

**Government of Lebanon**

**Integrated Rural Development Programme  
for Baalbeck - El Hermel**

LCB/96/100  
2613  
rural credit

Republic of Lebanon  
Office of the Minister of State for Administrative Reform  
Center for Public Sector Projects and Studies  
(C.P.S.P.S.)

**Rural Credit Component Requirements  
For The Years  
1st September 1998 to 31st Aug. 2001**

**Project Document**

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**February 1998  
(Second Version)**

**"To consolidate Eradication  
Of Illicit Crops Through  
Sustainable Human Development"**

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**Programme of the Government  
Of Lebanon**

**Project Document**

	<b>Budget</b>
- Title: Rural Credit	
	- I.R.D.P. (1st. Phase) US\$ 1,417,000
- <u>Project Site</u> : Baalbeck	- Private Banks funds US\$ 10,000,000
- <u>Government Co-operating Agency</u> :	- Government Funds US\$ 10,000,000
- Council of Development and Reconstruction	(I.D.B.)
- <u>Government Execution Agency</u> :	- In Kind Government Support
- Ministry of Agriculture	(involved civil servants)
- <u>Implementing Agency</u> :	Total Budget US\$ 21,417,000
- Baalbeck - El Hermel Integrated Rural Development Programme in cooperation with Commercial banks	
- Estimated Starting Date: 1st. Sept. 1998	Administrative and operational services
- Duration : 4 years	- I.R.D.P.
	- Ministry Of Agriculture
	- FRANSABANK
	- JAMMAL TRUST BANK
	- Others (BANKS)

## I- INTRODUCTION

The objectives of this document are to present the Rural Credit Project and its funding requirements, and to provide the financing institution with the required elements, in order to justify and to evaluate the opportunities of any eventual support / intervention. This report includes the following chapters:

- The background justifying the launching of Baalbeck - El Hermei Integrated Rural Development Programme (I.R.D.P.).
- The Programme approach and its immediate objectives.
- The achievements during the first phase i.e. June 1994 to Dec.1997.
- Presentation of the established Credit System during the first phase, its delivery mechanism and its performances.
- And lastly, presentation of the Credit Programme mechanism for the coming years 1998 - 2001 and its funds requirements.

The additional required funds in order to support the Credit Component within the I.R.D.P., are estimated to 20 Million US\$, to be allocated into five credit lines which are in conformity with the I.R.D.P.'s objectives and strategy.

This amount will permit to increase the number of beneficiaries from 1968 individual farmers year actually to 6700 farmers in 2000-2001, and in the same time to increase the average individual loan amount from 1,000 US\$ to 5,000 US\$.

The financial return of these small seasonal loans will permit to improve the farmer's income and thus its investment capacity and the local economic activity in general by 32%.

It is worth mentioning that this Credit Programme will have a substantial impact on the agricultural activities, the employment generation, as well as on the marketing, agro-industries and non-agricultural income generating activities in the Programme area.

Four scenarios (Alternatives) of funding are presented in details, in order to enable the decision makers, and the financial institutions, to enable them taking the appropriate actions and modalities.

## II- Background

Lebanon was a producer of cannabis, a producer of opium and a major trafficking center for narcotic drugs destined to Europe, the Middle East (especially the Gulf area) and other areas.

The cultivation of cannabis and opium poppy was limited to the Northern Bekaa valley in the districts of Baalbeck and El-Hermel.

The area is the most neglected, marginalized and undeserved region of Lebanon.

Therefore, illicit crops production played a positive role in the **relative** economic prosperity of the region and has created dependency, as it became the major cash crop in the area. The **farm gate income** generated by these crops was evaluated to 80 million US\$ per year in 1992 (Field Survey carried out by C.R.I.).

The size and acuteness of the drug problem became a major concern to the Government of Lebanon, especially after the end of the civil war.

The Government of Lebanon in 1991 and after establishment of peace and reconciliation in the country, took a joint decision with the Syrian authorities to eradicate illicit crops in the region. Immediate action was taken and about 80% of illicit crops cultivated in 1991 were destroyed.

Eradication measures were completed with strenuous education and information campaigns to dissuade farmers from reverting to illicit crops.

The eradication measures continued throughout 1992 and 1993. Official informations and satellite control confirmed that illicit crops have been completely eradicated.

The Baalbeck - El Hermel Integrated Rural Development Programme (I.R.D.P.) was initiated in 1994, by the Lebanese government with the collaboration of U.N.D.P. / U.N.O.P.S. and U.N.D.C.P.

The principal objective was to help the farmers of the region, who are facing economic difficulties due to the complete eradication of the illicit crops (Cannabis and Opium).

**It is neither a Programme for emergency aids distribution, nor for the direct compensation of the farmer's lost income.**

The major objective is to assist the farmers in order to **reorient their production systems**, which were based on illicit crops cultivation.

Because the Baalbeck - El Hermel area, has been neglected for a long time ago, it is normal to notice the total absence of institutions and professional organizational groups able to assist the agricultural production such as Credit or Inputs/Services supply institutions.

The situation is the same as far as health infrastructures, social, education, communication, trade, and other economical sectors are concerned.

The natural resources, such as land and water are not rationally exploited. Numerous water springs are left unexploited, and few are used on rudimentary basis for the summer season only.

Water losses are common in all the region, while the area is arid, and the need for irrigation and rational use of the water resources is of primordial importance. This is due to the absence of modern **hydro-agricultural infrastructures/on-farm networks**, as well as the absence of any water resources master plan aiming the mobilization of these water resources, in order to ensure the development of this arid and harsh part of Lebanon.

Since the region was deprived of an important revenue source, which was the cultivation of illicit crops, it is unfair to treat it on the basis of development indicators of the whole country.

In this concern, if the GDP on national level is around 2074 USD per capita according to the Lebanese Central Bank; it doesn't exceed 500 USD \$ per capita in this region according to a field survey carried in 1994 by the U.N. Programme on 1500 households (see the annexed overview). This level of revenue shows that the region should **be classified among the least developed countries districts**, that deserve immediate development help.

## **Baalbeck - El Hermel Area Overview**

**LAND AREA**

2,640 km<sup>2</sup>

**POPULATION**

- Inhabitants (1993) 250,000

- Family Farmers (1995) 27,000

**GNP PER CAPITA** in current prices

(1995) 528 \$ \* @

(1993) 480 \$ \*\*

### **Summary of 1995's survey on 1500 households<sup>Ⓢ</sup>**

Farm Size in ha	Nb. of farmers in the sample	Family members / household	Agr. Income	Non-Agr. Income	Total Income	Agr. Expenses	Net Income	Household Income	Gross Income per capita
less than 2 ha	631	3345	1,833,080	1,021,031	2,854,110	1,054,049	1,800,061	2,853	538
between 2 and 4 ha	545	2878	1,390,977	981,307	2,372,284	876,581	1,495,703	2,744	520
between 4 and 6 ha	175	1068	605,706	283,037	888,742	365,245	523,497	2,991	490
between 6 and 10 ha	98	613	430,988	183,160	614,147	253,773	360,374	3,677	588
between 10 and 15 ha	32	240	182,479	87,423	269,902	133,129	136,773	4,274	570
between 15 and 20 ha	18	126	120,221	31,043	151,264	96,096	55,168	3,065	438
between 20 and 30 ha	1	15	2,405	1,227	3,632	1,227	2,405	2,405	160
<b>Total</b>	<b>1500</b>	<b>8285</b>	<b>4,565,854</b>	<b>2,588,227</b>	<b>7,154,081</b>	<b>2,780,100</b>	<b>4,373,981</b>		
<b>Average</b>		<b>6</b>	<b>3,044</b>	<b>1,725</b>	<b>4769</b>	<b>1853</b>	<b>2916</b>	<b>2916</b>	<b>528</b>

**HUMAN DEVELOPMENT INDEX**

(1992) 0.600

Life expectancy at birth (1992) 60 yrs

Mean years of schooling (1992) 4.4 yrs

Adult literacy rate (1992) 81.3 %

**LAND USE**

Agriculture (Arable land) (1994) 1030 km<sup>2</sup> (39.00%)

of which irrigated (1994) 150 km<sup>2</sup> (14.56%)

Grazing (1994) 810 km<sup>2</sup> (30.68%)

Forest, woodland and degraded areas (1994) 530 km<sup>2</sup> (20.00%)

Other land (1994) 270 km<sup>2</sup> (10.20%)

Total (1994) 2640 km<sup>2</sup>

**VITAL STATISTICS**

Population density (1993) 95 persons/km<sup>2</sup>

Population Growth rate (1992-2000) 2.2%

Population distribution (1991)

Urban 40%

Rural 60%

**HEALTH**

Access to health services (1992) 60%

Infant mortality rate (1992)

Age under 1 50/1000

Age under 5 60/1000

Life expectancy at birth (1992) 60 yrs

Access to safe water (1988-1991) 60%

Access to sanitation (1988-1991) 30%

\* Which is less than that of Yemen as a least developed country. (Source: Survey on 1500 households in 1995)

@ The increase between 1993 and 1995, is due, mainly, to the amelioration in the Lebanese Pound's exchange rate toward the US Dollar (1730 LL compared to 1630 LL for one \$)

\*\* According to a survey in 1993.

Ⓢ Exhaustive statistics from the Loan applications.

### III - PROGRAMME APPROACH / IMMEDIATE OBJECTIVES :

#### 1. Approach

The Integrated Rural Development Programme's approach during the first phase was based on the Integration of the following principles :

- It is an intervention aiming the Socio - economic development of the region, and not the direct compensation of the farmers for their lost income from illicit crops.
- It is based on participatory approach through active and efficient involvement of the beneficiaries themselves in all its steps from conception, study, and planning to implementation and management..
- The sustainability of the developmental process should be secured by the creation of legal institutions, and economically viable professional groups under the supervision and the management of the beneficiaries themselves.

#### 2. Immediate Objectives :

In the absence of a miraculous substitute to hashish and poppy under the arid climate of Baalbeck - El Hermel, the reorientation of the production systems is the solution and should be based on the:

- Rational use / allocation of the natural resources especially water, through collective networks, and loans for procurement of sprinklers / drip irrigation systems.
- Improvement of the local agricultural products competitiveness, by minimizing the cost and maximizing the yield (providing agricultural inputs/services, introducing high performing/adequate species and varieties, new technologies, extension services and training etc.).
- Creation of a **Rural Credit System managed by the local community**, administered by a commercial bank, and assisted by a technical supervision and an extension service .
- The human and social development dimension should be omnipresent in every intervention.
- The improvement of social and economical conditions of the rural women is a basic activity of the Programme.
- Improvement of the infrastructures, mainly the rural roads and means of transportation which contribute enormously to the Socio-economical development of the region .
- Environment protection, and soil / water conservation should be considered too.

### IV- MAIN ACTIVITIES AND ACHIEVEMENTS FOR THE FIRST PHASE 1994-1997

- ⇒ A Programme Management Unit, with the objective of administrating and executing the projects, was established. National / International experts and consultants have been recruited in order to carry out detailed technical studies / surveys, and the feasibility studies.
- ⇒ The local capacities and the governmental services were given a remarkable consideration in this unit. The main objective was to motivate the Governmental services as well as the non-governmental organizations and associations.
- ⇒ The concretisation of the participatory approach was realized through the organization of the local community and the constitution of 22 local committees for development and credit (L.D.C.C.s), each representing a homogenous group of villages.

The selection of the members of these committees was done by the citizens themselves, with the coordination of the Mukhtars.

- ☞ The local committees **will be transformed into legal bodies (cooperatives/companies) as soon as possible** according to the National Commercial regulations after a technical training, and persuasive campaigns .

- ⇒ The continuity of the development process, should be, in principle, ensured by a Superior Committee for Development and Credit PDCC. All PDCC's members were freely elected by the L.D.C.C.s members.

The superior committee shall become a Development and Agricultural support / promotion company, constituted with the participation of the 22 L.D.C.C.s / cooperatives. The financial contribution shall reach 80% of the capital of each cooperative.

- ☞ This development company, is prepared to replace the Programme Management Unit in all what concerns the Credit, the provision of inputs and services, the Marketing, and the various agricultural investments in agro-industries.

- ⇒ An extension service was constituted, thanks to the contribution of the Ministry of Agriculture who provided 23 technicians and qualified labors.

In addition a multidisciplinary extension service, particularly a demonstration plots unit, an Audio-visual unit; and four sub-regional extension centers were created, each supervising 4 to 7 local extension cells linked to the LDCCs. Each LDCC provided a free of charge office for the extension cell.

- ⇒ Audio-Visual Extension films/flashs were produced.

- ⇒ A Credit System allowing the active participation of the LDCCs and PDCC in selecting and guarantying the beneficiaries, was established. The contribution of 2 commercial banks (FRANSABANK & JAMMAL TRUST BANK) ensured the funds administration and allowed to permit them acting as contractors in the credit contracts. So, **legally the bank is the lender, and responsible of the credit funds, as well as for the financial and bank formalities.** (See the annexed Letter of Agreement with J.T.B.).

☞ *The contribution of these commercial banks aims at :*

- Ensuring a clear / transparent administration of funds during the period of the activity of the Programme and even after its termination.
- To ensure the continuity of the agriculture credit scheme and its mechanism even after the termination of the Programme; since the banks will be presented, as the lender, in order to allow, later on, direct contact and deal with the farmers / borrowers. The bank will follow up the credit reimbursement even without the presence of the UNDP after the termination of the Programme.
- The presence of a **Private Commercial Bank** as the front-wall and desk, **will permit to avoid and alleviate political pressures and interferences in the loans allocation**, since the bank is sharing risks with its own funds to a limit of 50%.

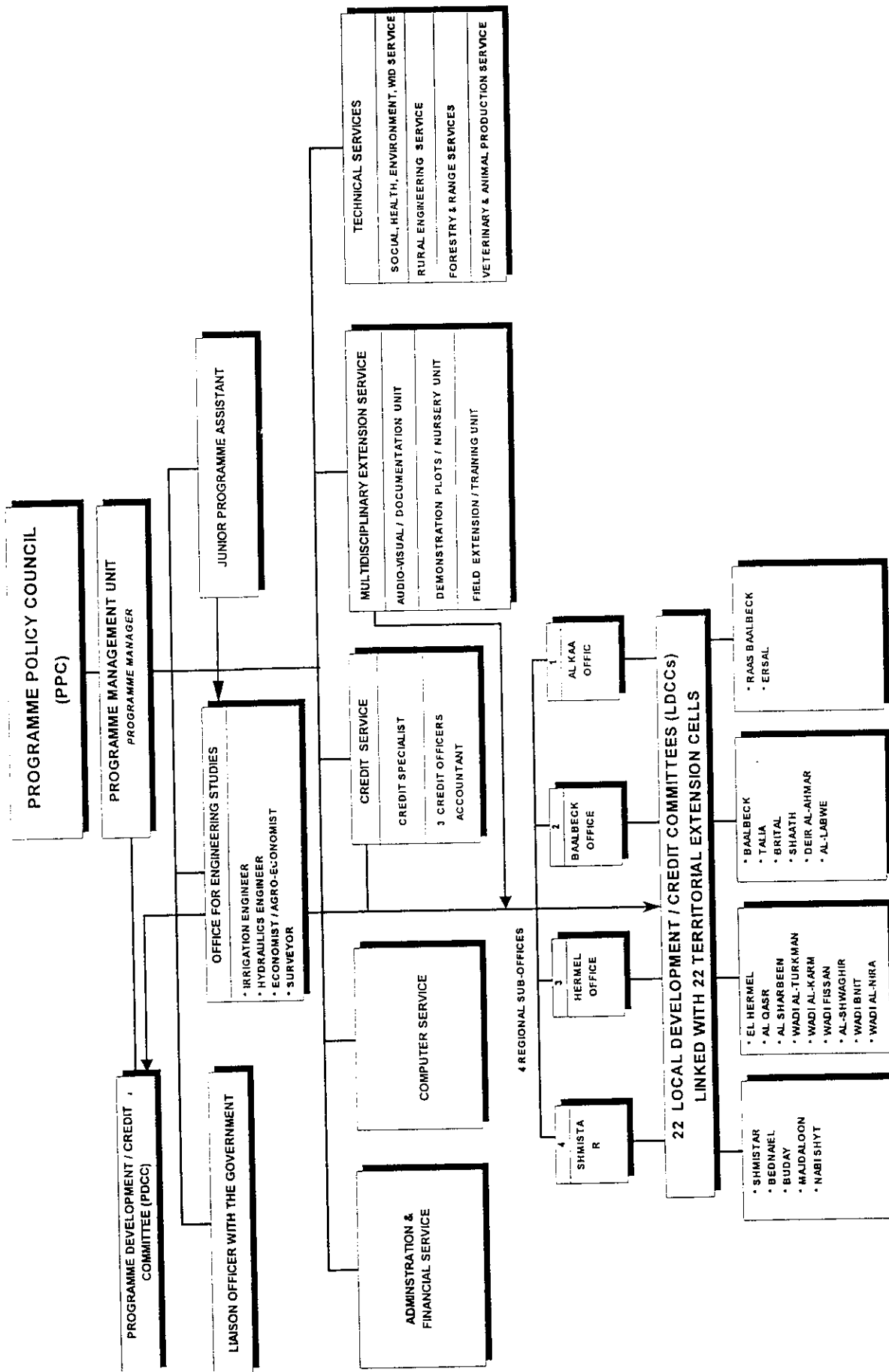
Individual loans were processed and approved during the last Agricultural seasons 94 -97, for amounts of USD 700 to 1500 each. The total amount of these loans (in kind and in cash) was USD 2,424,017. As of to date (FEB 98) 1968 approved individual loans have been disbursed.

The monitoring of the loan applications/contracts, and their analytic accountancy, was fully atomized/computerized.

The procurement of inputs (seeds, fertilizers, pesticides, fungicides) was achieved through the credit system with competitive prices by 20 to 30% less, compared to the traditional traders prices.

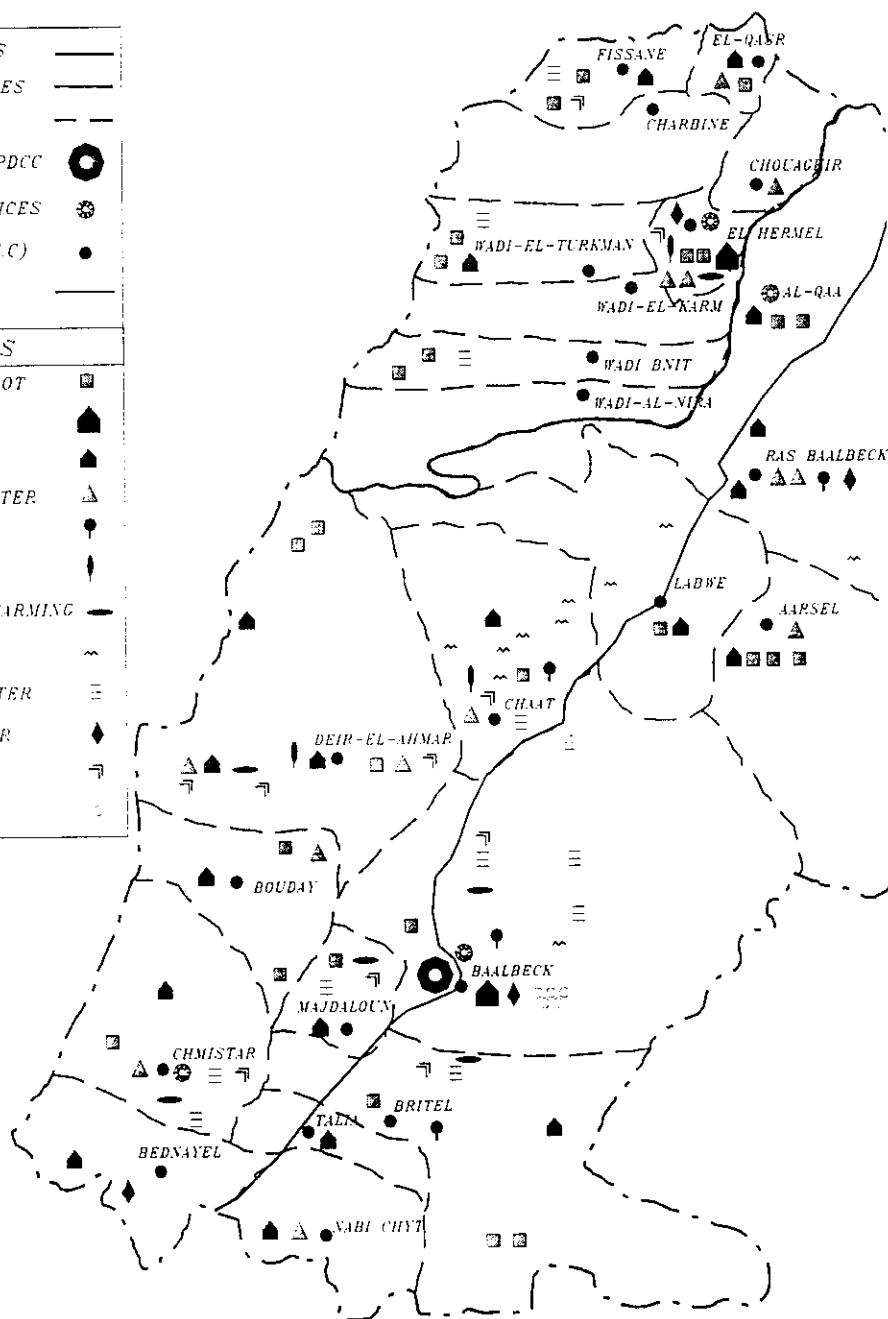
The interest rate was 12%, and the repayment rate reached more than 90% during the first two seasons till mid 1996, but the confusion about the continuity of the Programme and its eventual termination, in addition to the last civil strike during 97 (**Toufeili case**), have had a negative repercussion on the repayment rate. It is now around 70%. We are confident that it will raise during this summer in case the Programme is strengthened.





# LEGEND

REGION BOUNDARIES	---
DISTRICT BOUNDARIES	---
LDCC BOUNDARIES	---
PROGRAMME HQ / PDCC	●
REGIONAL SUB-OFFICES	●
LDCC CENTERS (E.T.C)	●
INT'L ROAD	---
ACTIVITIES	
DEMONSTRATION PLOT	■
HOSPITAL	■
MEDICAL CENTER	■
PROFESSIONAL CENTER	▲
REFORESTATION	●
NURSERIES	●
BEEKEEPING/FISHFARMING	■
DRINKING WATER	~
IRRIGATED PERIMETER	---
HANDICRAFT CENTER	◆
SOURCE	⌋
BANK AGENCY	○



## V- The Credit System and Its Delivery Mechanism:

The Programme established a Supervised Agricultural Credit System for small and medium - scale farmers in the Programme area. Participatory approach was one of the main characteristics of the strategy adopted. This means that all concerned bodies and entities: community members, local leaders (such Mukhtars/Mayors), local governmental authorities, and non-governmental organizations, have been involved in planning, defining priorities, and decision- making processes of all Programme activities, their implementation and their management.

Therefore the community has been organized in such a way to ensure and facilitate its active, efficient, effective and harmonious participation. According to several criteria such as demographic, agricultural, water resources, number of households and clans residing in the community, the region has been divided into 22 homogeneous units, represented by 22 LDCCs. The members of these LDCCs, a total of more than 300 local leaders, were freely selected/elected by the communities under the coordination of the Mukhtars. Representatives from each LDCC have been elected to form the Programme Development and Credit Committee. The PDCC is considered as the highest level of decision making regarding the credit issue and all other Programme's activities, **including development planning.**

The Local committees have played a vital role either in the coordination between the target groups and the Programme Management or in decision-making process and participation in the process itself, and ensuring its sustainability at the same time.

For a successful and systematical implementation of the Supervised Credit; field surveys and financial/ technical studies were performed by the technical staff in the Programme (Credit Officers).

Since the financial management including the disbursement of loans or their collection, and reporting on loans in a systematic way are crucial elements of the Credit Component and should be clearly defined prior to the Programme implementation; an assessment of the existing banking facilities and capabilities in the Programme area have been carried out. Therefore, establishment of serious and cooperative relationships between the Programme and FRANSABANK and JAMMAL Trust Bank (commercial & private banks with an active branches in the Programme area) have been managed and sustained within special letters of agreement. These banks are collaborating with the Programme for the credit administration, and act as front wall for the borrowers. The bank represents the contractor in the credit contracts. So legally, the bank is the lender, and the responsible of the credit funds and of the financial bank formalities. On the other hand, the bank will ensure the continuity of the agricultural credit scheme and its mechanism even after the termination of the Programme.

