

**AFRICAN DEVELOPMENT BANK GROUP**



**MOROCCO**

**EVALUATION OF BANK ASSISTANCE TO THE  
AGRICULTURE AND RURAL DEVELOPMENT SECTOR**

**OPERATIONS EVALUATION DEPARTMENT  
(OPEV)**

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**EXCHANGE RATES**

	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Dirham per US\$ (average for period)	8.5400	8.7200	9.5300	9.6000	9.8000	10.6300	11.3000	10.9760	9.5892	8.8718
Dirham per UA (annual average)	12.6162	12.7274	13.0112	13.0721	12.7182	13.65812	14.6706	14.6263	13.5532	

## LIST OF ABBREVIATIONS

ADB	:	African Development Bank
ADF	:	African Development Fund
AEFCS	:	Forestry and Soil Conservation Administration
AFESD	:	Arab Fund for Economic and Social Development
AGDP	:	Agricultural Gross Domestic Product
ASAP	:	Agricultural Sector Adjustment Programme
CDA	:	Agricultural Development Centre
CNCA	:	National Agricultural Credit Fund
CSP	:	Country Strategy Paper
EIB	:	European Investment Bank
EPCP	:	Economic Prospects and Country Programming
FDA	:	Agricultural Development Fund
GDP	:	Gross Domestic Product
IDB	:	Islamic Development Bank
IFAD	:	International Fund for Agricultural Development
JICB	:	Japanese International Cooperation Bank
KfW	:	Kreditanstalt für Wiederaufbau
MAD	:	Dirham
OPEV	:	Operations Evaluation Department
ORMVA	:	Regional Agricultural Development Agency
ORMVAD	:	Doukkala Regional Agricultural Development Agency
PDPEO	:	Oriental Pastoral and Livestock Development Project
PNI	:	National Irrigation Programme
PRR	:	Portfolio Review Report
SAP	:	Structural Adjustment Programme
TAF	:	Technical Assistance Fund
TC	:	Technical Centre
UA	:	Unit of Account
WTO	:	World Trade Organization

## **PREFACE**

Between 1974 and 1992, the Bank funded several operations in the agriculture and rural development sector in Morocco. All of these operations were completed by 2001. This report evaluates Bank Group assistance to Morocco in the sector and the strategy on which it was based.

In Morocco, Bank interventions were based on Economic Prospects and Country Programming (EPCP) papers, Portfolio Review Reports (PRR) and Country Strategy Papers (CSP). These are tools used for the determination of resource allocation. Bank Group interventions in Morocco were in keeping with the Bank's general mandate aimed at promoting economic and social progress in regional member countries and/or in response to express financing requests made within the framework of the Government's development programme.

The subject of our investigation is Bank Group Products and Services, that is lending and non-lending assistance. No new operation was undertaken over the 1996 – 2004 period even though the new integrated rural development approach initiated by the country offered many intervention opportunities for the development of (rainfed) irrigation systems. Medium-and small-scale irrigation schemes could have benefited from Bank operations. Other donors (World Bank, European Union, Agence française de Développement, etc.) focused their interventions in these sub-sectors.

Morocco's performance has been outstanding since 1996, which reflects efforts made by the Moroccan authorities to rehabilitate the political and economic environment. However, there are still considerable challenges to be met. These include the climatic risk resulting from periods of drought and pockets of flooding, significant underemployment in rural areas, dual agriculture where new actors should take over, lingering poverty in rural areas, underexploited sub-sectors (agroindustry and maritime fishery), and above all integration in a very competitive business environment.

The preparation of this report was facilitated by the invaluable help of the Moroccan authorities during the field mission which included the provision of relevant documentation and in-depth discussions with various officials. Bank experts responsible for the country also provided useful information and documents for the drafting of this report.

## **EXECUTIVE SUMMARY**

### Objective of the Evaluation

1. The main objective of this evaluation is to systematically review Bank assistance in the agriculture and rural development sector in Morocco, from the point of view of Bank and country strategies as well as aid in the form of lending and non-lending operations. This evaluation covers the outcomes of the 1996-2004 assistance programme, including the outcomes of previous periods (1974 -1995). Considering the fact that the Bank has not approved any project in the sector since 1991, the review is based on the experience of three ADB lending operations and a TAF grant for a study. All these projects were completed by 2001. The review covers irrigation, stockbreeding and natural resource conservation (1.1.1 ; 1.1.2 ; 1.1.3 ; 1.1.4).

### Context

2. Morocco is a middle-income country with a per capita gross national product estimated at US\$ 1 250. The various economic and structural reform programmes implemented by the Government since the mid-1980s helped restore internal and external financial balances for the most part, liberalize foreign and domestic trade, render the exchange system flexible, contain inflation and revitalize the financial sector. The country recorded economic growth of 4% on average between 1996 and 2003 as against 1.5% between 1990 and 1995 (1.2.1 ; 1.2.2 ; 1.2.3).

