chlifa (approx. 30,000 m<sup>3</sup>). Detailed studies for their constructions including design, specifications and Bills of Quantities will be ready on July 6<sup>th</sup>, 2009. A qualified contractor for their establishment will be recruited in August.</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of two artificial irrigation lakes</li> </ul>	<ul style="list-style-type: none"> <li>Planned for Q3 and Q4</li> </ul>
	3.2 Identification of water-harvesting sites. 3.3 Constructions of reservoirs and irrigation networks 3.4 Selection of beneficiaries and technical advice		<ul style="list-style-type: none"> <li>Installation of irrigation networks for target beneficiaries</li> </ul>	<ul style="list-style-type: none"> <li>Planned for Q4</li> </ul>
<b>4. Land Cover Increase and Soil Erosion Reduction</b>	4.1 Identification of erosion-sensitive areas 4.2 Establishment of nurseries for seedling production 4.3 Crop diversification and increased productivity 4.4 Forestation and forage cultivation	<ul style="list-style-type: none"> <li>Around 85% Germination was achieved in the wild fruit trees nursery for the pears, almonds and cypress. (Annex I). However, only 20% of the wild plum seeds germinated and produced seedlings.</li> </ul>	<ul style="list-style-type: none"> <li>Forestation in Aarsal with wild fruit trees</li> </ul>	<ul style="list-style-type: none"> <li>20,000 seedlings established, forestation to start mid september 2009.</li> </ul>
<b>5. Sustainability, capacity building and awareness raising</b>	5.1 Empowerment of target beneficiaries. 5.2 Awareness raising on flood and water management. 5.3 Capacity building through training. 5.4 Alternative livelihoods	<ul style="list-style-type: none"> <li>Awareness on flood management and soil conservation was raised during the press conference held on June 17<sup>th</sup> by the Ministry of Agriculture on the occasion of the World Day to Combat Desertification. Posters, folders, newsletters and brochures were distributed to several media representatives and other participants from different national institutions.</li> <li>Twenty desertification and flood management awareness tips were broadcasted daily on New TV prior to the weather forecast during the period July 3-23 2009.</li> </ul>	<ul style="list-style-type: none"> <li>Building the capacity of Municipality of Aarsal for future maintenance of established flood structures.</li> </ul>	<ul style="list-style-type: none"> <li>Planned for Q3</li> </ul>

### **Implementation Constraints**

Land Ownership: Some farmers are still not accepting the contour walls because they are very long and can be mistaken as land border walls. The project will replace some of these walls with check dams or Gabions.

### **Key Partnerships & Collaboration**

A good partnership is established between the project and the municipality of Aarsal. Two members from the municipality were always there to assist the project in resolving any dispute or uncertainty coming from local farmers and land owners.

**IV. Work plan per activity for the third quarter in 2009 (July – September 2009).**

Key Milestones Wks	July				August				September			
	1	2	3	4	1	2	3	4	1	2	3	4
<b>1. Project Management and Coordination</b>												
1.1 Technical, Financial and operational mgt.												
1.2 Promotion of synergies with other projects												
1.3 Information exchange and coordination.												
<b>2. Flood Risks Management and Reduction</b>												
2.1 Data collection and identification of target area.												
2.2 Modelling of target area & generation of maps.												
2.3 Constructions for flood control and prevention.												
2.4 Monitoring, evaluation & impact assessment.												
<b>3. Irrigation Water Harvesting and Networking</b>												
3.1 Field surveys & assessment of water resources												
3.2 Identification of water-harvesting sites.												
3.3 Constructions of reservoirs & irrigation networks												
3.4 Selection of beneficiaries and technical advice												
<b>4. Land Cover Increase &amp; Soil Erosion Reduction</b>												
4.1 Identification of erosion-sensitive areas												
4.2 Establishment of nurseries.												
4.3 Crop diversification and increased productivity.												
4.4 Forestation and forage cultivation												
<b>5.Sustainability, Capacity Building &amp; Awareness Raising</b>												
5.1 Empowerment of target beneficiaries.												
5.2 Awareness raising on flood and water mgt.												
5.3 Capacity building through training.												
5.4 Alternative livelihoods												



## ANNEX I. Field Views



**Completion of Hafir No. 7**



**Construction of more check dams**



**Excavations in Hafir No.11**



**Stone walls for runoff interception**



**Contour Stone Walls**



**Diversion of contour walls to avoid removal of existing shrubs**



**Emerging Wild pears seedlings with 85% Germination.**



**Overview of the Wild fruit tree nursery established by the Aarsal Rural Development Association (ARDA).**



**UNDP's Visit to project site and meeting of the Deputy Resident Representative with Municipality of Aarsal.**