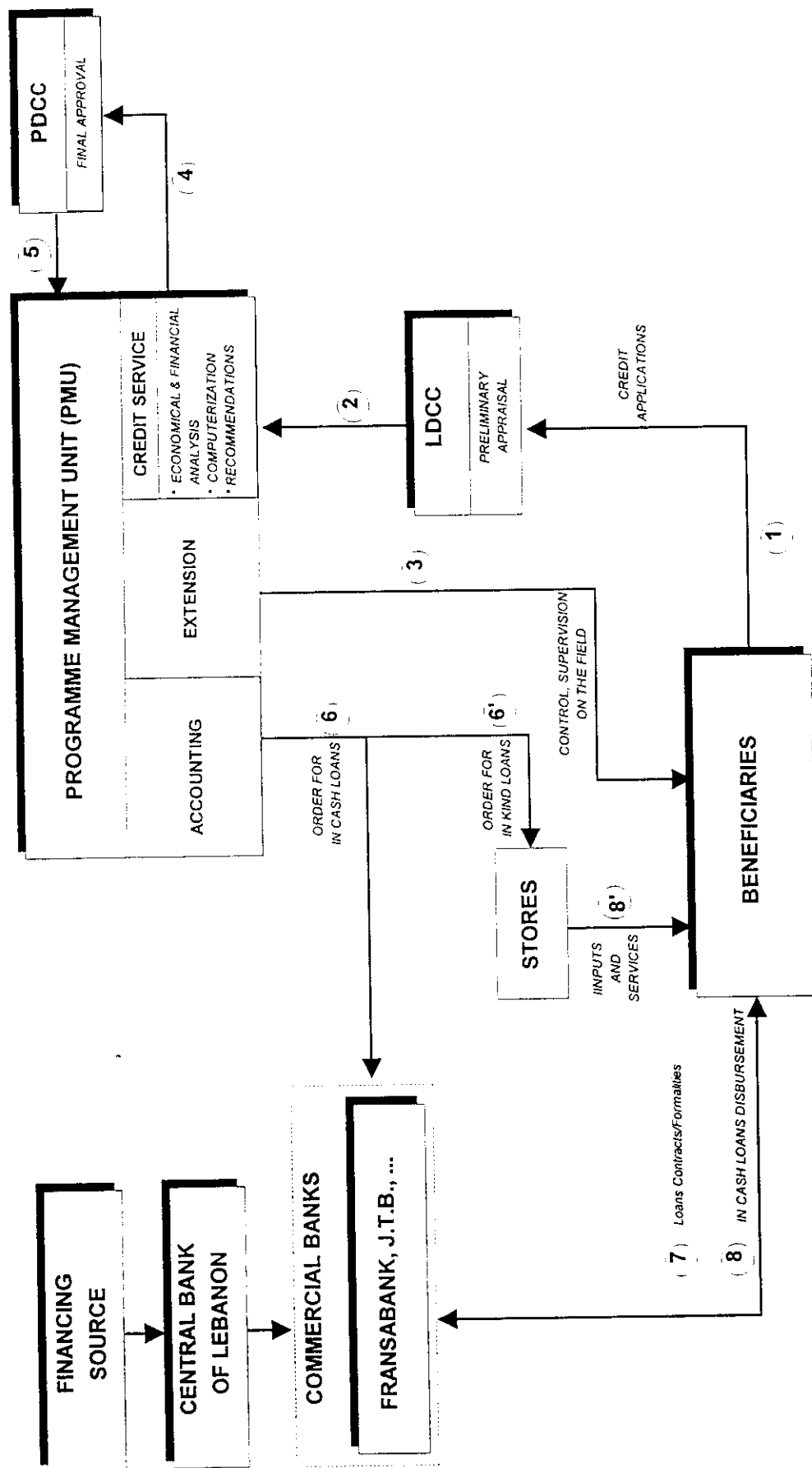
The basic entities/bodies for the implementation of the operational Credit System in the Programme area are the following :

- a- Beneficiaries(B,S),
- b- Local Development and Credit Committees(LDCC),
- c- Programme Development and Credit Committee(PDCC),
- d- Programme Credit and technical advisory staff (CTAS),
- e- Commercial Bank (local bank, LB) like FRANSABANK branch in Baalbeck .

Relations and inter-relations among these entities of this **institutionalized and Supervised Credit System** could be visualized as in the following Lending Mechanism diagram.

The beneficiaries of the Supervised Credit System adopted by the Programme should abide to the following credit criteria:

- a- Small and medium-scale farmers & entrepreneurs (men/**women**) and their family members who are themselves performing productive activities, and are eligible to borrow,
- b- Individuals, groups, cooperatives, and rural communities,
- c- Rural women for specific income generating activities only, as they are benefiting, in addition, as medium and small - scale farmers, in case a women is a head of household.



Chronologic Sequence of the Lending Steps

*The lending mechanism follows a sequence of steps:*

- a) The beneficiaries submit their loan applications to the Local Development and Credit Committees in their respective communities/villages without any intermediary.
- b) The LDCC proceeds for a preliminary study of the loan applications from eligibility points of view and priorities and list them according to certain criteria pre-set for this purpose.
- c) The Programme Credit and Technical Advisory Staff (C.T.A.S.) study the loan applications again in depth from technical, financial, and socio-economic points of view. Then field visits are organized with the involvement of the regional sub-offices and the extension officers of the Ministry of Agriculture.
- d) The CTAS submit these applications with their relevant recommendations to the Programme Development and Credit Committee.
- e) The PDCC in turn study the applications with any observations and notices concerning credit worthiness of the applicants in particular, eventually transmitted by the commercial banks and gives the final approvals or/and adjustments.
- f) Finally, the bank is advised to make necessary contracts, promissory notes, collaterals hypothec, and all Administrative / Financial procedures to disburse the amounts.

***Two types of credit have been released:***

- 1- Loans in kind: this type of loans constitutes the needs of available inputs supply as well as agricultural services (such as fertilizers, pesticides, insecticides, seeds and seedlings, sprayers, sprinklers, drip-irrigation units, tractors, etc.).
- 2- Loans in cash: this part of loan covers the cash obligations such as wages, cash rent and inputs services not yet covered by the in kind part.

The CTAS passes the loan decisions taken in this regard by the PDCC, through the Bank to the specific stores/cooperatives in each LDCC in order to complete the administrative arrangements and delivery mechanism of the in kind inputs/services.

In summary, the attached diagram generally shows the process of applications and decisions' flow beginning from and ending to the target group (beneficiaries) - See page 10.

Concerning the terms and conditions of the different types and purposes of loans, the attached table shows a summary by which the main characteristics and features of the lending policy of the Programme could be clearly observed. Moreover, these terms & conditions are most likely applicable to the local circumstances of the area and could be amended or changed in light of the Programme requirements and its target group.

The interest rates mentioned in this table are applicable for normal cases of repayment, without any delay from the borrowers. In case of delays, **penalties should be charged at commercial interest rate for the extra period of repayment.** In addition, the allocation of credit for the concerned LDCCs and for each village **will decrease according to its rate of reimbursement.**

Acceptable guarantees depend on the size of the loan and its terms and conditions as well as on the type of farming. Kinds of acceptable guarantees are as follows:

- a- Fixed Assets: Such as agricultural lands, housing, commercial lands, farm building and constructions,
- b- Two good financial standing and personal reputation are accepted as guarantors for loans not exceeding US\$ 3000,
- c- Each of the concerned LDCC will take the responsibility of collective / mutual guarantee of all loans recommended/approved within its sub-zone, in addition to the follow-up actions regarding the delinquents and defaults within its area. Moreover, in such cases of delinquencies and delays penalties for each of the concerned LDCC,s with low rate of repayment have been practiced in reality through decreasing its share proportionally to the decrease of reimbursement or **even its total deprivation in case its repayment rate is below 70%.**

# SUMMARY OF THE LOAN TERMS AND CONDITIONS

Loans Types & Purposes	No. of Disbursements	Repayment Period (yrs)	Grace Period (yrs)	No. of Installments	Interest rate	Ceilings % of Total Cost
<b>A. Seasonal Loans :</b>						
- Crop Production supply inputs	1	< 1	--	1	12%	70%
- Livestock Production supply inputs	1	< 1	--	1 - 4 (*)	12%	70%
- Non-agr. purposes (Communities)	1	< 1	--	1 - 4 (*)	12%	70%
<b>B. Short - Term Loans :</b>						
- Crop Production .	1	> 1 - 2	--	1	12%	70%
- Livestock Production.	1	> 1 - 2	--	1-2	12%	70%
- Non-agr. purposes (Communities)	1	> 1 - 2	--	1 - 4 (*)	12%	75%
<b>C. Medium - Term Loans :</b>						
- Irrigated land reclamation, irrigated farm buildings, cow (only), sprinkler units, drilling artesian wells, digging cistern, pools, water reservoir.	3 - 4	10	--	10	10%	75%
- Poultry farms, dairy cattle farms, farms for fattening calves and lambs.	3 - 4	10	1	9	12%	75%
- Bee-hives, green houses (glass houses), pumping units.	3 - 4	10	1	9	12%	75%
- Plastic houses	1	6	1	5	12%	75%
- Nurseries (Veg, fruit-trees, etc)	3 - 4	10	2	8	12%	75%
- Citrus farms in irrig. land	3 - 4	10	4	6	10%	75%
- Farm machinery	1	9	1	8	10%	75%
- Establishment of grapevines	3 - 4	8	3	5	10%	75%
- Establishment of banana plantation	3 - 4	6	1	5	10%	75%
- Sheep / goats (only)	1	6	1	5	10%	75%
- Drip irrigation units	1	6	1	5	10%	100%
- Draft animals	1	5	--	5	10%	75%
- Other communal projects (medium-scale)	3 - 4	10	--	10	10%	75%
<b>D. Long -Term Loans :</b>						
- Prevention of soil erosion and land degradation, farm buildings in dry lands, communal irrigation schemes.	3 - 4	15	--	15	8%	75%
- Fruit-trees in dry lands :						
• Olive trees	3 - 4	15	6	9	8%	75%
• Almonds & apples etc	3 - 4	12	6	6	8%-10%	75%
- Agro-industries	3 - 4	11 - 15	--	11 - 15	12%	75%
- Other communal projects (medium-scale).	3 - 4	15	--	15	10%	75%

(\*) Depends on types of production process and no. of its shifts during a year.

d- Crops that are marketed through the government's departments and authorities; like the Grain Office, the Sugar Beet Office, the Department of Tobacco, etc, the borrowers should submit specific written permissions in favor of the Programme in order to deduct their dues from their products values, at the source

e- Any other types of guarantees that the Programme and the commercial bank may deem fit for acceptance in this regard.

## VI- THE IMPLEMENTATION AND OBTAINED ACHIEVEMENTS OF THE CREDIT SYSTEM DURING THE FIRST PHASE:

- It is well known that the broad test or indicator of any efficient and successful agricultural credit system, is the extent to which it promotes the agricultural development by increasing **the amount of capital available in between the hands of the farmers and the efficient utilization of agricultural economic resources**, particularly the human labor, by promoting qualitative improvements and innovations of the target groups involved (farmers/producers), through changing their attitudes and mentalities, encouraging the use of better farming practices, methods, and techniques, and promoting better farmers' organizations and more effective local leaderships.
- Before giving a picture of the Programme's achievements in this concern, it is better to specify/identify the main unfavorable constraints, factors, and difficulties that have faced the implementation of The Credit Component in the first phase. By doing so, evaluation of the performances, in this short period of four seasons, becomes more reasonable and acceptable on one hand and the unfavorable conditions have been referred to from the beginning, in order to be taken into account in the forthcoming period either to be resolved/facilitated/shortened/limited on the other. Accordingly, many complications, and multiple difficulties and problems have been observed and noticed in practice. In this concern, the following points represent the most important and crucial difficulties, constraints, and problems previously and recently facing the Credit Component in particular :

- a) Confused situation in the real estates, as well as inheritance registration
- b) Absence of an agricultural bank, as well as the reluctance of all commercial banks to deliver agricultural loans, and to **take alone the risks**.
- c) Limitation of capital resources allocated to the I.R.D.P. and the Credit Component in the first phase i.e. 1994 – 1997. (only US\$ 1.417 million)
- d) Bad traditional habits and poor attitudes and imaginations of the target groups towards the Credit Component.
- e) Hard and many efforts needed amongst the target groups.
- f) Absence of sustainable materialistic supports, subsidies, and assistance to the people of the area and to the local communities/farmers.
- g) Hard and many actions and efforts needed for better organization of the local community (establishment of the LDCCs, PDCC, Cooperatives, Public Limited Company for Development, etc...).
- h) Shortage and weakness of the loans' amounts issued to the beneficiaries in addition to the limitation of diversification of their purposes, particularly for development purposes (capital investments).

Despite the above mentioned hard difficulties (hard challenge !). the Programme management, has effectively tried to achieve the mentioned implications of success in this short period of implementation. :

- Availability of capital in the hands of farmers has been increased through issuing loans (Seasonal, Medium and Long Term), and, subsequently, through earning additional jobs, incomes, and profits.
- Efficient utilization of agricultural economic resources, especially the owned lands and the human labor (family labor), has been realized.
- Good attitudes and mentalities of the target groups have been noticeably observed in practice.
- Adoption of better farming systems, practices, methods, and techniques has been done by the concerned target group in the Programme Area.

In figure terms and taking the above mentioned implications of the broad test / indicator of success, the Programme has reached a relatively high level of achievements in this concern in its first phase of implementation. The following table gives a general summary of the estimated number and mode of use of the loan applications submitted by the target group till the 31st. of Dec.1997.

Description	Identificator	Nbr. of Applications	Amount (Million of L.L.)
Total Requested Applications	(1)	6,200	37,200
Total Studied and Rejected Applications	(2)	4,100	24,600
Total Approved Applications	(3)	2,100	3,500
Total Disbursed Loans	(4)	1,968	3,684
Studied & Rejected Applications		4,100	24,600
Employee (Not Farmer)	(5)	500	3,000
Rejected by LDCC	(6)	450	2,700
Lack of Documents	(7)	650	3,900
Willingly Dropped	(8)	250	1,500
<b>Subtotal</b>	<b>(5)+(6)+(7)+(8)</b>	<b>1,850</b>	<b>11,100</b>
Lack of Funds	(9)	2,250	13,500

Percentages	
(3) / (1) % (Approved / Requested)	9.41%
(4) / (3) % (Disbursed / Approved)	87.43%
(2) / (1) % (Rejected / Requested)	66.13%
(9) / (1) % (Lack of Funds / Requested)	36.29%
(5) / (2) % (Employee / Rejected)	12.20%
(6) / (2) % (Rejected by LDCC / Rejected)	10.98%
(7) / (2) % (Lack of Docs / Rejected)	15.85%
(8) / (2) % (Willingly Dropped / Rejected)	6.10%
(9) / (2) % (Lack of Funds / Rejected)	54.88%

In addition to the 1968 above mentioned released loans, which have been distributed among the 22 LDCCs, the table herebelow shows the classification of the released loans and their reimbursement rates.

On the other side, the following table shows the evolution of seasonal loans' reimbursements, particularly (due on 31/08/1997 and 31/10/1997), excluding the repayments of their interests. From this table, it could be noticed that rates of repayment are increasing through the time, and the responsiveness of the target group in this concern are positively increasing also. Due to the continuous social pressure of the LDCCs/PDCC and the serious legal, administrative, and financial procedures, efforts, and actions taken by the Programme management in collaboration and cooperation with the involved commercial banks. The rate of repayment of the seasonal loans are hoped to be improved and increased from 60% presently up to 90% and more in the nearest future.



**Summary on the Credit System**  
as of 31<sup>st</sup> Dec. 1997  
**Loans Disbursement**

Season	Loan Type	Nbr. of Loans	Amount LL	Bank
1994-1995	Seasonal	526	882,405,268	Fransabank
	Long Term	611	1,385,005,418	Fransabank
	<b>Subtotal</b>	<b>1,137</b>	<b>2,267,410,686</b>	
1995-1996	Seasonal	726	1,260,670,892	JTB
	Short Term	16	28,953,600	JTB
	Medium Term	2	18,778,170	JTB
	<b>Subtotal</b>	<b>744</b>	<b>1,308,402,662</b>	
1996-1997	Inkind seasonal	62	92,682,523	JTB
1997-1998	Inkind seasonal	4	6,867,740	JTB
1997-1998	Inkind seasonal	21	9,143,000	JTB
	<b>Subtotal</b>	<b>87</b>	<b>108,693,263</b>	
	<b>Grand Total</b>	<b>1,968</b>	<b>3,684,506,611</b>	

**Loans Reimbursement**

Due Date	Loan Type	Nbr. of Loans	Due Amount LL	Reimbursed Amount LL	Reimbursement Rate %
31/08/95	Seasonal	526	882,405,268	645,853,642	73.19%
31/10/95	Seasonal	40	51,224,510	46,920,000	91.60%
29/02/96	Seasonal	144	215,708,000	207,731,319	96.30%
31/12/95	Seasonal	1	16,767,000	16,767,000	100.00%
	<b>Sub-total 94-95</b>	<b>711</b>	<b>1,166,104,778</b>	<b>917,271,961</b>	<b>78.66%</b>
31/08/96	Medium Term	1	10,693,170	10,693,170	100.00%
31/10/96	Seasonal	228	434,112,210	140,873,692	32.45%
31/08/96	Seasonal	186	352,182,772	164,720,852	46.77%
	<b>Sub-total 95-96</b>	<b>415</b>	<b>796,988,152</b>	<b>316,287,714</b>	<b>39.69%</b>
31/03/97	Seasonal	127	190,676,400	91,961,050	48.23%
31/08/96	Long Term	611	79,267,979	37,700,203	47.56%
31/08/97	Long Term		58,094,570	11,987,706	20.63%
31/10/97	in kind	62	92,682,523	43,908,795	47.38%
	<b>Sub-total 96-97</b>	<b>800</b>	<b>420,721,472</b>	<b>185,557,754</b>	<b>44.10%</b>
	<b>Total</b>	<b>1,926</b>	<b>2,383,814,402</b>	<b>1,419,117,429</b>	<b>59.53%</b>

**Loans not due to date**

Loan Type	Nbr. of Loans	Due Amount LL
Long Term		1,247,642,869
Medium Term	1	8,085,000
Short Term	16	28,953,600
Seasonal	4	6,867,740
in kind	21	9,143,000
<b>Total</b>	<b>42</b>	<b>1,300,692,209</b>

Value of the inputs in stock : 632,731,500 L.L.

## VII - The Project

### Credit Programme for the coming years 1997-1999

In the light of the first phase experience of the credit system and its delivery mechanism and taking into consideration the performances of this operational credit system, **especially the respectful repayment rate** as well as the experienced constraints, limits, and deficiencies of the system; it is worthwhile to strengthen the credit component of the Baalbeck-El-Hermel Integrated Rural Development Programme during the second phase, by requesting the allocation of additional funds. The estimated needs for 1998-2001 are evaluated to US\$10 millions, to be added to the already allocated amounts of 1,417,000 US\$ disbursed through the revolving fund during 1994-97. Thus it is proposed to constitute a Joint Rural Credit Fund between the Government, through the Central Bank and the Commercial Banks which are ready / willing to contribute. The banks are invited to contribute with an amount of US\$ 10 million, in order to bring the total Rural Credit Fund to US\$ 21,417 million.

#### 1- Project Objectives:

- To support the illicit crops replacement and the economic revitalization of the region.
- To reinforce the established institutional credit scheme, and the revolving fund so as:
  - a) To deliver seasonal, medium term, and long term loans to individual farmers and allow them to better command their agricultural activities, and reorient their production systems in order to escape illicit crops dependency.
  - b) To stimulate activities of **professional groups** in the fields of irrigation, marketing, and agro-industry.
  - c) To deliver small credit for **small scale, non-agricultural income generating projects**.

#### 2- Project Justification:

Although short and medium/long term rural credit is one of the most important inputs for the economic revitalization of the region, there are no sources of institutional rural credit in the Programme area. The only sources available to farmers have been throughout **money lenders**, with exorbitant interest rates. The creation of a national agricultural development bank was decided, with mixed public-private capital, but it is not expected to be fully operational in the short-term. The bank will undoubtedly contribute to the development of the region, but the assessment of its potential contribution will have to wait until the operating modalities of the bank are defined. In the meantime, a reliable institutional credit scheme has been implemented by the IRDP in its first phase 1994-97. The results of this first phase are encouraging and in favor of its strengthening in the coming years of the second phase.

#### 3- Project Description:

The basic characteristic of the credit scheme were determined in accordance with the needs of the community. Loans applications will be reviewed and approved by the community through the LDCCs. Five rural credit lines will be set up, three agricultural and two non-agricultural, as follows:

- a) Short-term seasonal agricultural loans in kind/ in cash for substitution/strategic crops.
- b) Medium-term loans for individual farmers in order to procure on-farm small-scale irrigation networks (sprinklers or drip irrigation systems) or other agricultural equipments/livestock.
- c) Long-term loans for individual farmers in order to proceed for fruit trees plantations.
- d) Short/medium/long term loans in order to promote and stimulate activities of professional groups / cooperatives in the fields of:
  - Collective irrigation infrastructures (drilling wells and their equipments).
  - Short term bridge financing for marketing and market regulation to allow farmers' cooperatives to command better prices for their products.
- e) Medium term/ long term loans for individuals/productive groups in order to promote:
  - Small scale plants for agro-industries
  - Cold stores and conditioning stations.

- Small scale cottage, handicraft and food processing industries to promote income supplements and diversification.
- The seasonal loans will be in principle 35% in cash and 65% in kind (Input and mechanized services).
- A substantial part of the Medium/Long term loans will be in kind too.
- The credit will support the crop diversification strategy of the I.R.D.P.
- Agro-industry, infrastructures, and marketing loans will be granted exclusively to professional productive groups and cooperatives.

Indicators of success of the Credit Scheme will be continuously monitored and the credit conditions periodically adjusted in order to **achieve, by the end of the fifth year of the I.R.D.P.'s second phase; a self sustaining operation, under commercial lending rates.**

The required amount of US\$ 10 millions, in addition to the contributions of the Commercial Banks for the same amount and the revolving fund of the first phase, will enable the I.R.D.P. to proceed for the Screening, approval, disbursement and supervision of about 6700 loans/year to individual farmers/producers, and around 60 loans to groups of farmers or non-agricultural producers according to the following indicative breakdown for the total Joint-Fund of The Rural Credit :

- 14,000,000 US\$ for seasonal loans ranging between 1000-5000 US\$ each. The allocated amount will permit to satisfy 4700 individual farmers / year, with 12% interest rate / year, 11 months duration and **disbursed in L.L.**
- 3,000,000 US\$ for medium term irrigation schemes loans of about 3,000 US\$ each. The allocated amount will permit to satisfy 1000 individual farmers/year, with 10% interest rate, and **disbursed in L.L.**
- 1,000,000 US\$ for long-term fruit trees plantation loans about 2,000 US\$ each. The allocated amount will permit to satisfy 500 individual farmers/year, with 8-10% interest rate, and **disbursed in L.L.**
- 2,000,000 US\$ for non-agricultural loans for 60 groups of farmers and income generating projects as mentioned and detailed in paragraphs 3-d and 3-e, with 12% interest rate/year, and **disbursed in L.L.**
- In addition, 850,000 US\$ repaid from the disbursed seasonal loans during the past first phase, will also permit to deliver other 500 individual loans, with 12% interest rate, and **disbursed in L.L.**

Consequently, with the injection of the requested additional amount, we will be able to increase the benefiting individual farmers from 1968 farmers in 94-97, to 6700 farmers in 99-2001, which represent 25% of the total farmers in the area, and to increase the benefiting groups from 4 groups in the past first phase 94-97 to 60 groups during 98-2001.

#### 4. The Joint-Fund For Rural Credit :

It is proposed, in the light of the 1st phase experience (more than four agricultural seasons within three years) to enlarge / strengthen the Rural Credit activities in the Baalbeck - El Hermel area.

In this respect the contributions / involvement of the Private Commercial Banks are primordial in order to ensure **the sustainability of the credit system, to increase the available funds for rural credit / investments** in general, and to **broke the wall of banks distrust/reluctance toward the farmers** and small / micro-enterprises.

Furthermore, the involvement of **The Private Banks** will permit to avoid interferences, **political pressures and favoritism in the selection of borrowers.**

The established credit system and its mechanism of borrowers selection, which involves / responsabilizes the local leaders / Local Development and Credit Committees, appears to be very efficient in alleviating favoritism in the selection of borrowers and **ensuring a social pressure for the reimbursement of loans.**

The criteria established for the selection of borrowers and the allocation of the credit funds in between the different areas are a cadre / canvas of work in order to avoid un-balances and to ensure that social pressures will be efficient for the repayment rate enhancement and the sustainability of the credit operation.

The proposed joint - fund (Revolving Fund) will be constituted by cost sharing between the Government and the Willing Private Commercial Banks.

It is proposed that the Government should inject from the treasury or solicit / contract a Development Long Term Credit Line (15 years) with an international Development Bank i.e. I.D.B., A.F.S.E.D., I.F.A.D., W.B. etc...

The proposed amount is US\$ 10 million for the first period, pending the results of the friends of Lebanon conference held on 16/12/1996 in Washington, in which the **Lebanese Government had requested US\$ 60 million for the rural credit through the I.R.D.P. - Baalbeck El Hermel.**

The Private Commercial Banks willing to cooperate in this Joint Rural Credit Fund should contribute from their own funds with the same amount of US\$ 10 million.

Thus the Joint Fund will start with US\$ 20 million.

The revolving fund will be used to allocate loans for individuals and groups of producers with an interest rate ranging from 8 to 12% (an average 10.85% after pondering), and in general 5 points less than the commercial rate. **The loans will be disbursed in Lebanese pounds.**

As for the Private Banks, they will receive the commercial interest rate (i.e. 16%) on their own funds, plus 3% on the Government Funds as administrative fees, which means 19% of their own funds.

While, the Gross return of **income interest** for the Joint Rural Credit Fund (Revolving Fund) will vary between 5.85% to 1.35% and nil% **of the total distributed / allocated loans**, according to the three different scenarios proposed hereafter.

The following charts explain according to 3 scenarios, the mechanisms of this **Joint Fund**, with Commercial Banks, and that of a **Rural Credit Fund** constituted by the Government exclusively.

## **5. Implementation arrangements**

The Credit Scheme will continue to be executed by the Ministry Of Agriculture (MOA) and administrated by the Local Commercial Banks. UNDP will continue to provide technical assistance through the IRDP. The involvement of farmers/beneficiaries in the management of the scheme through the Local Development and Credit Committees, and the Programme Development and Credit Committee, will be increased rapidly during the coming years 98 - 2001.

The resulting revolving fund at the end of the IRDP's second phase, will either become property of the community under the Banks administration, and the MOA supervision or be absorbed by the National Agricultural Bank under constitution, or any other appropriate institution.

## **6. Study Of The Financial Rate Of Return For The National Economy :**

The following tables, are tentatively presented, in order to point out the positive impacts/outputs of the rural credit operation, to evaluate its contribution to the generation of employment opportunities (familial and extra-familial employment) and to calculate the Interest rate of return (I.R.R.) for **The Public Treasury** and its sensibility towards: the reimbursement rate, the generated production value, and the tax rates.

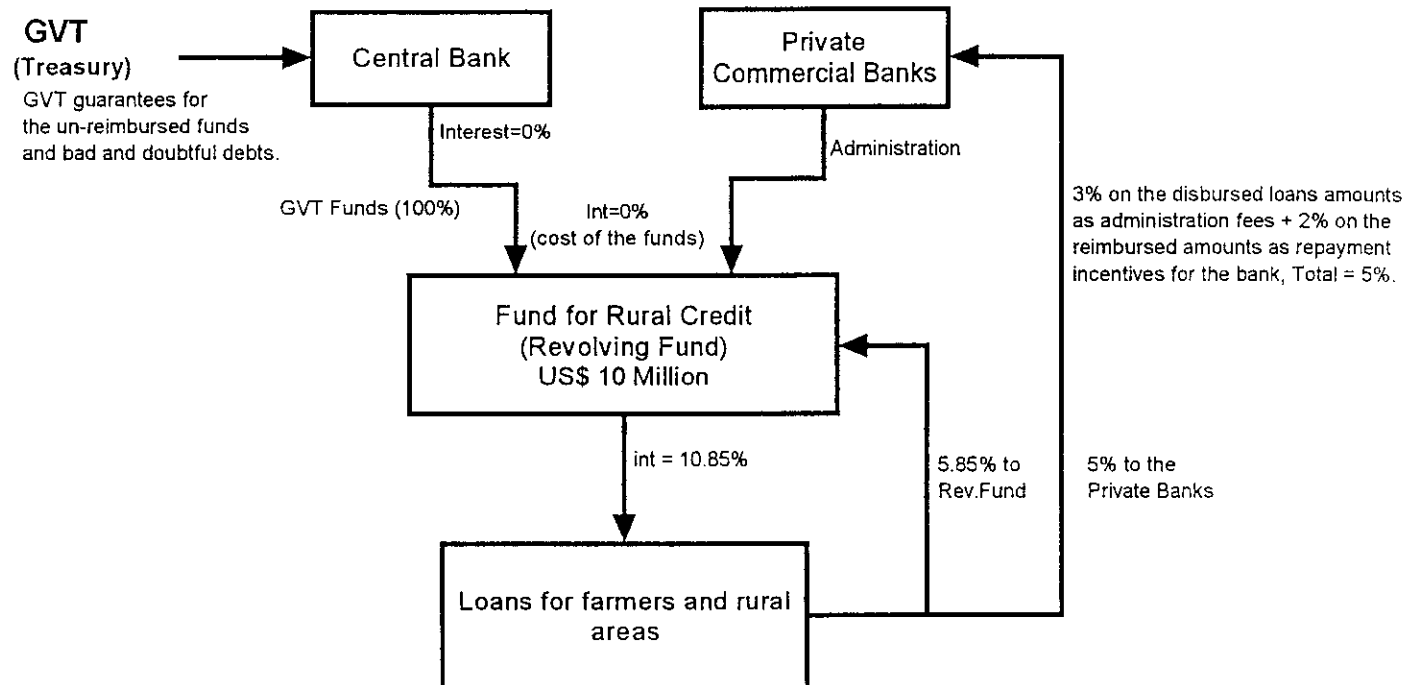
It appears, that in the horizon of 15 years and based on a cumulated reimbursement rate ranging from 85% for the first year to a minimum of 65% in the fifth year, and stabilized at 70% starting the sixth year, the following results will be reached in the three scenarios:

### **1<sup>st</sup> Scenario: Rural Credit Fund (without Private Commercial Banks Contribution)**

1. The original injected capital by the Government is supposed to be : US\$ 10 million.
2. The total cumulated bad and doubtful debts will reach the amount of US\$ 6.3 million at the fifteenth year, compared to a total Rural Credit Fund of US\$ 20.96 million at that time.
3. The allocated loans will permit to finance an **additional** cultivated areas of:
  - 5130ha irrigated crops/year.
  - 32000ha rainfed crops/year.
4. The generated **additional** production value will reach US\$ 29.6 million/year.
5. The total **additional** generated added value (i.e. – labor + capital remuneration + land rent), will reach US\$ 8.63 million/year.

## 1st Scenario

### Rural Credit Fund (without the contribution of private commercial banks)



**1st Scenario**  
**Evolution Of The Rural Credit Fund (Revolving Fund)**

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (5.85%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	3,000,000	3,000,000	175,500	85%	2,550,000	450,000	450,000
1999 - 2000	4,000,000	7,175,500	419,767	80%	5,740,400	1,435,100	985,100
2000 - 2001	3,000,000	10,595,267	619,823	75%	7,946,450	2,648,817	1,213,717
2001 - 2002	0	11,215,090	656,083	70%	7,850,563	3,364,527	715,710
2002 - 2003	0	11,871,173	694,464	65%	7,716,262	4,154,910	790,383
2003 - 2004	0	12,565,636	735,090	70%	8,795,945	3,769,691	-385,220
2004 - 2005	0	13,300,726	778,092	70%	9,310,508	3,990,218	220,527
2005 - 2006	0	14,078,818	823,611	70%	9,855,173	4,223,646	233,428
2006 - 2007	0	14,902,429	871,792	70%	10,431,700	4,470,729	247,083
2007 - 2008	0	15,774,221	922,792	70%	11,041,955	4,732,266	261,538
2008 - 2009	0	16,697,013	976,775	70%	11,687,909	5,009,104	276,838
2009 - 2010	0	17,673,789	1,033,917	70%	12,371,652	5,302,137	293,033
2010 - 2011	0	18,707,705	1,094,401	70%	13,095,394	5,612,312	310,175
2011 - 2012	0	19,802,106	1,158,423	70%	13,861,474	5,940,632	328,320
2012 - 2013	0	20,960,529	1,226,191	70%	14,672,370	6,288,159	347,527

\* N.B.: It is the net interest after deduction of 3% administration fees and 2% reimbursement incentive received by the cooperating commercial bank

# 1st Scenario

## The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	3,000,000	7,344	45,900	4,236,000	1,236,000	211,800	49,440	7,416	56,856
1999 - 2000	7,175,500	17,566	109,785	10,131,806	2,956,306	506,590	118,252	17,738	135,990
2000 - 2001	10,595,267	25,937	162,108	14,960,517	4,365,250	748,026	174,610	26,191	200,801
2001 - 2002	11,215,090	27,455	171,591	15,835,707	4,620,617	791,785	184,825	27,724	212,548
2002 - 2003	11,871,173	29,061	181,629	16,762,096	4,890,923	838,105	195,637	29,346	224,982
2003 - 2004	12,565,636	30,761	192,254	17,742,678	5,177,042	887,134	207,082	31,062	238,144
2004 - 2005	13,300,726	32,560	203,501	18,780,625	5,479,899	939,031	219,196	32,879	252,075
2005 - 2006	14,078,818	34,465	215,406	19,879,292	5,800,473	993,965	232,019	34,803	266,822
2006 - 2007	14,902,429	36,481	228,007	21,042,230	6,139,801	1,052,112	245,592	36,839	282,431
2007 - 2008	15,774,221	38,615	241,346	22,273,201	6,498,979	1,113,660	259,959	38,994	298,953
2008 - 2009	16,697,013	40,874	255,464	23,576,183	6,879,169	1,178,809	275,167	41,275	316,442
2009 - 2010	17,673,789	43,265	270,409	24,955,390	7,281,601	1,247,769	291,264	43,690	334,954
2010 - 2011	18,707,705	45,796	286,228	26,415,280	7,707,575	1,320,764	308,303	46,245	354,548
2011 - 2012	19,802,106	48,478	302,972	27,960,574	8,158,468	1,398,029	326,339	48,951	375,290
2012 - 2013	20,960,529	51,311	320,696	29,596,267	8,635,738	1,479,813	345,430	51,814	397,244

# 1st Scenario

## The Internal Rate Of Return Of The Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	450,000	320,000	90,000	860,000	211,800	-648,200
1999 - 2000	985,100	320,000	120,000	1,425,100	506,590	-918,510
2000 - 2001	1,213,717	320,000	90,000	1,623,717	748,026	-875,691
2001 - 2002	715,710	320,000	0	1,035,710	791,785	-243,925
2002 - 2003	790,383	200,000	0	990,383	838,105	-152,279
2003 - 2004	-385,220	200,000	0	-185,220	887,134	1,072,353
2004 - 2005	220,527	200,000	0	420,527	939,031	518,504
2005 - 2006	233,428	200,000	0	433,428	993,965	560,537
2006 - 2007	247,083	200,000	0	447,083	1,052,112	605,028
2007 - 2008	261,538	200,000	0	461,538	1,113,660	652,122
2008 - 2009	276,838	200,000	0	476,838	1,178,809	701,972
2009 - 2010	293,033	200,000	0	493,033	1,247,769	754,737
2010 - 2011	310,175	200,000	0	510,175	1,320,764	810,589
2011 - 2012	328,320	200,000	0	528,320	1,398,029	869,708
2012 - 2013	347,527	200,000	0	547,527	1,479,813	932,286

IRR (15 Years)

13.26%



6. The **additional** generated direct/indirect collected taxes by the Public Treasury are expected/estimated to reach US\$ 1.48 million/year, according to the lowest hypothesis (i.e. 5% of collected taxes on the additional production value).
7. The total additional generated employment opportunities, representing 40% of the added value, will reach 397,000 days/year, i.e. 2650 seasonal workers.

Thus the internal rate of return **for the Public Treasury, through the collected taxes exclusively**, will be of 13.26%, despite the fact that the treasury will support totally the **un-reimbursed loans, the credit management cost** (including an international credit specialist for four years) **and the UNDP – overhead cost at 3%** of the injected funds. (see the attached table: summary of the feasibility study and tests of the sensibility).

This I.R.R. was calculated **without taking into consideration** the income interest returning to the Rural Credit Fund, and the other social/economic benefits like employment generation and the additional production value, mentioned above.

## 2<sup>nd</sup> Scenario:

### A) *Joint Rural Credit Fund (with Contribution of the Private Commercial Banks, and 100% risks of un-reimbursement supported by the Government).*

1. The original injected capital by the Government is supposed to be US\$ 10 million, with a contribution of additional US\$ 10 million from the Commercial Banks.
2. After 15 years the total cumulated bad and doubtful debts will reach the amount of US\$ 7.14 million, to be supported by the Public Treasury, compared to a total Joint Rural Credit Fund of US\$ 23.81 million at that time.
3. The allocated loans will permit to finance **additional** cultivated areas of:
  - 5830ha irrigated crops/year.
  - 36430ha rainfed crops/year.
4. The generated **additional** production value will reach US\$ 33.62 million/year.
5. The total **additional** generated added value will reach US\$ 9.81 million/year.
6. The **additional** generated direct/indirect collected taxes by the **Public treasury** are expected / estimated to reach US\$ 1.68 million / year, according to the lowest hypothesis (i.e. 5% of collected taxes on the additional production value).
7. The total **additional** generated employment opportunities, representing 40% of the added value, will reach 451000 days/year, i.e. 3000 seasonal workers.

The internal rate of return **for the Public Treasury, through the collected taxes exclusively**, will be of 19.65% despite the fact that **the treasury will support totally the un-reimbursed loans, the credit management cost** (including an international credit specialist for four years) **and the UNDP – overhead cost at 3%** of the injected funds. (see the attached table, summary of the feasibility study, and tests of sensibility).

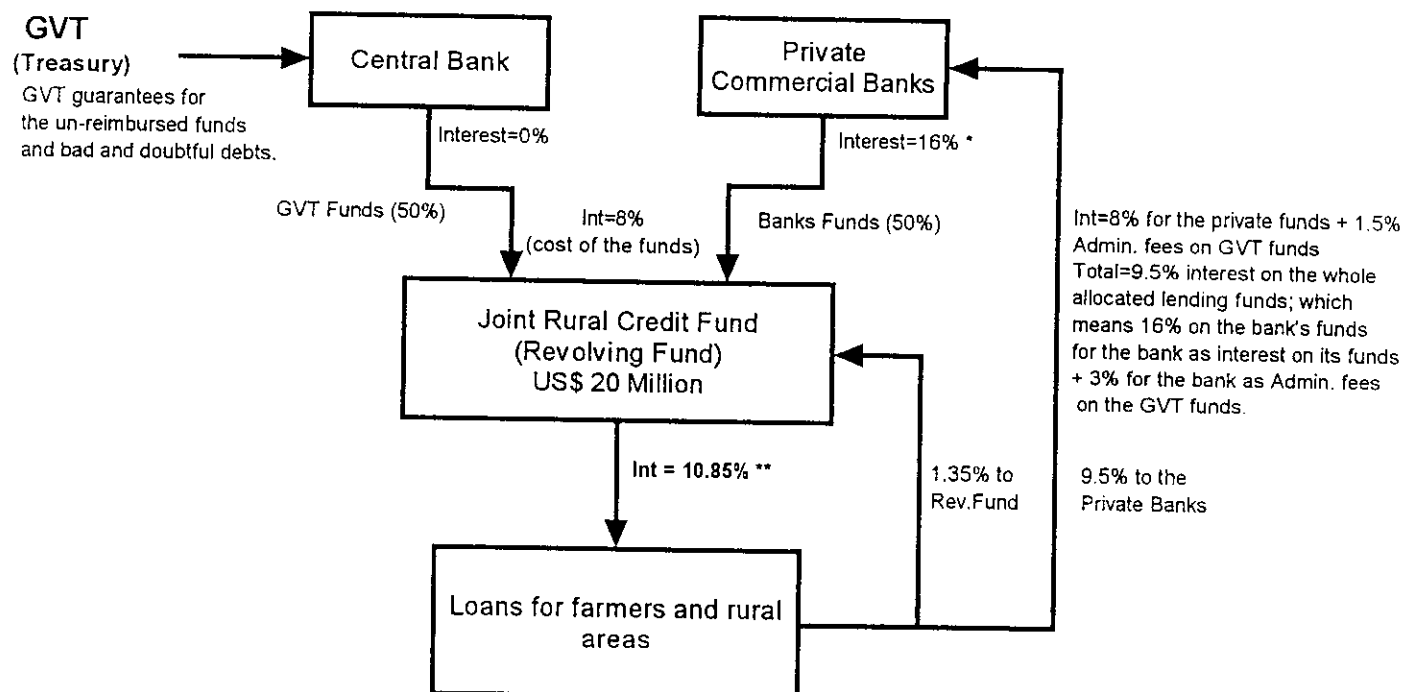
This I.R.R. was calculated **without taking into consideration** the income interest returning to the Joint Rural Credit Fund and the other social / economic benefits like the employment generation and the additional production value mentioned above.

### B) *Joint Rural Credit Fund (with Contribution of the Private Commercial Banks and 50% risks of un-reimbursement supported by the Commercial Banks).*

1. The original injected capital by the Government is supposed to be US\$ 10 million, with a contribution of additional US\$ 10 million from the Commercial Banks.
2. After 15 years the total cumulated bad and doubtful debts will reach the amount of US\$ 7.14 million, to be supported in equal shares by the Public Treasury and the Banks, compared to a total Joint Rural Credit Fund of US\$ 23.81 million at that time.
3. The allocated loans will permit to finance **additional** cultivated areas of:

## 2nd Scenario (A, B)

### Joint Rural Credit Fund (with the contribution of private commercial banks)



\* The commercial rate for the loans in Lebanese Pounds (L.L.)

\*\* The average annual interest rate of the loans after pondering.

**2nd Scenario (A)**  
**Evolution Of The Joint Rural Credit Fund (Revolving Fund)**

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	85%	5,100,000	900,000	900,000
1999 - 2000	8,000,000	14,081,000	190,094	80%	11,264,800	2,816,200	1,916,200
2000 - 2001	6,000,000	20,271,094	273,660	75%	15,203,320	5,067,773	2,251,573
2001 - 2002	0	20,544,753	277,354	70%	14,381,327	6,163,426	1,095,653
2002 - 2003	0	20,822,107	281,098	65%	13,534,370	7,287,738	1,124,312
2003 - 2004	0	21,103,206	284,893	70%	14,772,244	6,330,962	-956,776
2004 - 2005	0	21,388,099	288,739	70%	14,971,669	6,416,430	85,468
2005 - 2006	0	21,676,838	292,637	70%	15,173,787	6,503,052	86,622
2006 - 2007	0	21,969,476	296,588	70%	15,378,633	6,590,843	87,791
2007 - 2008	0	22,266,064	300,592	70%	15,586,245	6,679,819	88,976
2008 - 2009	0	22,566,656	304,650	70%	15,796,659	6,769,997	90,178
2009 - 2010	0	22,871,305	308,763	70%	16,009,914	6,861,392	91,395
2010 - 2011	0	23,180,068	312,931	70%	16,226,048	6,954,020	92,629
2011 - 2012	0	23,492,999	317,155	70%	16,445,099	7,047,900	93,879
2012 - 2013	0	23,810,154	321,437	70%	16,667,108	7,143,046	95,147

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\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

Republic of Lebanon  
Office of the Minister of State for Administrative Reform  
Center for Public Sector Projects and Studies  
(C.P.S.P.S.)

## 2nd Scenario (A)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	423,600	98,880	14,832	113,712
1999 - 2000	14,081,000	34,470	215,439	19,882,372	5,801,372	994,119	232,055	34,808	266,863
2000 - 2001	20,271,094	49,624	310,148	28,622,784	8,351,691	1,431,139	334,068	50,110	384,178
2001 - 2002	20,544,753	50,294	314,335	29,009,192	8,464,438	1,450,460	338,578	50,787	389,364
2002 - 2003	20,822,107	50,973	318,578	29,400,816	8,578,708	1,470,041	343,148	51,472	394,621
2003 - 2004	21,103,206	51,661	322,879	29,797,727	8,694,521	1,489,886	347,781	52,167	399,948
2004 - 2005	21,388,099	52,358	327,238	30,199,996	8,811,897	1,510,000	352,476	52,871	405,347
2005 - 2006	21,676,838	53,065	331,656	30,607,696	8,930,857	1,530,385	357,234	53,585	410,819
2006 - 2007	21,969,476	53,781	336,133	31,020,900	9,051,424	1,551,045	362,057	54,309	416,366
2007 - 2008	22,266,064	54,507	340,671	31,439,682	9,173,618	1,571,984	366,945	55,042	421,986
2008 - 2009	22,566,656	55,243	345,270	31,864,118	9,297,462	1,593,206	371,898	55,785	427,683
2009 - 2010	22,871,305	55,989	349,931	32,294,283	9,422,978	1,614,714	376,919	56,538	433,457
2010 - 2011	23,180,068	56,745	354,655	32,730,256	9,550,188	1,636,513	382,008	57,301	439,309
2011 - 2012	23,492,999	57,511	359,443	33,172,115	9,679,116	1,658,606	387,165	58,075	445,239
2012 - 2013	23,810,154	58,287	364,295	33,619,938	9,809,784	1,680,997	392,391	58,859	451,250

**2nd Scenario (A)**  
**The Internal Rate Of Return Of The Joint Rural Credit Fund**  
(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	900,000	320,000	180,000	1,400,000	423,600	-976,400
1999 - 2000	1,916,200	320,000	240,000	2,476,200	994,119	-1,482,081
2000 - 2001	2,251,573	320,000	180,000	2,751,573	1,431,139	-1,320,434
2001 - 2002	1,095,653	320,000	0	1,415,653	1,450,460	34,807
2002 - 2003	1,124,312	200,000	0	1,324,312	1,470,041	145,729
2003 - 2004	-956,776	200,000	0	-756,776	1,489,886	2,246,662
2004 - 2005	85,468	200,000	0	285,468	1,510,000	1,224,532
2005 - 2006	86,622	200,000	0	286,622	1,530,385	1,243,763
2006 - 2007	87,791	200,000	0	287,791	1,551,045	1,263,254
2007 - 2008	88,976	200,000	0	288,976	1,571,984	1,283,008
2008 - 2009	90,178	200,000	0	290,178	1,593,206	1,303,028
2009 - 2010	91,395	200,000	0	291,395	1,614,714	1,323,319
2010 - 2011	92,629	200,000	0	292,629	1,636,513	1,343,884
2011 - 2012	93,879	200,000	0	293,879	1,658,606	1,364,726
2012 - 2013	95,147	200,000	0	295,147	1,680,997	1,385,850

IRR (15 Years)

19.65%

- 5830ha irrigated crops/year.
  - 36430ha rainfed crops/year.
4. The generated **additional** production value will reach US\$ 33.62 million/year.
  5. The total **additional** generated added value will reach US\$ 9.81 million.
  6. The **additional** generated direct/indirect collected taxes by the **Public Treasury** are expected/estimated to reach US\$1.68 million/year, according to the lowest hypothesis (i.e. 5% of collected taxes on the additional production value).
  7. The total **additional** generated employment opportunities representing 40% of the added value, will reach 451000 days/year, i.e. 3000 seasonal workers.

The internal rate of return **for the Public Treasury, through the collected taxes exclusively**, will be of 47.34% despite the fact that the Public Treasury will support **50% of the un-reimbursed loans, the credit system management cost** (including an international credit specialist for four years) **and the UNDP overhead cost** at 3% of the injected funds. (See the attached table: summary of the feasibility study and tests of sensibility).

**3<sup>rd</sup> Scenario: Joint Rural Credit Fund** (exclusively financed by the Private Commercial Banks, and with a **Guarantee deposit account – sinking fund – to be funded by the Public Treasury**).

1. The original injected capital by the Government is supposed to be placed into a **guarantee deposit account/accounts** "sinking fund" opened in the cooperating Banks, with an **income interest** of 13% on LL or 7.5% on US\$, and for an amount of US\$ 10 million. This / these accounts will serve as guarantee for the cooperating Banks, in order to enable them engage an amount of US\$ 20 million, from their own funds, into the Joint Rural Credit Fund. Thus, the un-reimbursement risks, expected to be 30%, will be totally covered, even to the extend of 50% of the total rural credit fund, by the above sinking fund.

The **income interest** of 13% on the guarantee deposit will subsidize the pondered cost of the Rural Credit Fund, as follow:

- US\$ 20 million as banks' funds for the Rural Credit at 16% interest rate/year, disbursed in L.L. +3,200,000\$
- US\$ 10 million guarantee deposit account In LL at 13% income interest rate/year -1,300,000\$

Total cost/year of the rural credit fund in L.L. equivalent to US\$ 20 million +1,900,000\$

The pondered interest cost of the rural credit =  $\frac{+1,900,000\$}{+20,000,000\$} = 0.095 \Rightarrow 9.5\%$

2. The total cumulated bad and doubtful debts will reach an amount equivalent to US\$6 million at the fifteenth year, compared to a total Rural Credit Fund equivalent to US\$ 20 million at the time.
3. The allocated loans in L.L. will permit to finance an **additional** cultivated areas of:
  - 4890ha Irrigated crops/year.
  - 30600ha Rainfed crops/year.
4. The generated **additional** production value will reach US\$28.24million/year.
5. The total **additional** generated added value (i.e. labor + capital remuneration + land rent), will reach US\$ 8.24million/year.
6. The **additional** generated direct/indirect collected taxes by the Public Treasury are expected/estimated to reach US\$ 1.41 million/year, according to the lowest hypothesis (i.e. 5% of collected taxes on the additional production value).
7. The total **additional** generated employment opportunities, 40% of the added value, will reach 379000 days/year, i.e. 2530 seasonal workers.

## 2nd Scenario (B)

### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%) (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	85%	5,100,000	900,000	900,000	450,000
1999 - 2000	8,000,000	14,081,000	190,094	80%	11,264,800	2,816,200	1,916,200	958,100
2000 - 2001	6,000,000	20,271,094	273,660	75%	15,203,320	5,067,773	2,251,573	1,125,787
2001 - 2002	0	20,544,753	277,354	70%	14,381,327	6,163,426	1,095,653	547,826
2002 - 2003	0	20,822,107	281,098	65%	13,534,370	7,287,738	1,124,312	562,156
2003 - 2004	0	21,103,206	284,893	70%	14,772,244	6,330,962	-956,776	-478,388
2004 - 2005	0	21,388,099	288,739	70%	14,971,669	6,416,430	85,468	42,734
2005 - 2006	0	21,676,838	292,637	70%	15,173,787	6,503,052	86,622	43,311
2006 - 2007	0	21,969,476	296,588	70%	15,378,633	6,590,843	87,791	43,896
2007 - 2008	0	22,266,064	300,592	70%	15,586,245	6,679,819	88,976	44,488
2008 - 2009	0	22,566,656	304,650	70%	15,796,659	6,769,997	90,178	45,089
2009 - 2010	0	22,871,305	308,763	70%	16,009,914	6,861,392	91,395	45,697
2010 - 2011	0	23,180,068	312,931	70%	16,226,048	6,954,020	92,629	46,314
2011 - 2012	0	23,492,999	317,155	70%	16,445,099	7,047,900	93,879	46,940
2012 - 2013	0	23,810,154	321,437	70%	16,667,108	7,143,046	95,147	47,573

## 2nd Scenario (B)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

Year	Cumulated allocated Credit Funds  (US\$)	Financed Areas		Total Generated Production Value  (US\$)	Total Generated Added Value  (US\$)	Generated Direct and Indirect Collected Taxes  (US\$)	Generated Direct Employment Opportunities  (Days)	Generated Indirect Employment Opportunities  (Days)	Total Generated Employment Opportunities  (Days)
		Irrigated (40%)  (Dunums)	Rainfed (60%)  (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	423,600	98,880	14,832	113,712
1999 - 2000	14,081,000	34,470	215,439	19,882,372	5,801,372	994,119	232,055	34,808	266,863
2000 - 2001	20,271,094	49,624	310,148	28,622,784	8,351,691	1,431,139	334,068	50,110	384,178
2001 - 2002	20,544,753	50,294	314,335	29,009,192	8,464,438	1,450,460	338,578	50,787	389,364
2002 - 2003	20,822,107	50,973	318,578	29,400,816	8,578,708	1,470,041	343,148	51,472	394,621
2003 - 2004	21,103,206	51,661	322,879	29,797,727	8,694,521	1,489,886	347,781	52,167	399,948
2004 - 2005	21,388,099	52,358	327,238	30,199,996	8,811,897	1,510,000	352,476	52,871	405,347
2005 - 2006	21,676,838	53,065	331,656	30,607,696	8,930,857	1,530,385	357,234	53,585	410,819
2006 - 2007	21,969,476	53,781	336,133	31,020,900	9,051,424	1,551,045	362,057	54,309	416,366
2007 - 2008	22,266,064	54,507	340,671	31,439,682	9,173,618	1,571,984	366,945	55,042	421,986
2008 - 2009	22,566,656	55,243	345,270	31,864,118	9,297,462	1,593,206	371,898	55,785	427,683
2009 - 2010	22,871,305	55,989	349,931	32,294,283	9,422,978	1,614,714	376,919	56,538	433,457
2010 - 2011	23,180,068	56,745	354,655	32,730,256	9,550,188	1,636,513	382,008	57,301	439,309
2011 - 2012	23,492,999	57,511	359,443	33,172,115	9,679,116	1,658,606	387,165	58,075	445,239
2012 - 2013	23,810,154	58,287	364,295	33,619,938	9,809,784	1,680,997	392,391	58,859	451,250



**2nd Scenario (B)**  
**The Internal Rate Of Return Of The Joint Rural Credit Fund**

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

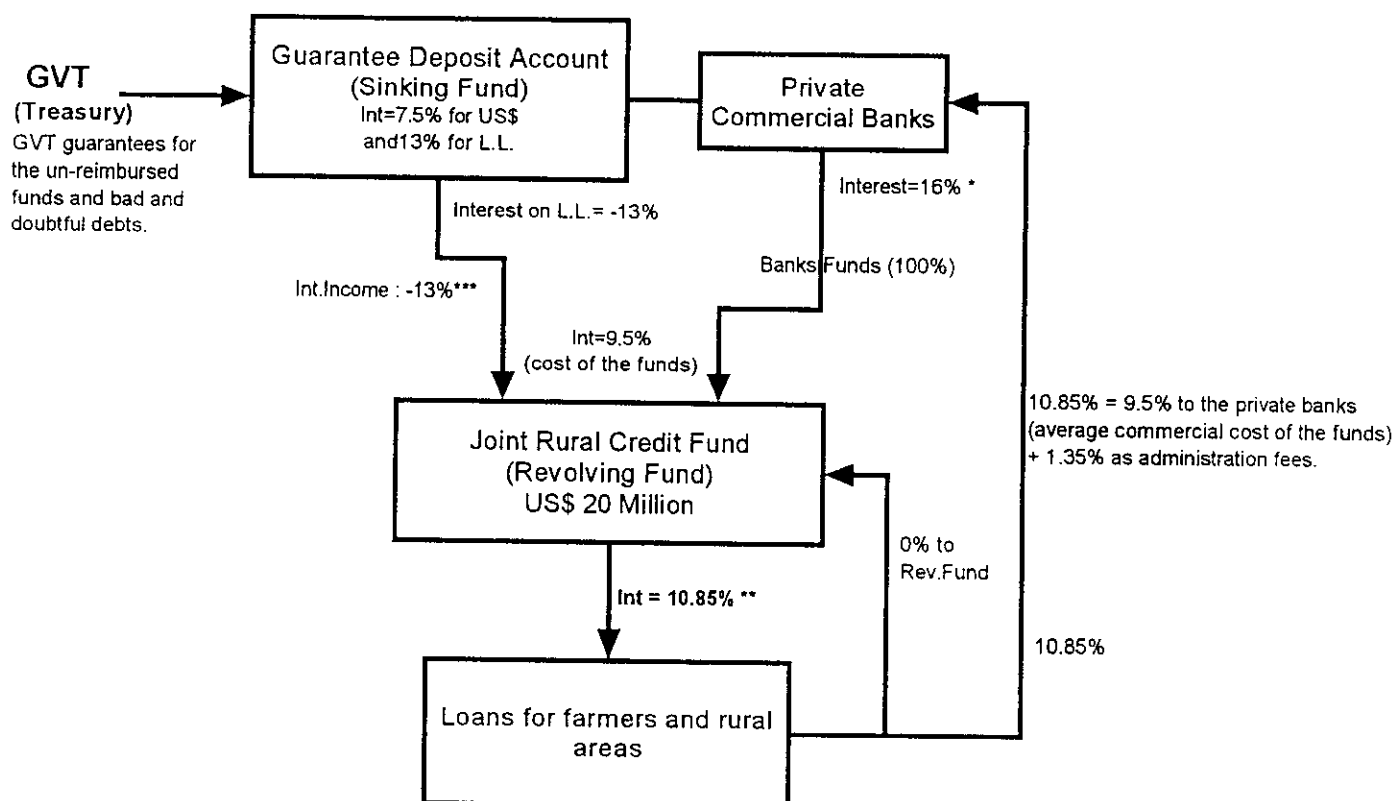
Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	450,000	320,000	180,000	950,000	423,600	-526,400
1999 - 2000	958,100	320,000	240,000	1,518,100	994,119	-523,981
2000 - 2001	1,125,787	320,000	180,000	1,625,787	1,431,139	-194,647
2001 - 2002	547,826	320,000	0	867,826	1,450,460	582,633
2002 - 2003	562,156	200,000	0	762,156	1,470,041	707,885
2003 - 2004	-478,388	200,000	0	-278,388	1,489,886	1,768,274
2004 - 2005	42,734	200,000	0	242,734	1,510,000	1,267,266
2005 - 2006	43,311	200,000	0	243,311	1,530,385	1,287,074
2006 - 2007	43,896	200,000	0	243,896	1,551,045	1,307,149
2007 - 2008	44,488	200,000	0	244,488	1,571,984	1,327,496
2008 - 2009	45,089	200,000	0	245,089	1,593,206	1,348,117
2009 - 2010	45,697	200,000	0	245,697	1,614,714	1,369,017
2010 - 2011	46,314	200,000	0	246,314	1,636,513	1,390,198
2011 - 2012	46,940	200,000	0	246,940	1,658,606	1,411,666
2012 - 2013	47,573	200,000	0	247,573	1,680,997	1,433,424

IRR (15 Years)

47.34%

### 3rd Scenario

#### Joint Rural Credit Fund with the contribution of private commercial banks, and constitution of a Guarantee Deposit Account



\* The commercial rate for the loans in Lebanese Pounds (L.L.)

\*\* The average annual interest rate of the loans after pondering.

\*\*\* It is an income interest on the Guarantee Deposit Account (Sinking Fund) of an amount in L.L. equivalent to US\$ 10 Million.

### 3rd Scenario

#### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (0%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	0	85%	5,100,000	900,000	900,000
1999 - 2000	8,000,000	14,000,000	0	80%	11,200,000	2,800,000	1,900,000
2000 - 2001	6,000,000	20,000,000	0	75%	15,000,000	5,000,000	2,200,000
2001 - 2002	0	20,000,000	0	70%	14,000,000	6,000,000	1,000,000
2002 - 2003	0	20,000,000	0	65%	13,000,000	7,000,000	1,000,000
2003 - 2004	0	20,000,000	0	70%	14,000,000	6,000,000	-1,000,000
2004 - 2005	0	20,000,000	0	70%	14,000,000	6,000,000	0
2005 - 2006	0	20,000,000	0	70%	14,000,000	6,000,000	0
2006 - 2007	0	20,000,000	0	70%	14,000,000	6,000,000	0
2007 - 2008	0	20,000,000	0	70%	14,000,000	6,000,000	0
2008 - 2009	0	20,000,000	0	70%	14,000,000	6,000,000	0
2009 - 2010	0	20,000,000	0	70%	14,000,000	6,000,000	0
2010 - 2011	0	20,000,000	0	70%	14,000,000	6,000,000	0
2011 - 2012	0	20,000,000	0	70%	14,000,000	6,000,000	0
2012 - 2013	0	20,000,000	0	70%	14,000,000	6,000,000	0

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\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

### 3rd Scenario

#### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added value (US\$)	Generated Direct and indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	423,600	98,880	14,832	113,712
1999 - 2000	14,000,000	34,272	214,200	19,768,000	5,768,000	988,400	230,720	34,608	265,328
2000 - 2001	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2001 - 2002	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2002 - 2003	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2003 - 2004	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2004 - 2005	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2005 - 2006	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2006 - 2007	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2007 - 2008	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2008 - 2009	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2009 - 2010	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2010 - 2011	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2011 - 2012	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2012 - 2013	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040

### 3rd Scenario

#### The Internal Rate Of Return Of The Joint Rural Credit Fund

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	900,000	320,000	180,000	1,400,000	423,600	-976,400
1999 - 2000	1,900,000	320,000	240,000	2,460,000	988,400	-1,471,600
2000 - 2001	2,200,000	320,000	180,000	2,700,000	1,412,000	-1,288,000
2001 - 2002	1,000,000	320,000	0	1,320,000	1,412,000	92,000
2002 - 2003	1,000,000	200,000	0	1,200,000	1,412,000	212,000
2003 - 2004	-1,000,000	200,000	0	-800,000	1,412,000	2,212,000
2004 - 2005	0	200,000	0	200,000	1,412,000	1,212,000
2005 - 2006	0	200,000	0	200,000	1,412,000	1,212,000
2006 - 2007	0	200,000	0	200,000	1,412,000	1,212,000
2007 - 2008	0	200,000	0	200,000	1,412,000	1,212,000
2008 - 2009	0	200,000	0	200,000	1,412,000	1,212,000
2009 - 2010	0	200,000	0	200,000	1,412,000	1,212,000
2010 - 2011	0	200,000	0	200,000	1,412,000	1,212,000
2011 - 2012	0	200,000	0	200,000	1,412,000	1,212,000
2012 - 2013	0	200,000	0	200,000	1,412,000	1,212,000

IRR (15 Years)

19.46%

Thus the internal rate of return for the **Public Treasury**, through the collected **taxes exclusively**, will be of 19.46% despite the fact that the treasury will support totally **the un-reimbursed loans, the credit system management cost** (including an international credit specialist for four years) **and the UNDP – overhead cost at 3% of the injected funds** (see the attached table: summary of the feasibility study and tests of the sensibility).

This I.R.R. was calculated **without taking into consideration** the social/economic benefits/impacts like the employment generation and the additional production value, mentioned above.

It appears from the above analysis of the three scenarios, and the following table; summary of the feasibility study of the Credit Funding Alternatives; that the scenario of Joint-venture and cost sharing with the Private Commercial Banks is the best alternative and the most economic for the **Public Treasury**. Even in case, that the Government will support/cover totally the risks of un-reimbursed loans, to the extend of 30% of the lending capital, in addition to the credit system management cost (including an international credit specialist for four years) and the UNDP – overhead cost at 3% of the injected funds.

The above alternative will permit to increase the cultivated area (**taken as a tool of reference for easy quantification**) by an additional acreage of 42,258ha (5,828ha irrigated crops+36,430ha rainfed crops) and to increase the annual production by the equivalent of US\$ 33.62 million.

The annual additional collected taxes for the Public Treasury will reach the amount of US\$ 1.68 million.

The total generated employment opportunities will reach 451250 days/year i.e. 3000 additional seasonal workers/year.

Even, in the cases of the different sensibility tests, this alternative will remain the best.

The third scenario, is presented, in order to propose an original modality of funding through a **Guarantee Deposit Accounts** with income interest generation "Sinking Fund", to be established in **Lebanese pounds or in US\$** for a total amount equivalent to US\$ 10 million, and opened at the cooperating Private Commercial Banks.

The above Guarantee Deposit Accounts, will be used to cover totally the un-reimbursement risks estimated at 30% (i.e. 70% cumulated reimbursement rate at the long run), and thus will enable the Private Banks to inject from their own funds, in the Joint Rural Credit Fund an amount in L.L. **equivalent to US\$ 20 million**.

The advantages of this modality are:

1. The economic rate of return for the Public Treasury will be almost the same as that of the scenario 2 (A) i.e. 19.46%.
2. The Government, **in case of extreme shortage of funds**, could, through the Public Treasury finance its above Guarantee Deposit of US\$ 10 million, even by treasury bonds in L.L., to be given to the Private Commercial Banks, and without any disbursement of liquidity from the Public Budget.
3. The **income interest** generated by the Guarantee Deposit Accounts "Sinking Fund" or alternatively the "treasury bonds", will be very useful to subsidize and to ponder the average cost of the Private Funds from 16% which is the commercial interest rate, to 9.5% as explained previously, which is the average cost of the Joint Rural Credit Fund (Revolving fund) of US\$ 20 million, taken into consideration in this 3<sup>rd</sup> scenario.
4. It will permit to absorb, the engaged amount in L.L. from the liquid monetary mass, and to inject it in the production system, which will help, in the long run, to juggle the inflation, to create more employment opportunities, to increase the G.D.P. through the additional generated production value, and above all to contribute in the **decrease of the budget deficit**, through the **additional generated** direct/indirect taxes to be collected by the **Public Treasury**. The expected generated taxes, even at the rate of 5% only, on the additional generated production value, will be enough to compensate the un-reimbursement risks of 30% and the credit system management cost supported by the Public Treasury, and to generate a financial Internal rate of return of 19.46%.

# SUMMARY OF THE FEASIBILITY STUDY OF THE CREDIT COMPONENT FUNDING ALTERNATIVES

Scenario	1 <sup>st</sup> Scenario : Rural Credit Fund Without contribution of the banks (5% admin. fees.) 100% risks* of un-reimbursement supported by the Govt	2 <sup>nd</sup> Scenario (A): Joint Rural Credit Fund With contribution of the banks 100% risks* of un-reimbursements supported by the Govt.	2 <sup>nd</sup> Scenario (B): Joint Rural Credit Fund With contribution of the banks 50% risks* of un-reimbursements supported by the Banks	3 <sup>rd</sup> Scenario: Joint Rural Credit Fund Opening a Guarantee Deposit Account 100% risks* of un-reimbursements supported by the Govt.
Subject				
1. Cultivated Area	37,201 ha (5,131 irrigated, 32070 rainfed )	42,258 ha (5,828 irrigated, 36,430 rainfed)	42,123 ha (5,828 irrigated, 36,295 rainfed)	35,496 ha (4,896 irrigated, 30,600 rainfed)
2. Production Value	29,596,267 US\$.	33,619,938 US\$	33,619,938 US\$	28,240,000
3. Added Value	8,635,738 US\$	9,809,784 US\$	9,809,784 US\$	8,240,000
4. Generated Direct/indirect taxes (5% of the product value) collected by the Treasury	1,479,813 US\$	1,680,997 US\$	1,680,997 US\$	1,412,000
5. Total generated Employment opportunities	397,244 days.	451,250 days	451,250 days	379,000
6. Internal Rate of Return (I.R.R.) In the normal case	13.26%	19.65%	47.34%	19.46%
Test of Sensitivity, in case of:				
a) +5% Reimbursement Rate	18.06%	25.98%	38.47%	25.63%
b) -5% Reimbursement Rate	9.47%	15.26%	57.71%	15.21%
c) +10% Production Value	17.03%	23.75%	38.43%	23.51%
d) -10% Production Value	9.39%	15.66%	58.44%	15.54%
e) Increase taxes from 5% to 7.5%	32.52%	42.72%	128.88%	42.41%
f) Increase taxes from 5% to 10%	57.13%	79.99%	583.81%	79.69%

\* N.B : It is supposed that the annual reimbursement rate will be around 70%, thus the annual bad and doubtful debts will represent 30% of the lending capital.

5. It is obvious, that instead of contracting **local loans**, through the treasury bonds, in order to ensure the funding of the Guarantee Deposit Accounts, and with high interest rate of 13%, the Government could borrow the required amount from the I.D.B., the A.F.S.E.D., or other Arab-Development Funds, with very low interest rates of less than 3%, and with **long terms** and adequate **grace period**.

The merit of this document, is to demonstrate, if need is there, the excellent feasibility and the high rentability of the Rural Credit for the **Public Treasury** in particular, and its benefits for the national economy and the **social stability of the country** in general.

The following legend tables in Annex, are attached in order to provide the specialists with the detailed calculations, and the test of sensibility for the different scenarios considered in this study.



# **ANNEXES**

## I – Legends :

1. **Financed areas :** (for easy calculations and quantification, it is supposed that all funds will be used for Agriculture).

Based on the crop-pattern and the area, during the field surveys and those extracted from the loan applications, the total production cost in L.L./dunum around 1/10ha, excluding the cost of family labors, was established for the irrigated and rainfed crops as follow:

- Production cost of an average irrigated crop-pattern = 250,000L.L./dunum.
- Production cost of an average rainfed crop-pattern = 60,000L.L./dunum.

It is supposed that 40% of the loans will finance irrigated crops and 60% of the loans will finance the rainfed crops.

2. **The total generated production value:**

Based on the same criteria / parameters mentioned above and the observed yields per dunum and the on-form gate market prices, the average total production value was calculated as follow:

- Total production value per dunum of irrigated crops = 320,000L.L.
- The total production value per dunum of rainfed crops = 90,000L.L.

3. **The added value:**

The added value is equal to the total production value minus the total production cost, which is in our case the yearly cumulated allocated credit funds.

4. **The direct and indirect collected taxes by the Public Treasury:**

The minimum hypothesis, is that these taxes represent only 5% of the total generated production value (additional). It is clear that during the production process, the farmers will have to pay taxes on inputs/services (en amont) and taxes on the selling of their products (en Aval), all of the are estimated to reach 5% only.

5. **Direct employment opportunities days:**

It is supposed that 40% of the added value, which in principle covers the remuneration of family labors, capital and land rent; these 40% of them represent the remuneration of total labors family and extra family.

Thus the direct employment opportunities in days (seasonal labors) is calculated as follow:

$$\frac{\text{The added value in US\$} \times 40\%}{\text{US\$ 10 wage per day}} = \text{x days of seasonal familial/extra-familial labors.}$$

6. **The indirect employment opportunities (days):**

This aggregate represents not more than 15% of the above seasonal labors.

7. The total generated employment is equal to the sum of the above two aggregates.

8. The exchange rate taken into consideration for the calculations was: US\$ 1 = 1530 L.L.

II  
TESTS OF SENSIBILITY  
FOR THE DIFFERENT SCENARIO

II - A  
TESTS OF SENSIBILITY  
1<sup>ST</sup> SCENARIO

# 1st Scenario

## Evolution Of The Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate + 5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (5.85%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	3,000,000	3,000,000	175,500	90%	2,700,000	300,000	300,000
1999 - 2000	4,000,000	7,175,500	419,767	85%	6,099,175	1,076,325	776,325
2000 - 2001	3,000,000	10,595,267	619,823	80%	8,476,213	2,119,053	1,042,728
2001 - 2002	0	11,215,090	656,083	75%	8,411,317	2,803,772	684,719
2002 - 2003	0	11,871,173	694,464	70%	8,309,821	3,561,352	757,579
2003 - 2004	0	12,565,636	735,090	75%	9,424,227	3,141,409	-419,943
2004 - 2005	0	13,300,726	778,092	75%	9,975,544	3,325,181	183,772
2005 - 2006	0	14,078,818	823,611	75%	10,559,114	3,519,705	194,523
2006 - 2007	0	14,902,429	871,792	75%	11,176,822	3,725,607	205,903
2007 - 2008	0	15,774,221	922,792	75%	11,830,666	3,943,555	217,948
2008 - 2009	0	16,697,013	976,775	75%	12,522,760	4,174,253	230,698
2009 - 2010	0	17,673,789	1,033,917	75%	13,255,341	4,418,447	244,194
2010 - 2011	0	18,707,705	1,094,401	75%	14,030,779	4,676,926	258,479
2011 - 2012	0	19,802,106	1,158,423	75%	14,851,580	4,950,527	273,600
2012 - 2013	0	20,960,529	1,226,191	75%	15,720,397	5,240,132	289,606
	1	2	4		3		

\* N.B.: It is the net interest after deduction of 3% administration fees and 2% reimbursement incentive received by the cooperating commercial bank

## 1st Scenario

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate + 5%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	3,000,000	7,344	45,900	4,236,000	1,236,000	211,800	49,440	7,416	56,856
1999 - 2000	7,175,500	17,566	109,785	10,131,806	2,956,306	506,590	118,252	17,738	135,990
2000 - 2001	10,595,267	25,937	162,108	14,960,517	4,365,250	748,026	174,610	26,191	200,801
2001 - 2002	11,215,090	27,455	171,591	15,835,707	4,620,617	791,785	184,825	27,724	212,548
2002 - 2003	11,871,173	29,061	181,629	16,762,096	4,890,923	838,105	195,637	29,346	224,982
2003 - 2004	12,565,636	30,761	192,254	17,742,678	5,177,042	887,134	207,082	31,062	238,144
2004 - 2005	13,300,726	32,560	203,501	18,780,625	5,479,899	939,031	219,196	32,879	252,075
2005 - 2006	14,078,818	34,465	215,406	19,879,292	5,800,473	993,965	232,019	34,803	266,822
2006 - 2007	14,902,429	36,481	228,007	21,042,230	6,139,801	1,052,112	245,592	36,839	282,431
2007 - 2008	15,774,221	38,615	241,346	22,273,201	6,498,979	1,113,660	259,959	38,994	298,953
2008 - 2009	16,697,013	40,874	255,464	23,576,183	6,879,169	1,178,809	275,167	41,275	316,442
2009 - 2010	17,673,789	43,265	270,409	24,955,390	7,281,601	1,247,769	291,264	43,690	334,954
2010 - 2011	18,707,705	45,796	286,228	26,415,280	7,707,575	1,320,764	308,303	46,245	354,548
2011 - 2012	19,802,106	48,476	302,972	27,960,574	8,158,468	1,398,029	326,339	48,951	375,290
2012 - 2013	20,960,529	51,311	320,696	29,596,267	8,635,738	1,479,813	345,430	51,814	397,244

## 1st Scenario

### The Internal Rate Of Return Of The Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate + 5%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	300,000	320,000	90,000	710,000	211,800	-498,200
1999 - 2000	776,325	320,000	120,000	1,216,325	506,590	-709,735
2000 - 2001	1,042,728	320,000	90,000	1,452,728	748,026	-704,703
2001 - 2002	684,719	320,000	0	1,004,719	791,785	-212,934
2002 - 2003	757,579	200,000	0	957,579	838,105	-119,475
2003 - 2004	-419,943	200,000	0	-219,943	887,134	1,107,077
2004 - 2005	183,772	200,000	0	383,772	939,031	555,259
2005 - 2006	194,523	200,000	0	394,523	993,965	599,441
2006 - 2007	205,903	200,000	0	405,903	1,052,112	646,209
2007 - 2008	217,948	200,000	0	417,948	1,113,660	695,712
2008 - 2009	230,698	200,000	0	430,698	1,178,809	748,111
2009 - 2010	244,194	200,000	0	444,194	1,247,769	803,576
2010 - 2011	258,479	200,000	0	458,479	1,320,764	862,285
2011 - 2012	273,600	200,000	0	473,600	1,398,029	924,428
2012 - 2013	289,606	200,000	0	489,606	1,479,813	990,208

IRR (15 Years)

18.06%

## 1st Scenario

### Evolution Of The Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate - 5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (5.85%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	3,000,000	3,000,000	175,500	80%	2,400,000	600,000	600,000
1999 - 2000	4,000,000	7,175,500	419,767	75%	5,381,625	1,793,875	1,193,875
2000 - 2001	3,000,000	10,595,267	619,823	70%	7,416,687	3,178,580	1,384,705
2001 - 2002	0	11,215,090	656,083	65%	7,289,808	3,925,281	746,701
2002 - 2003	0	11,871,173	694,464	60%	7,122,704	4,748,469	823,188
2003 - 2004	0	12,565,636	735,090	65%	8,167,664	4,397,973	-350,496
2004 - 2005	0	13,300,726	778,092	65%	8,645,472	4,655,254	257,281
2005 - 2006	0	14,078,818	823,611	65%	9,151,232	4,927,586	272,332
2006 - 2007	0	14,902,429	871,792	65%	9,686,579	5,215,850	288,264
2007 - 2008	0	15,774,221	922,792	65%	10,253,244	5,520,977	305,127
2008 - 2009	0	16,697,013	976,775	65%	10,853,059	5,843,955	322,977
2009 - 2010	0	17,673,789	1,033,917	65%	11,487,963	6,185,826	341,871
2010 - 2011	0	18,707,705	1,094,401	65%	12,160,008	6,547,697	361,871
2011 - 2012	0	19,802,106	1,158,423	65%	12,871,369	6,930,737	383,040
2012 - 2013	0	20,960,529	1,226,191	65%	13,624,344	7,336,185	405,448
	1	2	4		3		

\* N.B.: It is the net interest after deduction of 3% administration fees and 2% reimbursement incentive received by the cooperating commercial bank



## 1st Scenario

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate - 5%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	3,000,000	7,344	45,900	4,236,000	1,236,000	211,800	49,440	7,416	56,856
1999 - 2000	7,175,500	17,566	109,785	10,131,806	2,956,306	506,590	118,252	17,738	135,990
2000 - 2001	10,595,267	25,937	162,108	14,960,517	4,365,250	748,026	174,610	26,191	200,801
2001 - 2002	11,215,090	27,455	171,591	15,835,707	4,620,617	791,785	184,825	27,724	212,548
2002 - 2003	11,871,173	29,061	181,629	16,762,096	4,890,923	838,105	195,637	29,346	224,982
2003 - 2004	12,565,636	30,761	192,254	17,742,678	5,177,042	887,134	207,082	31,062	238,144
2004 - 2005	13,300,726	32,560	203,501	18,780,625	5,479,899	939,031	219,196	32,879	252,075
2005 - 2006	14,078,818	34,465	215,406	19,879,292	5,800,473	993,965	232,019	34,803	266,822
2006 - 2007	14,902,429	36,481	228,007	21,042,230	6,139,801	1,052,112	245,592	36,839	282,431
2007 - 2008	15,774,221	38,615	241,346	22,273,201	6,498,979	1,113,660	259,959	38,994	298,953
2008 - 2009	16,697,013	40,874	255,464	23,576,183	6,879,169	1,178,809	275,167	41,275	316,442
2009 - 2010	17,673,789	43,265	270,409	24,955,390	7,281,601	1,247,769	291,264	43,690	334,954
2010 - 2011	18,707,705	45,796	286,228	26,415,280	7,707,575	1,320,764	308,303	46,245	354,548
2011 - 2012	19,802,106	48,476	302,972	27,960,574	8,158,468	1,398,029	326,339	48,951	375,290
2012 - 2013	20,960,529	51,311	320,696	29,596,267	8,635,738	1,479,813	345,430	51,814	397,244

## 1st Scenario

### Sensitivity Test Of The Internal Rate Of Return Of The Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate - 5%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	600,000	320,000	90,000	1,010,000	211,800	-798,200
1999 - 2000	1,193,875	320,000	120,000	1,633,875	506,590	-1,127,285
2000 - 2001	1,384,705	320,000	90,000	1,794,705	748,026	-1,046,679
2001 - 2002	746,701	320,000	0	1,066,701	791,785	-274,916
2002 - 2003	823,188	200,000	0	1,023,188	838,105	-185,083
2003 - 2004	-350,496	200,000	0	-150,496	887,134	1,037,630
2004 - 2005	257,281	200,000	0	457,281	939,031	481,750
2005 - 2006	272,332	200,000	0	472,332	993,965	521,632
2006 - 2007	288,264	200,000	0	488,264	1,052,112	563,848
2007 - 2008	305,127	200,000	0	505,127	1,113,660	608,533
2008 - 2009	322,977	200,000	0	522,977	1,178,809	655,832
2009 - 2010	341,871	200,000	0	541,871	1,247,769	705,898
2010 - 2011	361,871	200,000	0	561,871	1,320,764	758,893
2011 - 2012	383,040	200,000	0	583,040	1,398,029	814,988
2012 - 2013	405,448	200,000	0	605,448	1,479,813	874,365

IRR (15 Years)

9.47%

## 1st Scenario

### Evolution Of The Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value + 10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (5.85%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	3,000,000	3,000,000	175,500	85%	2,550,000	450,000	450,000
1999 - 2000	4,000,000	7,175,500	419,767	80%	5,740,400	1,435,100	985,100
2000 - 2001	3,000,000	10,595,267	619,823	75%	7,946,450	2,648,817	1,213,717
2001 - 2002	0	11,215,090	656,083	70%	7,850,563	3,364,527	715,710
2002 - 2003	0	11,871,173	694,464	65%	7,716,262	4,154,910	790,383
2003 - 2004	0	12,565,636	735,090	70%	8,795,945	3,769,691	-385,220
2004 - 2005	0	13,300,726	778,092	70%	9,310,508	3,990,218	220,527
2005 - 2006	0	14,078,818	823,611	70%	9,855,173	4,223,646	233,428
2006 - 2007	0	14,902,429	871,792	70%	10,431,700	4,470,729	247,083
2007 - 2008	0	15,774,221	922,792	70%	11,041,955	4,732,266	261,538
2008 - 2009	0	16,697,013	976,775	70%	11,687,909	5,009,104	276,838
2009 - 2010	0	17,673,789	1,033,917	70%	12,371,652	5,302,137	293,033
2010 - 2011	0	18,707,705	1,094,401	70%	13,095,394	5,612,312	310,175
2011 - 2012	0	19,802,106	1,158,423	70%	13,861,474	5,940,632	328,320
2012 - 2013	0	20,960,529	1,226,191	70%	14,672,370	6,288,159	347,527
	1	2	4		3		

\* N.B.: It is the net interest after deduction of 3% administration fees and 2% reimbursement incentive received by the cooperating commercial bank

## 1st Scenario

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value + 10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	3,000,000	7,344	45,900	4,659,600	1,659,600	232,980	66,384	9,958	76,342
1999 - 2000	7,175,500	17,566	109,785	11,144,987	3,969,487	557,249	158,779	23,817	182,596
2000 - 2001	10,595,267	25,937	162,108	16,456,568	5,861,302	822,828	234,452	35,168	269,620
2001 - 2002	11,215,090	27,455	171,591	17,419,278	6,204,188	870,964	248,168	37,225	285,393
2002 - 2003	11,871,173	29,061	181,629	18,438,305	6,567,133	921,915	262,685	39,403	302,088
2003 - 2004	12,565,636	30,761	192,254	19,516,946	6,951,310	975,847	278,052	41,708	319,760
2004 - 2005	13,300,726	32,560	203,501	20,658,688	7,357,962	1,032,934	294,318	44,148	338,466
2005 - 2006	14,078,818	34,465	215,406	21,867,221	7,788,402	1,093,361	311,536	46,730	358,267
2006 - 2007	14,902,429	36,481	228,007	23,146,453	8,244,024	1,157,323	329,761	49,464	379,225
2007 - 2008	15,774,221	38,615	241,346	24,500,521	8,726,299	1,225,026	349,052	52,358	401,410
2008 - 2009	16,697,013	40,874	255,464	25,933,801	9,236,788	1,296,690	369,472	55,421	424,892
2009 - 2010	17,673,789	43,265	270,409	27,450,928	9,777,140	1,372,546	391,086	58,663	449,748
2010 - 2011	18,707,705	45,796	286,228	29,056,808	10,349,103	1,452,840	413,964	62,095	476,059
2011 - 2012	19,802,106	48,476	302,972	30,756,631	10,954,525	1,537,832	438,181	65,727	503,908
2012 - 2013	20,960,529	51,311	320,696	32,555,894	11,595,365	1,627,795	463,815	69,572	533,387

### 1st Scenario

#### The Internal Rate Of Return Of The Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value + 10%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1997 - 1998	450,000	320,000	90,000	860,000	232,980	-627,020
1998 - 1999	985,100	320,000	120,000	1,425,100	557,249	-867,851
1999 - 2000	1,213,717	320,000	90,000	1,623,717	822,828	-800,888
2000 - 2001	715,710	320,000	0	1,035,710	870,964	-164,746
2001 - 2002	790,383	200,000	0	990,383	921,915	-68,468
2002 - 2003	-385,220	200,000	0	-185,220	975,847	1,161,067
2003 - 2004	220,527	200,000	0	420,527	1,032,934	612,407
2004 - 2005	233,428	200,000	0	433,428	1,093,361	659,933
2005 - 2006	247,083	200,000	0	447,083	1,157,323	710,239
2006 - 2007	261,538	200,000	0	461,538	1,225,026	763,488
2007 - 2008	276,838	200,000	0	476,838	1,296,690	819,852
2008 - 2009	293,033	200,000	0	493,033	1,372,546	879,514
2009 - 2010	310,175	200,000	0	510,175	1,452,840	942,665
2010 - 2011	328,320	200,000	0	528,320	1,537,832	1,009,511
2011 - 2012	347,527	200,000	0	547,527	1,627,795	1,080,268

IRR (15 Years)

17.03%

# 1st Scenario

## Evolution Of The Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value -10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (5.85%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	3,000,000	3,000,000	175,500	85%	2,550,000	450,000	450,000
1999 - 2000	4,000,000	7,175,500	419,767	80%	5,740,400	1,435,100	985,100
2000 - 2001	3,000,000	10,595,267	619,823	75%	7,946,450	2,648,817	1,213,717
2001 - 2002	0	11,215,090	656,083	70%	7,850,563	3,364,527	715,710
2002 - 2003	0	11,871,173	694,464	65%	7,716,262	4,154,910	790,383
2003 - 2004	0	12,565,636	735,090	70%	8,795,945	3,769,691	-385,220
2004 - 2005	0	13,300,726	778,092	70%	9,310,508	3,990,218	220,527
2005 - 2006	0	14,078,818	823,611	70%	9,855,173	4,223,646	233,428
2006 - 2007	0	14,902,429	871,792	70%	10,431,700	4,470,729	247,083
2007 - 2008	0	15,774,221	922,792	70%	11,041,955	4,732,266	261,538
2008 - 2009	0	16,697,013	976,775	70%	11,687,909	5,009,104	276,838
2009 - 2010	0	17,673,789	1,033,917	70%	12,371,652	5,302,137	293,033
2010 - 2011	0	18,707,705	1,094,401	70%	13,095,394	5,612,312	310,175
2011 - 2012	0	19,802,106	1,158,423	70%	13,861,474	5,940,632	328,320
2012 - 2013	0	20,960,529	1,226,191	70%	14,672,370	6,288,159	347,527

\* N.B.: It is the net interest after deduction of 3% administration fees and 2% reimbursement incentive received by the cooperating commercial bank

## 1st Scenario

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value -10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	3,000,000	7,344	45,900	3,812,400	812,400	190,620	32,496	4,874	37,370
1999 - 2000	7,175,500	17,566	109,785	9,118,625	1,943,125	455,931	77,725	11,659	89,384
2000 - 2001	10,595,267	25,937	162,108	13,464,465	2,869,198	673,223	114,768	17,215	131,983
2001 - 2002	11,215,090	27,455	171,591	14,252,136	3,037,046	712,607	121,482	18,222	139,704
2002 - 2003	11,871,173	29,061	181,629	15,085,886	3,214,714	754,294	128,589	19,288	147,877
2003 - 2004	12,565,636	30,761	192,254	15,968,410	3,402,774	798,421	136,111	20,417	156,528
2004 - 2005	13,300,726	32,560	203,501	16,902,563	3,601,837	845,128	144,073	21,611	165,684
2005 - 2006	14,078,818	34,465	215,406	17,891,362	3,812,544	894,568	152,502	22,875	175,377
2006 - 2007	14,902,429	36,481	228,007	18,938,007	4,035,578	946,900	161,423	24,213	185,637
2007 - 2008	15,774,221	38,615	241,346	20,045,881	4,271,659	1,002,294	170,866	25,630	196,496
2008 - 2009	16,697,013	40,874	255,464	21,218,565	4,521,551	1,060,928	180,862	27,129	207,991
2009 - 2010	17,673,789	43,265	270,409	22,459,851	4,786,062	1,122,993	191,442	28,716	220,159
2010 - 2011	18,707,705	45,796	286,228	23,773,752	5,066,047	1,188,688	202,642	30,396	233,038
2011 - 2012	19,802,106	48,476	302,972	25,164,516	5,362,410	1,258,226	214,496	32,174	246,671
2012 - 2013	20,960,529	51,311	320,696	26,636,641	5,676,111	1,331,832	227,044	34,057	261,101

# 1st Scenario

## The Internal Rate Of Return Of The Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value -10%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	450,000	320,000	90,000	860,000	190,620	-669,380
1999 - 2000	985,100	320,000	120,000	1,425,100	455,931	-969,169
2000 - 2001	1,213,717	320,000	90,000	1,623,717	673,223	-950,493
2001 - 2002	715,710	320,000	0	1,035,710	712,607	-323,103
2002 - 2003	790,383	200,000	0	990,383	754,294	-236,089
2003 - 2004	-385,220	200,000	0	-185,220	798,421	983,640
2004 - 2005	220,527	200,000	0	420,527	845,128	424,601
2005 - 2006	233,428	200,000	0	433,428	894,568	461,140
2006 - 2007	247,083	200,000	0	447,083	946,900	499,817
2007 - 2008	261,538	200,000	0	461,538	1,002,294	540,756
2008 - 2009	276,838	200,000	0	476,838	1,060,928	584,091
2009 - 2010	293,033	200,000	0	493,033	1,122,993	629,960
2010 - 2011	310,175	200,000	0	510,175	1,188,688	678,513
2011 - 2012	328,320	200,000	0	528,320	1,258,226	729,906
2012 - 2013	347,527	200,000	0	547,527	1,331,832	784,305

IRR (15 Years)

9.39%



# 1st Scenario

## Evolution Of The Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (5.85%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	3,000,000	3,000,000	175,500	85%	2,550,000	450,000	450,000
1999 - 2000	4,000,000	7,175,500	419,767	80%	5,740,400	1,435,100	985,100
2000 - 2001	3,000,000	10,595,267	619,823	75%	7,946,450	2,648,817	1,213,717
2001 - 2002	0	11,215,090	656,083	70%	7,850,563	3,364,527	715,710
2002 - 2003	0	11,871,173	694,464	65%	7,716,262	4,154,910	790,383
2003 - 2004	0	12,565,636	735,090	70%	8,795,945	3,769,691	-385,220
2004 - 2005	0	13,300,726	778,092	70%	9,310,508	3,990,218	220,527
2005 - 2006	0	14,078,818	823,611	70%	9,855,173	4,223,646	233,428
2006 - 2007	0	14,902,429	871,792	70%	10,431,700	4,470,729	247,083
2007 - 2008	0	15,774,221	922,792	70%	11,041,955	4,732,266	261,538
2008 - 2009	0	16,697,013	976,775	70%	11,687,909	5,009,104	276,838
2009 - 2010	0	17,673,789	1,033,917	70%	12,371,652	5,302,137	293,033
2010 - 2011	0	18,707,705	1,094,401	70%	13,095,394	5,612,312	310,175
2011 - 2012	0	19,802,106	1,158,423	70%	13,861,474	5,940,632	328,320
2012 - 2013	0	20,960,529	1,226,191	70%	14,672,370	6,288,159	347,527

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\* N.B.: It is the net interest after deduction of 3% administration fees and 2% reimbursement incentive received by the cooperating commercial bank

# 1st Scenario

## The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	3,000,000	7,344	45,900	4,236,000	1,236,000	317,700	49,440	7,416	56,856
1999 - 2000	7,175,500	17,566	109,785	10,131,806	2,956,306	759,885	118,252	17,738	135,990
2000 - 2001	10,595,267	25,937	162,108	14,960,517	4,365,250	1,122,039	174,610	26,191	200,801
2001 - 2002	11,215,090	27,455	171,591	15,835,707	4,620,617	1,187,678	184,825	27,724	212,548
2002 - 2003	11,871,173	29,061	181,629	16,762,096	4,890,923	1,257,157	195,637	29,346	224,982
2003 - 2004	12,565,636	30,761	192,254	17,742,678	5,177,042	1,330,701	207,082	31,062	238,144
2004 - 2005	13,300,726	32,560	203,501	18,780,625	5,479,899	1,408,547	219,196	32,879	252,075
2005 - 2006	14,078,818	34,465	215,406	19,879,292	5,800,473	1,490,947	232,019	34,803	266,822
2006 - 2007	14,902,429	36,481	228,007	21,042,230	6,139,801	1,578,167	245,592	36,839	282,431
2007 - 2008	15,774,221	38,615	241,346	22,273,201	6,498,979	1,670,490	259,959	38,994	298,953
2008 - 2009	16,697,013	40,874	255,464	23,576,183	6,879,169	1,768,214	275,167	41,275	316,442
2009 - 2010	17,673,789	43,265	270,409	24,955,390	7,281,601	1,871,654	291,264	43,690	334,954
2010 - 2011	18,707,705	45,796	286,228	26,415,280	7,707,575	1,981,146	308,303	46,245	354,548
2011 - 2012	19,802,106	48,476	302,972	27,960,574	8,158,468	2,097,043	326,339	48,951	375,290
2012 - 2013	20,960,529	51,311	320,696	29,596,267	8,635,738	2,219,720	345,430	51,814	397,244

## 1st Scenario

### Sensitivity Test Of The Internal Rate Of Return Of The Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	450,000	320,000	90,000	860,000	317,700	-542,300
1999 - 2000	985,100	320,000	120,000	1,425,100	759,885	-665,215
2000 - 2001	1,213,717	320,000	90,000	1,623,717	1,122,039	-501,678
2001 - 2002	715,710	320,000	0	1,035,710	1,187,678	151,968
2002 - 2003	790,383	200,000	0	990,383	1,257,157	266,774
2003 - 2004	-385,220	200,000	0	-185,220	1,330,701	1,515,920
2004 - 2005	220,527	200,000	0	420,527	1,408,547	988,020
2005 - 2006	233,428	200,000	0	433,428	1,490,947	1,057,519
2006 - 2007	247,083	200,000	0	447,083	1,578,167	1,131,084
2007 - 2008	261,538	200,000	0	461,538	1,670,490	1,208,952
2008 - 2009	276,838	200,000	0	476,838	1,768,214	1,291,376
2009 - 2010	293,033	200,000	0	493,033	1,871,654	1,378,622
2010 - 2011	310,175	200,000	0	510,175	1,981,146	1,470,971
2011 - 2012	328,320	200,000	0	528,320	2,097,043	1,568,723
2012 - 2013	347,527	200,000	0	547,527	2,219,720	1,672,193

IRR (15 Years)

32.52%

# 1st Scenario

## Evolution Of The Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (5.85%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	3,000,000	3,000,000	175,500	85%	2,550,000	450,000	450,000
1999 - 2000	4,000,000	7,175,500	419,767	80%	5,740,400	1,435,100	985,100
2000 - 2001	3,000,000	10,595,267	619,823	75%	7,946,450	2,648,817	1,213,717
2001 - 2002	0	11,215,090	656,083	70%	7,850,563	3,364,527	715,710
2002 - 2003	0	11,871,173	694,464	65%	7,716,262	4,154,910	790,383
2003 - 2004	0	12,565,636	735,090	70%	8,795,945	3,769,691	-385,220
2004 - 2005	0	13,300,726	778,092	70%	9,310,508	3,990,218	220,527
2005 - 2006	0	14,078,818	823,611	70%	9,855,173	4,223,646	233,428
2006 - 2007	0	14,902,429	871,792	70%	10,431,700	4,470,729	247,083
2007 - 2008	0	15,774,221	922,792	70%	11,041,955	4,732,266	261,538
2008 - 2009	0	16,697,013	976,775	70%	11,687,909	5,009,104	276,838
2009 - 2010	0	17,673,789	1,033,917	70%	12,371,652	5,302,137	293,033
2010 - 2011	0	18,707,705	1,094,401	70%	13,095,394	5,612,312	310,175
2011 - 2012	0	19,802,106	1,158,423	70%	13,861,474	5,940,632	328,320
2012 - 2013	0	20,960,529	1,226,191	70%	14,672,370	6,288,159	347,527

\* N.B.: It is the net interest after deduction of 3% administration fees and 2% reimbursement incentive received by the cooperating commercial bank

## 1st Scenario

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	3,000,000	7,344	45,900	4,236,000	1,236,000	423,600	49,440	7,416	56,856
1999 - 2000	7,175,500	17,566	109,785	10,131,806	2,956,306	1,013,181	118,252	17,738	135,990
2000 - 2001	10,595,267	25,937	162,108	14,960,517	4,365,250	1,496,052	174,610	26,191	200,801
2001 - 2002	11,215,090	27,455	171,591	15,835,707	4,620,617	1,583,571	184,825	27,724	212,548
2002 - 2003	11,871,173	29,061	181,629	16,762,096	4,890,923	1,676,210	195,637	29,346	224,982
2003 - 2004	12,565,636	30,761	192,254	17,742,678	5,177,042	1,774,268	207,082	31,062	238,144
2004 - 2005	13,300,726	32,560	203,501	18,780,625	5,479,899	1,878,063	219,196	32,879	252,075
2005 - 2006	14,078,818	34,465	215,406	19,879,292	5,800,473	1,987,929	232,019	34,803	266,822
2006 - 2007	14,902,429	36,481	228,007	21,042,230	6,139,801	2,104,223	245,592	36,839	282,431
2007 - 2008	15,774,221	38,615	241,346	22,273,201	6,498,979	2,227,320	259,959	38,994	298,953
2008 - 2009	16,697,013	40,874	255,464	23,576,183	6,879,169	2,357,618	275,167	41,275	316,442
2009 - 2010	17,673,789	43,265	270,409	24,955,390	7,281,601	2,495,539	291,264	43,690	334,954
2010 - 2011	18,707,705	45,796	286,228	26,415,280	7,707,575	2,641,528	308,303	46,245	354,548
2011 - 2012	19,802,106	48,476	302,972	27,960,574	8,158,468	2,796,057	326,339	48,951	375,290
2012 - 2013	20,960,529	51,311	320,696	29,596,267	8,635,738	2,959,627	345,430	51,814	397,244

# 1st Scenario

## The Internal Rate Of Return Of The Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 10%)

Year	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1997 - 1998	450,000	320,000	90,000	860,000	423,600	-436,400
1998 - 1999	985,100	320,000	120,000	1,425,100	1,013,181	-411,919
1999 - 2000	1,213,717	320,000	90,000	1,623,717	1,496,052	-127,665
2000 - 2001	715,710	320,000	0	1,035,710	1,583,571	547,860
2001 - 2002	790,383	200,000	0	990,383	1,676,210	685,826
2002 - 2003	-385,220	200,000	0	-185,220	1,774,268	1,959,487
2003 - 2004	220,527	200,000	0	420,527	1,878,063	1,457,536
2004 - 2005	233,428	200,000	0	433,428	1,987,929	1,554,501
2005 - 2006	247,083	200,000	0	447,083	2,104,223	1,657,140
2006 - 2007	261,538	200,000	0	461,538	2,227,320	1,765,782
2007 - 2008	276,838	200,000	0	476,838	2,357,618	1,880,781
2008 - 2009	293,033	200,000	0	493,033	2,495,539	2,002,506
2009 - 2010	310,175	200,000	0	510,175	2,641,528	2,131,353
2010 - 2011	328,320	200,000	0	528,320	2,796,057	2,267,737
2011 - 2012	347,527	200,000	0	547,527	2,959,627	2,412,100

IRR (15 Years)

57.13%

II – B  
TESTS OF SENSIBILITY  
2<sup>ND</sup> SCENARIO (A)

## 2nd Scenario (A)

### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate + 5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	90%	5,400,000	600,000	600,000
1999 - 2000	8,000,000	14,081,000	190,094	85%	11,968,850	2,112,150	1,512,150
2000 - 2001	6,000,000	20,271,094	273,660	80%	16,216,875	4,054,219	1,942,069
2001 - 2002	0	20,544,753	277,354	75%	15,408,565	5,136,188	1,081,970
2002 - 2003	0	20,822,107	281,098	70%	14,575,475	6,246,632	1,110,444
2003 - 2004	0	21,103,206	284,893	75%	15,827,404	5,275,801	-970,831
2004 - 2005	0	21,388,099	288,739	75%	16,041,074	5,347,025	71,223
2005 - 2006	0	21,676,838	292,637	75%	16,257,629	5,419,210	72,185
2006 - 2007	0	21,969,476	296,588	75%	16,477,107	5,492,369	73,159
2007 - 2008	0	22,266,064	300,592	75%	16,699,548	5,566,516	74,147
2008 - 2009	0	22,566,656	304,650	75%	16,924,992	5,641,664	75,148
2009 - 2010	0	22,871,305	308,763	75%	17,153,479	5,717,826	76,162
2010 - 2011	0	23,180,068	312,931	75%	17,385,051	5,795,017	77,191
2011 - 2012	0	23,492,999	317,155	75%	17,619,749	5,873,250	78,233
2012 - 2013	0	23,810,154	321,437	75%	17,857,616	5,952,539	79,289



## 2nd Scenario (A)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate + 5%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	423,600	98,880	14,832	113,712
1999 - 2000	14,081,000	34,470	215,439	19,882,372	5,801,372	994,119	232,055	34,808	266,863
2000 - 2001	20,271,094	49,624	310,148	28,622,784	8,351,691	1,431,139	334,068	50,110	384,178
2001 - 2002	20,544,753	50,294	314,335	29,009,192	8,464,438	1,450,460	338,578	50,787	389,364
2002 - 2003	20,822,107	50,973	318,578	29,400,816	8,578,708	1,470,041	343,148	51,472	394,621
2003 - 2004	21,103,206	51,661	322,879	29,797,727	8,694,521	1,489,886	347,781	52,167	399,948
2004 - 2005	21,388,099	52,358	327,238	30,199,996	8,811,897	1,510,000	352,476	52,871	405,347
2005 - 2006	21,676,838	53,065	331,656	30,607,696	8,930,857	1,530,385	357,234	53,585	410,819
2006 - 2007	21,969,476	53,781	336,133	31,020,900	9,051,424	1,551,045	362,057	54,309	416,366
2007 - 2008	22,266,064	54,507	340,671	31,439,682	9,173,618	1,571,984	366,945	55,042	421,986
2008 - 2009	22,566,656	55,243	345,270	31,864,118	9,297,462	1,593,206	371,898	55,785	427,683
2009 - 2010	22,871,305	55,989	349,931	32,294,283	9,422,978	1,614,714	376,919	56,538	433,457
2010 - 2011	23,180,068	56,745	354,655	32,730,256	9,550,188	1,636,513	382,008	57,301	439,309
2011 - 2012	23,492,999	57,511	359,443	33,172,115	9,679,116	1,658,606	387,165	58,075	445,239
2012 - 2013	23,810,154	58,287	364,295	33,619,938	9,809,784	1,680,997	392,391	58,859	451,250

## 2nd Scenario (A)

### The Internal Rate Of Return Of The Joint Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate + 5%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	600,000	320,000	180,000	1,100,000	423,600	-676,400
1999 - 2000	1,512,150	320,000	240,000	2,072,150	994,119	-1,078,031
2000 - 2001	1,942,069	320,000	180,000	2,442,069	1,431,139	-1,010,929
2001 - 2002	1,081,970	320,000	0	1,401,970	1,450,460	48,490
2002 - 2003	1,110,444	200,000	0	1,310,444	1,470,041	159,597
2003 - 2004	-970,831	200,000	0	-770,831	1,489,886	2,260,717
2004 - 2005	71,223	200,000	0	271,223	1,510,000	1,238,776
2005 - 2006	72,185	200,000	0	272,185	1,530,385	1,258,200
2006 - 2007	73,159	200,000	0	273,159	1,551,045	1,277,886
2007 - 2008	74,147	200,000	0	274,147	1,571,984	1,297,837
2008 - 2009	75,148	200,000	0	275,148	1,593,206	1,318,058
2009 - 2010	76,162	200,000	0	276,162	1,614,714	1,338,552
2010 - 2011	77,191	200,000	0	277,191	1,636,513	1,359,322
2011 - 2012	78,233	200,000	0	278,233	1,658,606	1,380,373
2012 - 2013	79,289	200,000	0	279,289	1,680,997	1,401,708

IRR (15 Years)

25.98%

## 2nd Scenario (A)

### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate - 5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	80%	4,800,000	1,200,000	1,200,000
1999 - 2000	8,000,000	14,081,000	190,094	75%	10,560,750	3,520,250	2,320,250
2000 - 2001	6,000,000	20,271,094	273,660	70%	14,189,765	6,081,328	2,561,078
2001 - 2002	0	20,544,753	277,354	65%	13,354,090	7,190,664	1,109,336
2002 - 2003	0	20,822,107	281,098	60%	12,493,264	8,328,843	1,138,179
2003 - 2004	0	21,103,206	284,893	65%	13,717,084	7,386,122	-942,721
2004 - 2005	0	21,388,099	288,739	65%	13,902,264	7,485,835	99,713
2005 - 2006	0	21,676,838	292,637	65%	14,089,945	7,586,893	101,059
2006 - 2007	0	21,969,476	296,588	65%	14,280,159	7,689,317	102,423
2007 - 2008	0	22,266,064	300,592	65%	14,472,941	7,793,122	103,806
2008 - 2009	0	22,566,656	304,650	65%	14,668,326	7,898,329	105,207
2009 - 2010	0	22,871,305	308,763	65%	14,866,349	8,004,957	106,627
2010 - 2011	0	23,180,068	312,931	65%	15,067,044	8,113,024	108,067
2011 - 2012	0	23,492,999	317,155	65%	15,270,449	8,222,550	109,526
2012 - 2013	0	23,810,154	321,437	65%	15,476,600	8,333,554	111,004
	1	2	4		3		

\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

## 2nd Scenario (A)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate - 5%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	423,600	98,880	14,832	113,712
1999 - 2000	14,081,000	34,470	215,439	19,882,372	5,801,372	994,119	232,055	34,808	266,863
2000 - 2001	20,271,094	49,624	310,148	28,622,784	8,351,691	1,431,139	334,068	50,110	384,178
2001 - 2002	20,544,753	50,294	314,335	29,009,192	8,464,438	1,450,460	338,578	50,787	389,364
2002 - 2003	20,822,107	50,973	318,578	29,400,816	8,578,708	1,470,041	343,148	51,472	394,621
2003 - 2004	21,103,206	51,661	322,879	29,797,727	8,694,521	1,489,886	347,781	52,167	399,948
2004 - 2005	21,388,099	52,358	327,238	30,199,996	8,811,897	1,510,000	352,476	52,871	405,347
2005 - 2006	21,676,838	53,065	331,656	30,607,696	8,930,857	1,530,385	357,234	53,585	410,819
2006 - 2007	21,969,476	53,781	336,133	31,020,900	9,051,424	1,551,045	362,057	54,309	416,366
2007 - 2008	22,266,064	54,507	340,671	31,439,682	9,173,618	1,571,984	366,945	55,042	421,986
2008 - 2009	22,566,656	55,243	345,270	31,864,118	9,297,462	1,593,206	371,898	55,785	427,683
2009 - 2010	22,871,305	55,989	349,931	32,294,283	9,422,978	1,614,714	376,919	56,538	433,457
2010 - 2011	23,180,068	56,745	354,655	32,730,256	9,550,188	1,636,513	382,008	57,301	439,309
2011 - 2012	23,492,999	57,511	359,443	33,172,115	9,679,116	1,658,606	387,165	58,075	445,239
2012 - 2013	23,810,154	58,287	364,295	33,619,938	9,809,784	1,680,997	392,391	58,859	451,250

## 2nd Scenario (A)

### Sensitivity Test Of The Internal Rate Of Return Of The Joint Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate - 5%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	1,200,000	320,000	180,000	1,700,000	423,600	-1,276,400
1999 - 2000	2,320,250	320,000	240,000	2,880,250	994,119	-1,886,131
2000 - 2001	2,561,078	320,000	180,000	3,061,078	1,431,139	-1,629,939
2001 - 2002	1,109,336	320,000	0	1,429,336	1,450,460	21,124
2002 - 2003	1,138,179	200,000	0	1,338,179	1,470,041	131,861
2003 - 2004	-942,721	200,000	0	-742,721	1,489,886	2,232,607
2004 - 2005	99,713	200,000	0	299,713	1,510,000	1,210,287
2005 - 2006	101,059	200,000	0	301,059	1,530,385	1,229,326
2006 - 2007	102,423	200,000	0	302,423	1,551,045	1,248,622
2007 - 2008	103,806	200,000	0	303,806	1,571,984	1,268,178
2008 - 2009	105,207	200,000	0	305,207	1,593,206	1,287,999
2009 - 2010	106,627	200,000	0	306,627	1,614,714	1,308,087
2010 - 2011	108,067	200,000	0	308,067	1,636,513	1,328,446
2011 - 2012	109,526	200,000	0	309,526	1,658,606	1,349,080
2012 - 2013	111,004	200,000	0	311,004	1,680,997	1,369,992

IRR (15 Years)

15.26%

**2nd Scenario (A)**  
**Evolution Of The Joint Rural Credit Fund (Revolving Fund)**

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value + 10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	85%	5,100,000	900,000	900,000
1999 - 2000	8,000,000	14,081,000	190,094	80%	11,264,800	2,816,200	1,916,200
2000 - 2001	6,000,000	20,271,094	273,660	75%	15,203,320	5,067,773	2,251,573
2001 - 2002	0	20,544,753	277,354	70%	14,381,327	6,163,426	1,095,653
2002 - 2003	0	20,822,107	281,098	65%	13,534,370	7,287,738	1,124,312
2003 - 2004	0	21,103,206	284,893	70%	14,772,244	6,330,962	-956,776
2004 - 2005	0	21,388,099	288,739	70%	14,971,669	6,416,430	85,468
2005 - 2006	0	21,676,838	292,637	70%	15,173,787	6,503,052	86,622
2006 - 2007	0	21,969,476	296,588	70%	15,378,633	6,590,843	87,791
2007 - 2008	0	22,266,064	300,592	70%	15,586,245	6,679,819	88,976
2008 - 2009	0	22,566,656	304,650	70%	15,796,659	6,769,997	90,178
2009 - 2010	0	22,871,305	308,763	70%	16,009,914	6,861,392	91,395
2010 - 2011	0	23,180,068	312,931	70%	16,226,048	6,954,020	92,629
2011 - 2012	0	23,492,999	317,155	70%	16,445,099	7,047,900	93,879
2012 - 2013	0	23,810,154	321,437	70%	16,667,108	7,143,046	95,147

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\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

## 2nd Scenario (A)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value + 10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	9,319,200	3,319,200	465,960	132,768	19,915	152,683
1999 - 2000	14,081,000	34,470	215,439	21,870,609	7,789,609	1,093,530	311,584	46,738	358,322
2000 - 2001	20,271,094	49,624	310,148	31,485,062	11,213,969	1,574,253	448,559	67,284	515,843
2001 - 2002	20,544,753	50,294	314,335	31,910,111	11,365,358	1,595,506	454,614	68,192	522,806
2002 - 2003	20,822,107	50,973	318,578	32,340,897	11,518,790	1,617,045	460,752	69,113	529,864
2003 - 2004	21,103,206	51,661	322,879	32,777,499	11,674,293	1,638,875	466,972	70,046	537,018
2004 - 2005	21,388,099	52,358	327,238	33,219,996	11,831,896	1,661,000	473,276	70,991	544,267
2005 - 2006	21,676,838	53,065	331,656	33,668,466	11,991,627	1,683,423	479,665	71,950	551,615
2006 - 2007	21,969,476	53,781	336,133	34,122,990	12,153,514	1,706,149	486,141	72,921	559,062
2007 - 2008	22,266,064	54,507	340,671	34,583,650	12,317,586	1,729,183	492,703	73,906	566,609
2008 - 2009	22,566,656	55,243	345,270	35,050,529	12,483,874	1,752,526	499,355	74,903	574,258
2009 - 2010	22,871,305	55,989	349,931	35,523,712	12,652,406	1,776,186	506,096	75,914	582,011
2010 - 2011	23,180,068	56,745	354,655	36,003,282	12,823,214	1,800,164	512,929	76,939	589,868
2011 - 2012	23,492,999	57,511	359,443	36,489,326	12,996,327	1,824,466	519,853	77,978	597,831
2012 - 2013	23,810,154	58,287	364,295	36,981,932	13,171,777	1,849,097	526,871	79,031	605,902

## 2nd Scenario (A)

### The Internal Rate Of Return Of The Joint Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value + 10%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1997 - 1998	900,000	320,000	180,000	1,400,000	465,960	-934,040
1998 - 1999	1,916,200	320,000	240,000	2,476,200	1,093,530	-1,382,670
1999 - 2000	2,251,573	320,000	180,000	2,751,573	1,574,253	-1,177,320
2000 - 2001	1,095,653	320,000	0	1,415,653	1,595,506	179,853
2001 - 2002	1,124,312	200,000	0	1,324,312	1,617,045	292,733
2002 - 2003	-956,776	200,000	0	-756,776	1,638,875	2,395,651
2003 - 2004	85,468	200,000	0	285,468	1,661,000	1,375,532
2004 - 2005	86,622	200,000	0	286,622	1,683,423	1,396,801
2005 - 2006	87,791	200,000	0	287,791	1,706,149	1,418,358
2006 - 2007	88,976	200,000	0	288,976	1,729,183	1,440,206
2007 - 2008	90,178	200,000	0	290,178	1,752,526	1,462,349
2008 - 2009	91,395	200,000	0	291,395	1,776,186	1,484,791
2009 - 2010	92,629	200,000	0	292,629	1,800,164	1,507,535
2010 - 2011	93,879	200,000	0	293,879	1,824,466	1,530,587
2011 - 2012	95,147	200,000	0	295,147	1,849,097	1,553,950

IRR (15 Years)

23.75%



## 2nd Scenario (A)

### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value -10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	85%	5,100,000	900,000	900,000
1999 - 2000	8,000,000	14,081,000	190,094	80%	11,264,800	2,816,200	1,916,200
2000 - 2001	6,000,000	20,271,094	273,660	75%	15,203,320	5,067,773	2,251,573
2001 - 2002	0	20,544,753	277,354	70%	14,381,327	6,163,426	1,095,653
2002 - 2003	0	20,822,107	281,098	65%	13,534,370	7,287,738	1,124,312
2003 - 2004	0	21,103,206	284,893	70%	14,772,244	6,330,962	-956,776
2004 - 2005	0	21,388,099	288,739	70%	14,971,669	6,416,430	85,468
2005 - 2006	0	21,676,838	292,637	70%	15,173,787	6,503,052	86,622
2006 - 2007	0	21,969,476	296,588	70%	15,378,633	6,590,843	87,791
2007 - 2008	0	22,266,064	300,592	70%	15,586,245	6,679,819	88,976
2008 - 2009	0	22,566,656	304,650	70%	15,796,659	6,769,997	90,178
2009 - 2010	0	22,871,305	308,763	70%	16,009,914	6,861,392	91,395
2010 - 2011	0	23,180,068	312,931	70%	16,226,048	6,954,020	92,629
2011 - 2012	0	23,492,999	317,155	70%	16,445,099	7,047,900	93,879
2012 - 2013	0	23,810,154	321,437	70%	16,667,108	7,143,046	95,147

## 2nd Scenario (A)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value -10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	7,624,800	1,624,800	381,240	64,992	9,749	74,741
1999 - 2000	14,081,000	34,470	215,439	17,894,135	3,813,135	894,707	152,525	22,879	175,404
2000 - 2001	20,271,094	49,624	310,148	25,760,506	5,489,412	1,288,025	219,576	32,936	252,513
2001 - 2002	20,544,753	50,294	314,335	26,108,272	5,563,519	1,305,414	222,541	33,381	255,922
2002 - 2003	20,822,107	50,973	318,578	26,460,734	5,638,627	1,323,037	225,545	33,832	259,377
2003 - 2004	21,103,206	51,661	322,879	26,817,954	5,714,748	1,340,898	228,590	34,288	262,878
2004 - 2005	21,388,099	52,358	327,238	27,179,996	5,791,897	1,359,000	231,676	34,751	266,427
2005 - 2006	21,676,838	53,065	331,656	27,546,926	5,870,088	1,377,346	234,804	35,221	270,024
2006 - 2007	21,969,476	53,781	336,133	27,918,810	5,949,334	1,395,940	237,973	35,696	273,669
2007 - 2008	22,266,064	54,507	340,671	28,295,714	6,029,650	1,414,786	241,186	36,178	277,364
2008 - 2009	22,566,656	55,243	345,270	28,677,706	6,111,050	1,433,885	244,442	36,666	281,108
2009 - 2010	22,871,305	55,989	349,931	29,064,855	6,193,550	1,453,243	247,742	37,161	284,903
2010 - 2011	23,180,068	56,745	354,655	29,457,231	6,277,162	1,472,862	251,086	37,663	288,749
2011 - 2012	23,492,999	57,511	359,443	29,854,903	6,361,904	1,492,745	254,476	38,171	292,648
2012 - 2013	23,810,154	58,287	364,295	30,257,944	6,447,790	1,512,897	257,912	38,687	296,598

## 2nd Scenario (A)

### The Internal Rate Of Return Of The Joint Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value -10%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	900,000	320,000	180,000	1,400,000	381,240	-1,018,760
1999 - 2000	1,916,200	320,000	240,000	2,476,200	894,707	-1,581,493
2000 - 2001	2,251,573	320,000	180,000	2,751,573	1,288,025	-1,463,548
2001 - 2002	1,095,653	320,000	0	1,415,653	1,305,414	-110,239
2002 - 2003	1,124,312	200,000	0	1,324,312	1,323,037	-1,275
2003 - 2004	-956,776	200,000	0	-756,776	1,340,898	2,097,674
2004 - 2005	85,468	200,000	0	285,468	1,359,000	1,073,532
2005 - 2006	86,622	200,000	0	286,622	1,377,346	1,090,725
2006 - 2007	87,791	200,000	0	287,791	1,395,940	1,108,149
2007 - 2008	88,976	200,000	0	288,976	1,414,786	1,125,809
2008 - 2009	90,178	200,000	0	290,178	1,433,885	1,143,708
2009 - 2010	91,395	200,000	0	291,395	1,453,243	1,161,848
2010 - 2011	92,629	200,000	0	292,629	1,472,862	1,180,233
2011 - 2012	93,879	200,000	0	293,879	1,492,745	1,198,866
2012 - 2013	95,147	200,000	0	295,147	1,512,897	1,217,751

IRR (15 Years)

15.66%

**2nd Scenario (A)**  
**Evolution Of The Joint Rural Credit Fund (Revolving Fund)**

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	85%	5,100,000	900,000	900,000
1999 - 2000	8,000,000	14,081,000	190,094	80%	11,264,800	2,816,200	1,916,200
2000 - 2001	6,000,000	20,271,094	273,660	75%	15,203,320	5,067,773	2,251,573
2001 - 2002	0	20,544,753	277,354	70%	14,381,327	6,163,426	1,095,653
2002 - 2003	0	20,822,107	281,098	65%	13,534,370	7,287,738	1,124,312
2003 - 2004	0	21,103,206	284,893	70%	14,772,244	6,330,962	-956,776
2004 - 2005	0	21,388,099	288,739	70%	14,971,669	6,416,430	85,468
2005 - 2006	0	21,676,838	292,637	70%	15,173,787	6,503,052	86,622
2006 - 2007	0	21,969,476	296,588	70%	15,378,633	6,590,843	87,791
2007 - 2008	0	22,266,064	300,592	70%	15,586,245	6,679,819	88,976
2008 - 2009	0	22,566,656	304,650	70%	15,796,659	6,769,997	90,178
2009 - 2010	0	22,871,305	308,763	70%	16,009,914	6,861,392	91,395
2010 - 2011	0	23,180,068	312,931	70%	16,226,048	6,954,020	92,629
2011 - 2012	0	23,492,999	317,155	70%	16,445,099	7,047,900	93,879
2012 - 2013	0	23,810,154	321,437	70%	16,667,108	7,143,046	95,147

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\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

## 2nd Scenario (A)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	635,400	98,880	14,832	113,712
1999 - 2000	14,081,000	34,470	215,439	19,882,372	5,801,372	1,491,178	232,055	34,808	266,863
2000 - 2001	20,271,094	49,624	310,148	28,622,784	8,351,691	2,146,709	334,068	50,110	384,178
2001 - 2002	20,544,753	50,294	314,335	29,009,192	8,464,438	2,175,689	338,578	50,787	389,364
2002 - 2003	20,822,107	50,973	318,578	29,400,816	8,578,708	2,205,061	343,148	51,472	394,621
2003 - 2004	21,103,206	51,661	322,879	29,797,727	8,694,521	2,234,830	347,781	52,167	399,948
2004 - 2005	21,388,099	52,358	327,238	30,199,996	8,811,897	2,265,000	352,476	52,871	405,347
2005 - 2006	21,676,838	53,065	331,656	30,607,696	8,930,857	2,295,577	357,234	53,585	410,819
2006 - 2007	21,969,476	53,781	336,133	31,020,900	9,051,424	2,326,567	362,057	54,309	416,366
2007 - 2008	22,266,064	54,507	340,671	31,439,682	9,173,618	2,357,976	366,945	55,042	421,986
2008 - 2009	22,566,656	55,243	345,270	31,864,118	9,297,462	2,389,809	371,898	55,785	427,683
2009 - 2010	22,871,305	55,989	349,931	32,294,283	9,422,978	2,422,071	376,919	56,538	433,457
2010 - 2011	23,180,068	56,745	354,655	32,730,256	9,550,188	2,454,769	382,008	57,301	439,309
2011 - 2012	23,492,999	57,511	359,443	33,172,115	9,679,116	2,487,909	387,165	58,075	445,239
2012 - 2013	23,810,154	58,287	364,295	33,619,938	9,809,784	2,521,495	392,391	58,859	451,250

## 2nd Scenario (A)

### Sensitivity Test Of The Internal Rate Of Return Of The Joint Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	900,000	320,000	180,000	1,400,000	635,400	-764,600
1999 - 2000	1,916,200	320,000	240,000	2,476,200	1,491,178	-985,022
2000 - 2001	2,251,573	320,000	180,000	2,751,573	2,146,709	-604,865
2001 - 2002	1,095,653	320,000	0	1,415,653	2,175,689	760,037
2002 - 2003	1,124,312	200,000	0	1,324,312	2,205,061	880,750
2003 - 2004	-956,776	200,000	0	-756,776	2,234,830	2,991,605
2004 - 2005	85,468	200,000	0	285,468	2,265,000	1,979,532
2005 - 2006	86,622	200,000	0	286,622	2,295,577	2,008,955
2006 - 2007	87,791	200,000	0	287,791	2,326,567	2,038,776
2007 - 2008	88,976	200,000	0	288,976	2,357,976	2,069,000
2008 - 2009	90,178	200,000	0	290,178	2,389,809	2,099,631
2009 - 2010	91,395	200,000	0	291,395	2,422,071	2,130,676
2010 - 2011	92,629	200,000	0	292,629	2,454,769	2,162,140
2011 - 2012	93,879	200,000	0	293,879	2,487,909	2,194,029
2012 - 2013	95,147	200,000	0	295,147	2,521,495	2,226,349

IRR (15 Years)

42.72%

## 2nd Scenario (A)

### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	85%	5,100,000	900,000	900,000
1999 - 2000	8,000,000	14,081,000	190,094	80%	11,264,800	2,816,200	1,916,200
2000 - 2001	6,000,000	20,271,094	273,660	75%	15,203,320	5,067,773	2,251,573
2001 - 2002	0	20,544,753	277,354	70%	14,381,327	6,163,426	1,095,653
2002 - 2003	0	20,822,107	281,098	65%	13,534,370	7,287,738	1,124,312
2003 - 2004	0	21,103,206	284,893	70%	14,772,244	6,330,962	-956,776
2004 - 2005	0	21,388,099	288,739	70%	14,971,669	6,416,430	85,468
2005 - 2006	0	21,676,838	292,637	70%	15,173,787	6,503,052	86,622
2006 - 2007	0	21,969,476	296,588	70%	15,378,633	6,590,843	87,791
2007 - 2008	0	22,266,064	300,592	70%	15,586,245	6,679,819	88,976
2008 - 2009	0	22,566,656	304,650	70%	15,796,659	6,769,997	90,178
2009 - 2010	0	22,871,305	308,763	70%	16,009,914	6,861,392	91,395
2010 - 2011	0	23,180,068	312,931	70%	16,226,048	6,954,020	92,629
2011 - 2012	0	23,492,999	317,155	70%	16,445,099	7,047,900	93,879
2012 - 2013	0	23,810,154	321,437	70%	16,667,108	7,143,046	95,147

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\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

## 2nd Scenario (A)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	847,200	98,880	14,832	113,712
1999 - 2000	14,081,000	34,470	215,439	19,882,372	5,801,372	1,988,237	232,055	34,808	266,863
2000 - 2001	20,271,094	49,624	310,148	28,622,784	8,351,691	2,862,278	334,068	50,110	384,178
2001 - 2002	20,544,753	50,294	314,335	29,009,192	8,464,438	2,900,919	338,578	50,787	389,364
2002 - 2003	20,822,107	50,973	318,578	29,400,816	8,578,708	2,940,082	343,148	51,472	394,621
2003 - 2004	21,103,206	51,661	322,879	29,797,727	8,694,521	2,979,773	347,781	52,167	399,948
2004 - 2005	21,388,099	52,358	327,238	30,199,996	8,811,897	3,020,000	352,476	52,871	405,347
2005 - 2006	21,676,838	53,065	331,656	30,607,696	8,930,857	3,060,770	357,234	53,585	410,819
2006 - 2007	21,969,476	53,781	336,133	31,020,900	9,051,424	3,102,090	362,057	54,309	416,366
2007 - 2008	22,266,064	54,507	340,671	31,439,682	9,173,618	3,143,968	366,945	55,042	421,986
2008 - 2009	22,566,656	55,243	345,270	31,864,118	9,297,462	3,186,412	371,898	55,785	427,683
2009 - 2010	22,871,305	55,989	349,931	32,294,283	9,422,978	3,229,428	376,919	56,538	433,457
2010 - 2011	23,180,068	56,745	354,655	32,730,256	9,550,188	3,273,026	382,008	57,301	439,309
2011 - 2012	23,492,999	57,511	359,443	33,172,115	9,679,116	3,317,211	387,165	58,075	445,239
2012 - 2013	23,810,154	58,287	364,295	33,619,938	9,809,784	3,361,994	392,391	58,859	451,250



**2nd Scenario (A)**  
**The Internal Rate Of Return Of The Joint Rural Credit Fund**

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 10%)

Year	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1997 - 1998	900,000	320,000	180,000	1,400,000	847,200	-552,800
1998 - 1999	1,916,200	320,000	240,000	2,476,200	1,988,237	-487,963
1999 - 2000	2,251,573	320,000	180,000	2,751,573	2,862,278	110,705
2000 - 2001	1,095,653	320,000	0	1,415,653	2,900,919	1,485,267
2001 - 2002	1,124,312	200,000	0	1,324,312	2,940,082	1,615,770
2002 - 2003	-956,776	200,000	0	-756,776	2,979,773	3,736,549
2003 - 2004	85,468	200,000	0	285,468	3,020,000	2,734,532
2004 - 2005	86,622	200,000	0	286,622	3,060,770	2,774,148
2005 - 2006	87,791	200,000	0	287,791	3,102,090	2,814,299
2006 - 2007	88,976	200,000	0	288,976	3,143,968	2,854,992
2007 - 2008	90,178	200,000	0	290,178	3,186,412	2,896,234
2008 - 2009	91,395	200,000	0	291,395	3,229,428	2,938,033
2009 - 2010	92,629	200,000	0	292,629	3,273,026	2,980,397
2010 - 2011	93,879	200,000	0	293,879	3,317,211	3,023,332
2011 - 2012	95,147	200,000	0	295,147	3,361,994	3,066,847

IRR (15 Years)

79.99%

II – C  
TESTS OF SENSIBILITY  
2<sup>ND</sup> SCENARIO (B)

**2nd Scenario (B)**  
**Evolution Of The Joint Rural Credit Fund (Revolving Fund)**

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Reimbursement Rate - 5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	80%	4,800,000	1,200,000	1,200,000	600,000
1999 - 2000	8,000,000	14,081,000	190,094	75%	10,560,750	3,520,250	2,320,250	1,160,125
2000 - 2001	6,000,000	20,271,094	273,660	70%	14,189,765	6,081,328	2,561,078	1,280,539
2001 - 2002	0	20,544,753	277,354	65%	13,354,090	7,190,664	1,109,336	554,668
2002 - 2003	0	20,822,107	281,098	60%	12,493,264	8,328,843	1,138,179	569,090
2003 - 2004	0	21,103,206	284,893	65%	13,717,084	7,386,122	-942,721	-471,360
2004 - 2005	0	21,388,099	288,739	65%	13,902,264	7,485,835	99,713	49,856
2005 - 2006	0	21,676,838	292,637	65%	14,089,945	7,586,893	101,059	50,529
2006 - 2007	0	21,969,476	296,588	65%	14,280,159	7,689,317	102,423	51,212
2007 - 2008	0	22,266,064	300,592	65%	14,472,941	7,793,122	103,806	51,903
2008 - 2009	0	22,566,656	304,650	65%	14,668,326	7,898,329	105,207	52,604
2009 - 2010	0	22,871,305	308,763	65%	14,866,349	8,004,957	106,627	53,314
2010 - 2011	0	23,180,068	312,931	65%	15,067,044	8,113,024	108,067	54,033
2011 - 2012	0	23,492,999	317,155	65%	15,270,449	8,222,550	109,526	54,763
2012 - 2013	0	23,810,154	321,437	65%	15,476,600	8,333,554	111,004	55,502

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\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

## 2nd Scenario (B)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Reimbursement Rate - 5%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	423,600	98,880	14,832	113,712
1999 - 2000	14,081,000	34,470	215,439	19,882,372	5,801,372	994,119	232,055	34,808	266,863
2000 - 2001	20,271,094	49,624	310,148	28,622,784	8,351,691	1,431,139	334,068	50,110	384,178
2001 - 2002	20,544,753	50,294	314,335	29,009,192	8,464,438	1,450,460	338,578	50,787	389,364
2002 - 2003	20,822,107	50,973	318,578	29,400,816	8,578,708	1,470,041	343,148	51,472	394,621
2003 - 2004	21,103,206	51,661	322,879	29,797,727	8,694,521	1,489,886	347,781	52,167	399,948
2004 - 2005	21,388,099	52,358	327,238	30,199,996	8,811,897	1,510,000	352,476	52,871	405,347
2005 - 2006	21,676,838	53,065	331,656	30,607,696	8,930,857	1,530,385	357,234	53,585	410,819
2006 - 2007	21,969,476	53,781	336,133	31,020,900	9,051,424	1,551,045	362,057	54,309	416,366
2007 - 2008	22,266,064	54,507	340,671	31,439,682	9,173,618	1,571,984	366,945	55,042	421,986
2008 - 2009	22,566,656	55,243	345,270	31,864,118	9,297,462	1,593,206	371,898	55,785	427,683
2009 - 2010	22,871,305	55,989	349,931	32,294,283	9,422,978	1,614,714	376,919	56,538	433,457
2010 - 2011	23,180,068	56,745	354,655	32,730,256	9,550,188	1,636,513	382,008	57,301	439,309
2011 - 2012	23,492,999	57,511	359,443	33,172,115	9,679,116	1,658,606	387,165	58,075	445,239
2012 - 2013	23,810,154	58,287	364,295	33,619,938	9,809,784	1,680,997	392,391	58,859	451,250

## 2nd Scenario (B)

### Sensitivity Test Of The Internal Rate Of Return Of The Joint Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Reimbursement Rate - 5%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	600,000	320,000	180,000	1,100,000	423,600	-676,400
1999 - 2000	1,160,125	320,000	240,000	1,720,125	994,119	-726,006
2000 - 2001	1,280,539	320,000	180,000	1,780,539	1,431,139	-349,400
2001 - 2002	554,668	320,000	0	874,668	1,450,460	575,792
2002 - 2003	569,090	200,000	0	769,090	1,470,041	700,951
2003 - 2004	-471,360	200,000	0	-271,360	1,489,886	1,761,247
2004 - 2005	49,856	200,000	0	249,856	1,510,000	1,260,143
2005 - 2006	50,529	200,000	0	250,529	1,530,385	1,279,855
2006 - 2007	51,212	200,000	0	251,212	1,551,045	1,299,833
2007 - 2008	51,903	200,000	0	251,903	1,571,984	1,320,081
2008 - 2009	52,604	200,000	0	252,604	1,593,206	1,340,602
2009 - 2010	53,314	200,000	0	253,314	1,614,714	1,361,400
2010 - 2011	54,033	200,000	0	254,033	1,636,513	1,382,479
2011 - 2012	54,763	200,000	0	254,763	1,658,606	1,403,843
2012 - 2013	55,502	200,000	0	255,502	1,680,997	1,425,495

IRR (15 Years)

38.47%

**2nd Scenario (B)**  
**Evolution Of The Joint Rural Credit Fund (Revolving Fund)**

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Production Value + 10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	85%	5,100,000	900,000	900,000	450,000
1999 - 2000	8,000,000	14,081,000	190,094	80%	11,264,800	2,816,200	1,916,200	958,100
2000 - 2001	6,000,000	20,271,094	273,660	75%	15,203,320	5,067,773	2,251,573	1,125,787
2001 - 2002	0	20,544,753	277,354	70%	14,381,327	6,163,426	1,095,653	547,826
2002 - 2003	0	20,822,107	281,098	65%	13,534,370	7,287,738	1,124,312	562,156
2003 - 2004	0	21,103,206	284,893	70%	14,772,244	6,330,962	-956,776	-478,388
2004 - 2005	0	21,388,099	288,739	70%	14,971,669	6,416,430	85,468	42,734
2005 - 2006	0	21,676,838	292,637	70%	15,173,787	6,503,052	86,622	43,311
2006 - 2007	0	21,969,476	296,588	70%	15,378,633	6,590,843	87,791	43,896
2007 - 2008	0	22,266,064	300,592	70%	15,586,245	6,679,819	88,976	44,488
2008 - 2009	0	22,566,656	304,650	70%	15,796,659	6,769,997	90,178	45,089
2009 - 2010	0	22,871,305	308,763	70%	16,009,914	6,861,392	91,395	45,697
2010 - 2011	0	23,180,068	312,931	70%	16,226,048	6,954,020	92,629	46,314
2011 - 2012	0	23,492,999	317,155	70%	16,445,099	7,047,900	93,879	46,940
2012 - 2013	0	23,810,154	321,437	70%	16,667,108	7,143,046	95,147	47,573
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\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

## 2nd Scenario (B)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Production Value + 10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	9,319,200	3,319,200	465,960	132,768	19,915	152,683
1999 - 2000	14,081,000	34,470	215,439	21,870,609	7,789,609	1,093,530	311,584	46,738	358,322
2000 - 2001	20,271,094	49,624	310,148	31,485,062	11,213,969	1,574,253	448,559	67,284	515,843
2001 - 2002	20,544,753	50,294	314,335	31,910,111	11,365,358	1,595,506	454,614	68,192	522,806
2002 - 2003	20,822,107	50,973	318,578	32,340,897	11,518,790	1,617,045	460,752	69,113	529,864
2003 - 2004	21,103,206	51,661	322,879	32,777,499	11,674,293	1,638,875	466,972	70,046	537,018
2004 - 2005	21,388,099	52,358	327,238	33,219,996	11,831,896	1,661,000	473,276	70,991	544,267
2005 - 2006	21,676,838	53,065	331,656	33,668,466	11,991,627	1,683,423	479,665	71,950	551,615
2006 - 2007	21,969,476	53,781	336,133	34,122,990	12,153,514	1,706,149	486,141	72,921	559,062
2007 - 2008	22,266,064	54,507	340,671	34,583,650	12,317,586	1,729,183	492,703	73,906	566,609
2008 - 2009	22,566,656	55,243	345,270	35,050,529	12,483,874	1,752,526	499,355	74,903	574,258
2009 - 2010	22,871,305	55,989	349,931	35,523,712	12,652,406	1,776,186	506,096	75,914	582,011
2010 - 2011	23,180,068	56,745	354,655	36,003,282	12,823,214	1,800,164	512,929	76,939	589,868
2011 - 2012	23,492,999	57,511	359,443	36,489,326	12,996,327	1,824,466	519,853	77,978	597,831
2012 - 2013	23,810,154	58,287	364,295	36,981,932	13,171,777	1,849,097	526,871	79,031	605,902

## 2nd Scenario (B)

### The Internal Rate Of Return Of The Joint Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Production Value + 10%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1997 - 1998	450,000	320,000	180,000	950,000	465,960	-484,040
1998 - 1999	958,100	320,000	240,000	1,518,100	1,093,530	-424,570
1999 - 2000	1,125,787	320,000	180,000	1,625,787	1,574,253	-51,534
2000 - 2001	547,826	320,000	0	867,826	1,595,506	727,679
2001 - 2002	562,156	200,000	0	762,156	1,617,045	854,889
2002 - 2003	-478,388	200,000	0	-278,388	1,638,875	1,917,263
2003 - 2004	42,734	200,000	0	242,734	1,661,000	1,418,266
2004 - 2005	43,311	200,000	0	243,311	1,683,423	1,440,112
2005 - 2006	43,896	200,000	0	243,896	1,706,149	1,462,254
2006 - 2007	44,488	200,000	0	244,488	1,729,183	1,484,694
2007 - 2008	45,089	200,000	0	245,089	1,752,526	1,507,438
2008 - 2009	45,697	200,000	0	245,697	1,776,186	1,530,488
2009 - 2010	46,314	200,000	0	246,314	1,800,164	1,553,850
2010 - 2011	46,940	200,000	0	246,940	1,824,466	1,577,527
2011 - 2012	47,573	200,000	0	247,573	1,849,097	1,601,523

IRR (15 Years)

57.71%

Republic of Lebanon

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(C.P.S.P.S.)



**2nd Scenario (B)**  
**Evolution Of The Joint Rural Credit Fund (Revolving Fund)**

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Production Value -10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	85%	5,100,000	900,000	900,000	450,000
1999 - 2000	8,000,000	14,081,000	190,094	80%	11,264,800	2,816,200	1,916,200	958,100
2000 - 2001	6,000,000	20,271,094	273,660	75%	15,203,320	5,067,773	2,251,573	1,125,787
2001 - 2002	0	20,544,753	277,354	70%	14,381,327	6,163,426	1,095,653	547,826
2002 - 2003	0	20,822,107	281,098	65%	13,534,370	7,287,738	1,124,312	562,156
2003 - 2004	0	21,103,206	284,893	70%	14,772,244	6,330,962	-956,776	-478,388
2004 - 2005	0	21,388,099	288,739	70%	14,971,669	6,416,430	85,468	42,734
2005 - 2006	0	21,676,838	292,637	70%	15,173,787	6,503,052	86,622	43,311
2006 - 2007	0	21,969,476	296,588	70%	15,378,633	6,590,843	87,791	43,896
2007 - 2008	0	22,266,064	300,592	70%	15,586,245	6,679,819	88,976	44,488
2008 - 2009	0	22,566,656	304,650	70%	15,796,659	6,769,997	90,178	45,089
2009 - 2010	0	22,871,305	308,763	70%	16,009,914	6,861,392	91,395	45,697
2010 - 2011	0	23,180,068	312,931	70%	16,226,048	6,954,020	92,629	46,314
2011 - 2012	0	23,492,999	317,155	70%	16,445,099	7,047,900	93,879	46,940
2012 - 2013	0	23,810,154	321,437	70%	16,667,108	7,143,046	95,147	47,573

\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

## 2nd Scenario (B)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Production Value -10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	7,624,800	1,624,800	381,240	64,992	9,749	74,741
1999 - 2000	14,081,000	34,470	215,439	17,894,135	3,813,135	894,707	152,525	22,879	175,404
2000 - 2001	20,271,094	49,624	310,148	25,760,506	5,489,412	1,288,025	219,576	32,936	252,513
2001 - 2002	20,544,753	50,294	314,335	26,108,272	5,563,519	1,305,414	222,541	33,381	255,922
2002 - 2003	20,822,107	50,973	318,578	26,460,734	5,638,627	1,323,037	225,545	33,832	259,377
2003 - 2004	21,103,206	51,661	322,879	26,817,954	5,714,748	1,340,898	228,590	34,288	262,878
2004 - 2005	21,388,099	52,358	327,238	27,179,996	5,791,897	1,359,000	231,676	34,751	266,427
2005 - 2006	21,676,838	53,065	331,656	27,546,926	5,870,088	1,377,346	234,804	35,221	270,024
2006 - 2007	21,969,476	53,781	336,133	27,918,810	5,949,334	1,395,940	237,973	35,696	273,669
2007 - 2008	22,266,064	54,507	340,671	28,295,714	6,029,650	1,414,786	241,186	36,178	277,364
2008 - 2009	22,566,656	55,243	345,270	28,677,706	6,111,050	1,433,885	244,442	36,666	281,108
2009 - 2010	22,871,305	55,989	349,931	29,064,855	6,193,550	1,453,243	247,742	37,161	284,903
2010 - 2011	23,180,068	56,745	354,655	29,457,231	6,277,162	1,472,862	251,086	37,663	288,749
2011 - 2012	23,492,999	57,511	359,443	29,854,903	6,361,904	1,492,745	254,476	38,171	292,648
2012 - 2013	23,810,154	58,287	364,295	30,257,944	6,447,790	1,512,897	257,912	38,687	296,598

## 2nd Scenario (B)

### The Internal Rate Of Return Of The Joint Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Production Value -10%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	450,000	320,000	180,000	950,000	381,240	-568,760
1999 - 2000	958,100	320,000	240,000	1,518,100	894,707	-623,393
2000 - 2001	1,125,787	320,000	180,000	1,625,787	1,288,025	-337,761
2001 - 2002	547,826	320,000	0	867,826	1,305,414	437,587
2002 - 2003	562,156	200,000	0	762,156	1,323,037	560,881
2003 - 2004	-478,388	200,000	0	-278,388	1,340,898	1,619,286
2004 - 2005	42,734	200,000	0	242,734	1,359,000	1,116,266
2005 - 2006	43,311	200,000	0	243,311	1,377,346	1,134,035
2006 - 2007	43,896	200,000	0	243,896	1,395,940	1,152,045
2007 - 2008	44,488	200,000	0	244,488	1,414,786	1,170,298
2008 - 2009	45,089	200,000	0	245,089	1,433,885	1,188,797
2009 - 2010	45,697	200,000	0	245,697	1,453,243	1,207,545
2010 - 2011	46,314	200,000	0	246,314	1,472,862	1,226,547
2011 - 2012	46,940	200,000	0	246,940	1,492,745	1,245,806
2012 - 2013	47,573	200,000	0	247,573	1,512,897	1,265,324

IRR (15 Years)

38.43%

## 2nd Scenario (B)

### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	85%	5,100,000	900,000	900,000	450,000
1999 - 2000	8,000,000	14,081,000	190,094	80%	11,264,800	2,816,200	1,916,200	958,100
2000 - 2001	6,000,000	20,271,094	273,660	75%	15,203,320	5,067,773	2,251,573	1,125,787
2001 - 2002	0	20,544,753	277,354	70%	14,381,327	6,163,426	1,095,653	547,826
2002 - 2003	0	20,822,107	281,098	65%	13,534,370	7,287,738	1,124,312	562,156
2003 - 2004	0	21,103,206	284,893	70%	14,772,244	6,330,962	-956,776	-478,388
2004 - 2005	0	21,388,099	288,739	70%	14,971,669	6,416,430	85,468	42,734
2005 - 2006	0	21,676,838	292,637	70%	15,173,787	6,503,052	86,622	43,311
2006 - 2007	0	21,969,476	296,588	70%	15,378,633	6,590,843	87,791	43,896
2007 - 2008	0	22,266,064	300,592	70%	15,586,245	6,679,819	88,976	44,488
2008 - 2009	0	22,566,656	304,650	70%	15,796,659	6,769,997	90,178	45,089
2009 - 2010	0	22,871,305	308,763	70%	16,009,914	6,861,392	91,395	45,697
2010 - 2011	0	23,180,068	312,931	70%	16,226,048	6,954,020	92,629	46,314
2011 - 2012	0	23,492,999	317,155	70%	16,445,099	7,047,900	93,879	46,940
2012 - 2013	0	23,810,154	321,437	70%	16,667,108	7,143,046	95,147	47,573
	1	2	4		3			

\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

## 2nd Scenario (B)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	635,400	98,880	14,832	113,712
1999 - 2000	14,081,000	34,470	215,439	19,882,372	5,801,372	1,491,178	232,055	34,808	266,863
2000 - 2001	20,271,094	49,624	310,148	28,622,784	8,351,691	2,146,709	334,068	50,110	384,178
2001 - 2002	20,544,753	50,294	314,335	29,009,192	8,464,438	2,175,689	338,578	50,787	389,364
2002 - 2003	20,822,107	50,973	318,578	29,400,816	8,578,708	2,205,061	343,148	51,472	394,621
2003 - 2004	21,103,206	51,661	322,879	29,797,727	8,694,521	2,234,830	347,781	52,167	399,948
2004 - 2005	21,388,099	52,358	327,238	30,199,996	8,811,897	2,265,000	352,476	52,871	405,347
2005 - 2006	21,676,838	53,065	331,656	30,607,696	8,930,857	2,295,577	357,234	53,585	410,819
2006 - 2007	21,969,476	53,781	336,133	31,020,900	9,051,424	2,326,567	362,057	54,309	416,366
2007 - 2008	22,266,064	54,507	340,671	31,439,682	9,173,618	2,357,976	366,945	55,042	421,986
2008 - 2009	22,566,656	55,243	345,270	31,864,118	9,297,462	2,389,809	371,898	55,785	427,683
2009 - 2010	22,871,305	55,989	349,931	32,294,283	9,422,978	2,422,071	376,919	56,538	433,457
2010 - 2011	23,180,068	56,745	354,655	32,730,256	9,550,188	2,454,769	382,008	57,301	439,309
2011 - 2012	23,492,999	57,511	359,443	33,172,115	9,679,116	2,487,909	387,165	58,075	445,239
2012 - 2013	23,810,154	58,287	364,295	33,619,938	9,809,784	2,521,495	392,391	58,859	451,250

**2nd Scenario (B)**  
**Sensitivity Test Of The Internal Rate Of Return Of The Joint Rural Credit Fund**  
 (GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	450,000	320,000	180,000	950,000	635,400	-314,600
1999 - 2000	958,100	320,000	240,000	1,518,100	1,491,178	-26,922
2000 - 2001	1,125,787	320,000	180,000	1,625,787	2,146,709	520,922
2001 - 2002	547,826	320,000	0	867,826	2,175,689	1,307,863
2002 - 2003	562,156	200,000	0	762,156	2,205,061	1,442,905
2003 - 2004	-478,388	200,000	0	-278,388	2,234,830	2,513,217
2004 - 2005	42,734	200,000	0	242,734	2,265,000	2,022,266
2005 - 2006	43,311	200,000	0	243,311	2,295,577	2,052,266
2006 - 2007	43,896	200,000	0	243,896	2,326,567	2,082,672
2007 - 2008	44,488	200,000	0	244,488	2,357,976	2,113,488
2008 - 2009	45,089	200,000	0	245,089	2,389,809	2,144,720
2009 - 2010	45,697	200,000	0	245,697	2,422,071	2,176,374
2010 - 2011	46,314	200,000	0	246,314	2,454,769	2,208,455
2011 - 2012	46,940	200,000	0	246,940	2,487,909	2,240,969
2012 - 2013	47,573	200,000	0	247,573	2,521,495	2,273,922

IRR (15 Years)

128.88%

## 2nd Scenario (B)

### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Direct and Indirect Collected Taxes = 10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (1.35%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	81,000	85%	5,100,000	900,000	900,000	450,000
1999 - 2000	8,000,000	14,081,000	190,094	80%	11,264,800	2,816,200	1,916,200	958,100
2000 - 2001	6,000,000	20,271,094	273,660	75%	15,203,320	5,067,773	2,251,573	1,125,787
2001 - 2002	0	20,544,753	277,354	70%	14,381,327	6,163,426	1,095,653	547,826
2002 - 2003	0	20,822,107	281,098	65%	13,534,370	7,287,738	1,124,312	562,156
2003 - 2004	0	21,103,206	284,893	70%	14,772,244	6,330,962	-956,776	-478,388
2004 - 2005	0	21,388,099	288,739	70%	14,971,669	6,416,430	85,468	42,734
2005 - 2006	0	21,676,838	292,637	70%	15,173,787	6,503,052	86,622	43,311
2006 - 2007	0	21,969,476	296,588	70%	15,378,633	6,590,843	87,791	43,896
2007 - 2008	0	22,266,064	300,592	70%	15,586,245	6,679,819	88,976	44,488
2008 - 2009	0	22,566,656	304,650	70%	15,796,659	6,769,997	90,178	45,089
2009 - 2010	0	22,871,305	308,763	70%	16,009,914	6,861,392	91,395	45,697
2010 - 2011	0	23,180,068	312,931	70%	16,226,048	6,954,020	92,629	46,314
2011 - 2012	0	23,492,999	317,155	70%	16,445,099	7,047,900	93,879	46,940
2012 - 2013	0	23,810,154	321,437	70%	16,667,108	7,143,046	95,147	47,573
	1	2	4		3			

\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

## 2nd Scenario (B)

### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Direct and Indirect Collected Taxes = 10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	847,200	98,880	14,832	113,712
1999 - 2000	14,081,000	34,470	215,439	19,882,372	5,801,372	1,988,237	232,055	34,808	266,863
2000 - 2001	20,271,094	49,624	310,148	28,622,784	8,351,691	2,862,278	334,068	50,110	384,178
2001 - 2002	20,544,753	50,294	314,335	29,009,192	8,464,438	2,900,919	338,578	50,787	389,364
2002 - 2003	20,822,107	50,973	318,578	29,400,816	8,578,708	2,940,082	343,148	51,472	394,621
2003 - 2004	21,103,206	51,661	322,879	29,797,727	8,694,521	2,979,773	347,781	52,167	399,948
2004 - 2005	21,388,099	52,358	327,238	30,199,996	8,811,897	3,020,000	352,476	52,871	405,347
2005 - 2006	21,676,838	53,065	331,656	30,607,696	8,930,857	3,060,770	357,234	53,585	410,819
2006 - 2007	21,969,476	53,781	336,133	31,020,900	9,051,424	3,102,090	362,057	54,309	416,366
2007 - 2008	22,266,064	54,507	340,671	31,439,682	9,173,618	3,143,968	366,945	55,042	421,986
2008 - 2009	22,566,656	55,243	345,270	31,864,118	9,297,462	3,186,412	371,898	55,785	427,683
2009 - 2010	22,871,305	55,989	349,931	32,294,283	9,422,978	3,229,428	376,919	56,538	433,457
2010 - 2011	23,180,068	56,745	354,655	32,730,256	9,550,188	3,273,026	382,008	57,301	439,309
2011 - 2012	23,492,999	57,511	359,443	33,172,115	9,679,116	3,317,211	387,165	58,075	445,239
2012 - 2013	23,810,154	58,287	364,295	33,619,938	9,809,784	3,361,994	392,391	58,859	451,250



## 2nd Scenario (B)

### The Internal Rate Of Return Of The Joint Rural Credit Fund

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 50%)

(Direct and Indirect Collected Taxes = 10%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1997 - 1998	450,000	320,000	180,000	950,000	847,200	-102,800
1998 - 1999	958,100	320,000	240,000	1,518,100	1,988,237	470,137
1999 - 2000	1,125,787	320,000	180,000	1,625,787	2,862,278	1,236,492
2000 - 2001	547,826	320,000	0	867,826	2,900,919	2,033,093
2001 - 2002	562,156	200,000	0	762,156	2,940,082	2,177,926
2002 - 2003	-478,388	200,000	0	-278,388	2,979,773	3,258,161
2003 - 2004	42,734	200,000	0	242,734	3,020,000	2,777,266
2004 - 2005	43,311	200,000	0	243,311	3,060,770	2,817,459
2005 - 2006	43,896	200,000	0	243,896	3,102,090	2,858,194
2006 - 2007	44,488	200,000	0	244,488	3,143,968	2,899,480
2007 - 2008	45,089	200,000	0	245,089	3,186,412	2,941,323
2008 - 2009	45,697	200,000	0	245,697	3,229,428	2,983,731
2009 - 2010	46,314	200,000	0	246,314	3,273,026	3,026,711
2010 - 2011	46,940	200,000	0	246,940	3,317,211	3,070,272
2011 - 2012	47,573	200,000	0	247,573	3,361,994	3,114,420

IRR (15 Years)

583.81%

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### 3rd Scenario

#### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

##### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate + 5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (0%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	0	90%	5,400,000	600,000	600,000
1999 - 2000	8,000,000	14,000,000	0	85%	11,900,000	2,100,000	1,500,000
2000 - 2001	6,000,000	20,000,000	0	80%	16,000,000	4,000,000	1,900,000
2001 - 2002	0	20,000,000	0	75%	15,000,000	5,000,000	1,000,000
2002 - 2003	0	20,000,000	0	70%	14,000,000	6,000,000	1,000,000
2003 - 2004	0	20,000,000	0	75%	15,000,000	5,000,000	-1,000,000
2004 - 2005	0	20,000,000	0	75%	15,000,000	5,000,000	0
2005 - 2006	0	20,000,000	0	75%	15,000,000	5,000,000	0
2006 - 2007	0	20,000,000	0	75%	15,000,000	5,000,000	0
2007 - 2008	0	20,000,000	0	75%	15,000,000	5,000,000	0
2008 - 2009	0	20,000,000	0	75%	15,000,000	5,000,000	0
2009 - 2010	0	20,000,000	0	75%	15,000,000	5,000,000	0
2010 - 2011	0	20,000,000	0	75%	15,000,000	5,000,000	0
2011 - 2012	0	20,000,000	0	75%	15,000,000	5,000,000	0
2012 - 2013	0	20,000,000	0	75%	15,000,000	5,000,000	0
	1	2	4		3		

\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

### 3rd Scenario

#### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

##### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate + 5%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunums)	Rainfed (60%) (Dunums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	423,600	98,880	14,832	113,712
1999 - 2000	14,000,000	34,272	214,200	19,768,000	5,768,000	988,400	230,720	34,608	265,328
2000 - 2001	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2001 - 2002	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2002 - 2003	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2003 - 2004	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2004 - 2005	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2005 - 2006	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2006 - 2007	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2007 - 2008	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2008 - 2009	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2009 - 2010	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2010 - 2011	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2011 - 2012	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2012 - 2013	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040

### 3rd Scenario

#### The Internal Rate Of Return Of The Joint Rural Credit Fund

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate + 5%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	600,000	320,000	180,000	1,100,000	423,600	-676,400
1999 - 2000	1,500,000	320,000	240,000	2,060,000	988,400	-1,071,600
2000 - 2001	1,900,000	320,000	180,000	2,400,000	1,412,000	-988,000
2001 - 2002	1,000,000	320,000	0	1,320,000	1,412,000	92,000
2002 - 2003	1,000,000	200,000	0	1,200,000	1,412,000	212,000
2003 - 2004	-1,000,000	200,000	0	-800,000	1,412,000	2,212,000
2004 - 2005	0	200,000	0	200,000	1,412,000	1,212,000
2005 - 2006	0	200,000	0	200,000	1,412,000	1,212,000
2006 - 2007	0	200,000	0	200,000	1,412,000	1,212,000
2007 - 2008	0	200,000	0	200,000	1,412,000	1,212,000
2008 - 2009	0	200,000	0	200,000	1,412,000	1,212,000
2009 - 2010	0	200,000	0	200,000	1,412,000	1,212,000
2010 - 2011	0	200,000	0	200,000	1,412,000	1,212,000
2011 - 2012	0	200,000	0	200,000	1,412,000	1,212,000
2012 - 2013	0	200,000	0	200,000	1,412,000	1,212,000

IRR (15 Years)

25.63%

### 3rd Scenario

#### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

##### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate - 5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (0%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	0	80%	4,800,000	1,200,000	1,200,000
1999 - 2000	8,000,000	14,000,000	0	75%	10,500,000	3,500,000	2,300,000
2000 - 2001	6,000,000	20,000,000	0	70%	14,000,000	6,000,000	2,500,000
2001 - 2002	0	20,000,000	0	65%	13,000,000	7,000,000	1,000,000
2002 - 2003	0	20,000,000	0	60%	12,000,000	8,000,000	1,000,000
2003 - 2004	0	20,000,000	0	65%	13,000,000	7,000,000	-1,000,000
2004 - 2005	0	20,000,000	0	65%	13,000,000	7,000,000	0
2005 - 2006	0	20,000,000	0	65%	13,000,000	7,000,000	0
2006 - 2007	0	20,000,000	0	65%	13,000,000	7,000,000	0
2007 - 2008	0	20,000,000	0	65%	13,000,000	7,000,000	0
2008 - 2009	0	20,000,000	0	65%	13,000,000	7,000,000	0
2009 - 2010	0	20,000,000	0	65%	13,000,000	7,000,000	0
2010 - 2011	0	20,000,000	0	65%	13,000,000	7,000,000	0
2011 - 2012	0	20,000,000	0	65%	13,000,000	7,000,000	0
2012 - 2013	0	20,000,000	0	65%	13,000,000	7,000,000	0
	1	2	4		3		

\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

### 3rd Scenario

#### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate - 5%)

Year	Cumulated allocated Credit Funds (US\$)	Finances Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irregular (40%) (Durums)	Regular (60%) (Durums)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	423,600	98,880	14,832	113,712
1999 - 2000	14,000,000	34,272	214,200	19,768,000	5,768,000	988,400	230,720	34,608	265,328
2000 - 2001	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2001 - 2002	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2002 - 2003	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2003 - 2004	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2004 - 2005	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2005 - 2006	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2006 - 2007	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2007 - 2008	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2008 - 2009	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2009 - 2010	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2010 - 2011	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2011 - 2012	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040
2012 - 2013	20,000,000	48,960	306,000	28,240,000	8,240,000	1,412,000	329,600	49,440	379,040

### 3rd Scenario

#### Sensitivity Test Of The Internal Rate Of Return Of The Joint Rural Credit Fund

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Reimbursement Rate - 5%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	1,200,000	320,000	180,000	1,700,000	423,600	-1,276,400
1999 - 2000	2,300,000	320,000	240,000	2,860,000	988,400	-1,871,600
2000 - 2001	2,500,000	320,000	180,000	3,000,000	1,412,000	-1,588,000
2001 - 2002	1,000,000	320,000	0	1,320,000	1,412,000	92,000
2002 - 2003	1,000,000	200,000	0	1,200,000	1,412,000	212,000
2003 - 2004	-1,000,000	200,000	0	-800,000	1,412,000	2,212,000
2004 - 2005	0	200,000	0	200,000	1,412,000	1,212,000
2005 - 2006	0	200,000	0	200,000	1,412,000	1,212,000
2006 - 2007	0	200,000	0	200,000	1,412,000	1,212,000
2007 - 2008	0	200,000	0	200,000	1,412,000	1,212,000
2008 - 2009	0	200,000	0	200,000	1,412,000	1,212,000
2009 - 2010	0	200,000	0	200,000	1,412,000	1,212,000
2010 - 2011	0	200,000	0	200,000	1,412,000	1,212,000
2011 - 2012	0	200,000	0	200,000	1,412,000	1,212,000
2012 - 2013	0	200,000	0	200,000	1,412,000	1,212,000

IRR (15 Years)

15.21%



### 3rd Scenario

#### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value + 10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (0%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	0	85%	5,100,000	900,000	900,000
1999 - 2000	8,000,000	14,000,000	0	80%	11,200,000	2,800,000	1,900,000
2000 - 2001	6,000,000	20,000,000	0	75%	15,000,000	5,000,000	2,200,000
2001 - 2002	0	20,000,000	0	70%	14,000,000	6,000,000	1,000,000
2002 - 2003	0	20,000,000	0	65%	13,000,000	7,000,000	1,000,000
2003 - 2004	0	20,000,000	0	70%	14,000,000	6,000,000	-1,000,000
2004 - 2005	0	20,000,000	0	70%	14,000,000	6,000,000	0
2005 - 2006	0	20,000,000	0	70%	14,000,000	6,000,000	0
2006 - 2007	0	20,000,000	0	70%	14,000,000	6,000,000	0
2007 - 2008	0	20,000,000	0	70%	14,000,000	6,000,000	0
2008 - 2009	0	20,000,000	0	70%	14,000,000	6,000,000	0
2009 - 2010	0	20,000,000	0	70%	14,000,000	6,000,000	0
2010 - 2011	0	20,000,000	0	70%	14,000,000	6,000,000	0
2011 - 2012	0	20,000,000	0	70%	14,000,000	6,000,000	0
2012 - 2013	0	20,000,000	0	70%	14,000,000	6,000,000	0
	1	2	4		3		

\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

### 3rd Scenario

#### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value + 10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irregular (40%) (Dumane)	Regular (60%) (Dumane)						
1998 - 1999	6,000,000	14,688	91,800	9,319,200	3,319,200	465,960	132,768	19,915	152,683
1999 - 2000	14,000,000	34,272	214,200	21,744,800	7,744,800	1,087,240	309,792	46,469	356,261
2000 - 2001	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2001 - 2002	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2002 - 2003	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2003 - 2004	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2004 - 2005	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2005 - 2006	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2006 - 2007	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2007 - 2008	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2008 - 2009	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2009 - 2010	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2010 - 2011	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2011 - 2012	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944
2012 - 2013	20,000,000	48,960	306,000	31,064,000	11,064,000	1,553,200	442,560	66,384	508,944

### 3rd Scenario

#### The Internal Rate Of Return Of The Joint Rural Credit Fund

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value + 10%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1997 - 1998	900,000	320,000	180,000	1,400,000	465,960	-934,040
1998 - 1999	1,900,000	320,000	240,000	2,460,000	1,087,240	-1,372,760
1999 - 2000	2,200,000	320,000	180,000	2,700,000	1,553,200	-1,146,800
2000 - 2001	1,000,000	320,000	0	1,320,000	1,553,200	233,200
2001 - 2002	1,000,000	200,000	0	1,200,000	1,553,200	353,200
2002 - 2003	-1,000,000	200,000	0	-800,000	1,553,200	2,353,200
2003 - 2004	0	200,000	0	200,000	1,553,200	1,353,200
2004 - 2005	0	200,000	0	200,000	1,553,200	1,353,200
2005 - 2006	0	200,000	0	200,000	1,553,200	1,353,200
2006 - 2007	0	200,000	0	200,000	1,553,200	1,353,200
2007 - 2008	0	200,000	0	200,000	1,553,200	1,353,200
2008 - 2009	0	200,000	0	200,000	1,553,200	1,353,200
2009 - 2010	0	200,000	0	200,000	1,553,200	1,353,200
2010 - 2011	0	200,000	0	200,000	1,553,200	1,353,200
2011 - 2012	0	200,000	0	200,000	1,553,200	1,353,200

IRR (15 Years)

23.51%

### 3rd Scenario

#### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value -10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (0%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	0	85%	5,100,000	900,000	900,000
1999 - 2000	8,000,000	14,000,000	0	80%	11,200,000	2,800,000	1,900,000
2000 - 2001	6,000,000	20,000,000	0	75%	15,000,000	5,000,000	2,200,000
2001 - 2002	0	20,000,000	0	70%	14,000,000	6,000,000	1,000,000
2002 - 2003	0	20,000,000	0	65%	13,000,000	7,000,000	1,000,000
2003 - 2004	0	20,000,000	0	70%	14,000,000	6,000,000	-1,000,000
2004 - 2005	0	20,000,000	0	70%	14,000,000	6,000,000	0
2005 - 2006	0	20,000,000	0	70%	14,000,000	6,000,000	0
2006 - 2007	0	20,000,000	0	70%	14,000,000	6,000,000	0
2007 - 2008	0	20,000,000	0	70%	14,000,000	6,000,000	0
2008 - 2009	0	20,000,000	0	70%	14,000,000	6,000,000	0
2009 - 2010	0	20,000,000	0	70%	14,000,000	6,000,000	0
2010 - 2011	0	20,000,000	0	70%	14,000,000	6,000,000	0
2011 - 2012	0	20,000,000	0	70%	14,000,000	6,000,000	0
2012 - 2013	0	20,000,000	0	70%	14,000,000	6,000,000	0
	1	2	4		3		

\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

### 3rd Scenario

#### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation

##### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value -10%)

Year	Cumulated allocated Credit Funds (US\$)	Finances Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Dunams)	Rainfed (60%) (Dunams)						
1998 - 1999	6,000,000	14,688	91,800	7,624,800	1,624,800	381,240	64,992	9,749	74,741
1999 - 2000	14,000,000	34,272	214,200	17,791,200	3,791,200	889,560	151,648	22,747	174,395
2000 - 2001	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2001 - 2002	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2002 - 2003	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2003 - 2004	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2004 - 2005	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2005 - 2006	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2006 - 2007	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2007 - 2008	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2008 - 2009	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2009 - 2010	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2010 - 2011	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2011 - 2012	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136
2012 - 2013	20,000,000	48,960	306,000	25,416,000	5,416,000	1,270,800	216,640	32,496	249,136

### 3rd Scenario

#### The Internal Rate Of Return Of The Joint Rural Credit Fund

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Production Value -10%)

Year	Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	900,000	320,000	180,000	1,400,000	381,240	-1,018,760
1999 - 2000	1,900,000	320,000	240,000	2,460,000	889,560	-1,570,440
2000 - 2001	2,200,000	320,000	180,000	2,700,000	1,270,800	-1,429,200
2001 - 2002	1,000,000	320,000	0	1,320,000	1,270,800	-49,200
2002 - 2003	1,000,000	200,000	0	1,200,000	1,270,800	70,800
2003 - 2004	-1,000,000	200,000	0	-800,000	1,270,800	2,070,800
2004 - 2005	0	200,000	0	200,000	1,270,800	1,070,800
2005 - 2006	0	200,000	0	200,000	1,270,800	1,070,800
2006 - 2007	0	200,000	0	200,000	1,270,800	1,070,800
2007 - 2008	0	200,000	0	200,000	1,270,800	1,070,800
2008 - 2009	0	200,000	0	200,000	1,270,800	1,070,800
2009 - 2010	0	200,000	0	200,000	1,270,800	1,070,800
2010 - 2011	0	200,000	0	200,000	1,270,800	1,070,800
2011 - 2012	0	200,000	0	200,000	1,270,800	1,070,800
2012 - 2013	0	200,000	0	200,000	1,270,800	1,070,800

IRR (15 Years)

15.54%

### 3rd Scenario

#### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

##### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net interest (0%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	0	85%	5,100,000	900,000	900,000
1999 - 2000	8,000,000	14,000,000	0	80%	11,200,000	2,800,000	1,900,000
2000 - 2001	6,000,000	20,000,000	0	75%	15,000,000	5,000,000	2,200,000
2001 - 2002	0	20,000,000	0	70%	14,000,000	6,000,000	1,000,000
2002 - 2003	0	20,000,000	0	65%	13,000,000	7,000,000	1,000,000
2003 - 2004	0	20,000,000	0	70%	14,000,000	6,000,000	-1,000,000
2004 - 2005	0	20,000,000	0	70%	14,000,000	6,000,000	0
2005 - 2006	0	20,000,000	0	70%	14,000,000	6,000,000	0
2006 - 2007	0	20,000,000	0	70%	14,000,000	6,000,000	0
2007 - 2008	0	20,000,000	0	70%	14,000,000	6,000,000	0
2008 - 2009	0	20,000,000	0	70%	14,000,000	6,000,000	0
2009 - 2010	0	20,000,000	0	70%	14,000,000	6,000,000	0
2010 - 2011	0	20,000,000	0	70%	14,000,000	6,000,000	0
2011 - 2012	0	20,000,000	0	70%	14,000,000	6,000,000	0
2012 - 2013	0	20,000,000	0	70%	14,000,000	6,000,000	0

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\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

### 3rd Scenario

#### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Cumune)	Rainfed (60%) (Cumune)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	635,400	98,880	14,832	113,712
1999 - 2000	14,000,000	34,272	214,200	19,768,000	5,768,000	1,482,600	230,720	34,608	265,328
2000 - 2001	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2001 - 2002	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2002 - 2003	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2003 - 2004	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2004 - 2005	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2005 - 2006	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2006 - 2007	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2007 - 2008	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2008 - 2009	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2009 - 2010	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2010 - 2011	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2011 - 2012	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040
2012 - 2013	20,000,000	48,960	306,000	28,240,000	8,240,000	2,118,000	329,600	49,440	379,040



### 3rd Scenario

#### Sensitivity Test Of The Internal Rate Of Return Of The Joint Rural Credit Fund

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 7.5%)

Year	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1998 - 1999	900,000	320,000	180,000	1,400,000	635,400	-764,600
1999 - 2000	1,900,000	320,000	240,000	2,460,000	1,482,600	-977,400
2000 - 2001	2,200,000	320,000	180,000	2,700,000	2,118,000	-582,000
2001 - 2002	1,000,000	320,000	0	1,320,000	2,118,000	798,000
2002 - 2003	1,000,000	200,000	0	1,200,000	2,118,000	918,000
2003 - 2004	-1,000,000	200,000	0	-800,000	2,118,000	2,918,000
2004 - 2005	0	200,000	0	200,000	2,118,000	1,918,000
2005 - 2006	0	200,000	0	200,000	2,118,000	1,918,000
2006 - 2007	0	200,000	0	200,000	2,118,000	1,918,000
2007 - 2008	0	200,000	0	200,000	2,118,000	1,918,000
2008 - 2009	0	200,000	0	200,000	2,118,000	1,918,000
2009 - 2010	0	200,000	0	200,000	2,118,000	1,918,000
2010 - 2011	0	200,000	0	200,000	2,118,000	1,918,000
2011 - 2012	0	200,000	0	200,000	2,118,000	1,918,000
2012 - 2013	0	200,000	0	200,000	2,118,000	1,918,000

IRR (15 Years)

42.41%

### 3rd Scenario

#### Evolution Of The Joint Rural Credit Fund (Revolving Fund)

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 10%)

Year	Capital (Principal) (US\$)	Cumulated Principal + Interest (US\$)	Net Interest (0%)* (US\$)	Reimbursement Rate (%)	Reimbursed Funds (US\$)	Cumulated Bad & Doubtful Debts (US\$)	Annual Bad & Doubtful Debts (US\$)
1998 - 1999	6,000,000	6,000,000	0	85%	5,100,000	900,000	900,000
1999 - 2000	8,000,000	14,000,000	0	80%	11,200,000	2,800,000	1,900,000
2000 - 2001	6,000,000	20,000,000	0	75%	15,000,000	5,000,000	2,200,000
2001 - 2002	0	20,000,000	0	70%	14,000,000	6,000,000	1,000,000
2002 - 2003	0	20,000,000	0	65%	13,000,000	7,000,000	1,000,000
2003 - 2004	0	20,000,000	0	70%	14,000,000	6,000,000	-1,000,000
2004 - 2005	0	20,000,000	0	70%	14,000,000	6,000,000	0
2005 - 2006	0	20,000,000	0	70%	14,000,000	6,000,000	0
2006 - 2007	0	20,000,000	0	70%	14,000,000	6,000,000	0
2007 - 2008	0	20,000,000	0	70%	14,000,000	6,000,000	0
2008 - 2009	0	20,000,000	0	70%	14,000,000	6,000,000	0
2009 - 2010	0	20,000,000	0	70%	14,000,000	6,000,000	0
2010 - 2011	0	20,000,000	0	70%	14,000,000	6,000,000	0
2011 - 2012	0	20,000,000	0	70%	14,000,000	6,000,000	0
2012 - 2013	0	20,000,000	0	70%	14,000,000	6,000,000	0

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\* N.B.: It is the net interest returning to the revolving fund, after deduction of the cooperating commercial bank's share.

### 3rd Scenario

#### The Generated Production, Employment And Collected Taxes By The Rural Credit Operation Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 10%)

Year	Cumulated allocated Credit Funds (US\$)	Financed Areas		Total Generated Production Value (US\$)	Total Generated Added Value (US\$)	Generated Direct and Indirect Collected Taxes (US\$)	Generated Direct Employment Opportunities (Days)	Generated Indirect Employment Opportunities (Days)	Total Generated Employment Opportunities (Days)
		Irrigated (40%) (Cumulative)	Rainfed (60%) (Cumulative)						
1998 - 1999	6,000,000	14,688	91,800	8,472,000	2,472,000	847,200	98,880	14,832	113,712
1999 - 2000	14,000,000	34,272	214,200	19,768,000	5,768,000	1,976,800	230,720	34,608	265,328
2000 - 2001	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2001 - 2002	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2002 - 2003	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2003 - 2004	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2004 - 2005	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2005 - 2006	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2006 - 2007	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2007 - 2008	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2008 - 2009	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2009 - 2010	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2010 - 2011	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2011 - 2012	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040
2012 - 2013	20,000,000	48,960	306,000	28,240,000	8,240,000	2,824,000	329,600	49,440	379,040

### 3rd Scenario

#### The Internal Rate Of Return Of The Joint Rural Credit Fund

#### Opening of a Guarantee Deposit Account

(GVT. Part Of Risk of Annual Bad & Doubtful Debts = 100%)

(Direct and Indirect Collected Taxes = 10%)

Year	GVT. Part Of Risk of Annual Bad & Doubtful Debts (US\$)	Credit System Management Cost	UNDP Overhead Cost	Total Cost	Direct and Indirect Collected Taxes (US\$)	Balance (US\$)
1997 - 1998	900,000	320,000	180,000	1,400,000	847,200	-552,800
1998 - 1999	1,900,000	320,000	240,000	2,460,000	1,976,800	-483,200
1999 - 2000	2,200,000	320,000	180,000	2,700,000	2,824,000	124,000
2000 - 2001	1,000,000	320,000	0	1,320,000	2,824,000	1,504,000
2001 - 2002	1,000,000	200,000	0	1,200,000	2,824,000	1,624,000
2002 - 2003	-1,000,000	200,000	0	-800,000	2,824,000	3,624,000
2003 - 2004	0	200,000	0	200,000	2,824,000	2,624,000
2004 - 2005	0	200,000	0	200,000	2,824,000	2,624,000
2005 - 2006	0	200,000	0	200,000	2,824,000	2,624,000
2006 - 2007	0	200,000	0	200,000	2,824,000	2,624,000
2007 - 2008	0	200,000	0	200,000	2,824,000	2,624,000
2008 - 2009	0	200,000	0	200,000	2,824,000	2,624,000
2009 - 2010	0	200,000	0	200,000	2,824,000	2,624,000
2010 - 2011	0	200,000	0	200,000	2,824,000	2,624,000
2011 - 2012	0	200,000	0	200,000	2,824,000	2,624,000

IRR (15 Years)

79.69%

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