3. The country is in full transition to a market economy open to the external world and is experiencing a drop in agricultural growth. Food security and the fight against unemployment and poverty are the main concerns of decision-makers. Agriculture is the backbone of the other sectors of activity. The rainfed production system is the most dominant system and concerns the majority of small-and medium-scale farms. The irrigation sector is the only link with the external market for agricultural products. (1.2.4 ; 1.2.5 )

### Country Constraints and Strategies

4. The major constraints confronting the agriculture and rural development sector in Morocco are: (i) poverty in rural areas; (ii) inadequate infrastructure in rural areas; (iii) the land tenure issue concerning particularly the parcelling out and smallness of farms, and problems related to the legal status of land; (iv) the degradation of natural resources; (v) the small quantity of water resources and significant limitations to the mobilization of new water resources; (vi) difficulties in securing financing; and (vii) the vagaries of the weather. Environmental protection and sustainable development are new challenges for the country's economic and social policy (1.3.1.1 to 1.3.1.16)

5. Successive development plans led to the implementation, with varying degrees of success, of programmes to address the challenges arising from the constraints outlined above, namely : (i) irrigation programmes ; (ii) rainfed areas development projects, which are integrated programmes for the creation of development areas with irrigation facilities, basic equipment and services, agricultural development activities, etc.; (iii) the national forest programme which aims at checking the degradation of forest areas and integrating forests in the rural development drive; (iv) the rangeland improvement programme which aims at improving vegetation, protecting pastures, creating restricted areas and water points, etc; (v) rural capital programmes; (vi) socio-educational programmes; (vii) programmes for diversification of economic activities in rural areas; and (viii) special programmes in mountain, border and oasis areas (1.3.2.1 to 1.3.2.9).

## Bank Assistance Strategy

6. A review of Bank assistance to the agriculture sector distinguishes between interventions through lending operations which are in keeping with the country's priorities, and non-lending operations. Regarding the first group of operations, the Bank's options (irrigation, poverty reduction and environmental protection) are in keeping with those of the country. The non-lending assistance instruments which contributed to the quality of dialogue between the Bank and the country were: (i) the Economic Prospects and Country Programming (EPCP) paper; (ii) Portfolio Reviews; (iii) Country Strategy Papers (CSP); and (iv) supervision missions. There is a remarkable improvement in approach which has become more participatory with consultation of the different stakeholders. Contact and identification missions initiated since 2004 are likely to enhance such dialogue which will be further strengthened by the ongoing deconcentration. The Bank's strategy was relevant ( 2.1.1 to 2.3.3).

## Lending Operations

7. As at 31 December 2001, the date of the last operations in the sector, and with a net commitment of UA 465.2 million, the agricultural sector ranked second in Bank resource allocation in Morocco with 15 operations including 14 projects and a study (22%). The agricultural project portfolio funded by the Bank is said to cover areas such as irrigation, stockbreeding, rural development and conservation of natural resources. Four lines of credit awarded to the National Agricultural Credit Fund (CNCA) provided support to the private sector thus enabling it to develop rainfed agriculture, market gardening, fruit farming, forestry, stockbreeding and fisheries. The operations contributed towards poverty reduction while protecting the environment. Though not the subject of a specific component, the gender issue was intrinsically taken into consideration in the projects. The operations performance is satisfactory (Annex III, Table 1).( 3.1.1 to 3.1.13).

## Non-lending Activities

8. Since 1996, the Bank has continued to improve policy and programme dialogue with the country. EPCP evolved into CSP with a more participatory approach. Portfolio reviews helped ensure a periodic adjustment of investments. The Bank should have funded sector studies in order to strengthen its analysis capacity and the quality of dialogue with the country. Concerning TAF resource mobilization, only one project (Gharb irrigation) in the sector was financed with TAF resources. Many other sub-sectors should have been examined (training/agricultural research, maritime fisheries, agroindustry). Identification missions recently initiated by the Bank (April-May 2004 and March 2005) may transform it from a project institution into a programme institution where initiatives are the work of the Bank. The performance of non-lending operations is unsatisfactory (4.1.1 ; 4.1.2)

## Bank Performance

9. Non-participation of the Bank in the projects identification and preparation phases affected quality at entry assessment very negatively. The same is true for loan approval, signature and effectiveness time frames which were relatively long. On the contrary, evaluation and supervision missions were properly conducted. Bank performance in Morocco is satisfactory (5.2.1).

## Borrower Performance

10. Morocco is a good risk for the Bank. Despite a few weaknesses, the executing agencies (ORMVA, DPE and AEFCS) implemented the projects well. Borrower performance is considered satisfactory (5.1.1 ; 5.1.2 ; 5.1.3).

## **Lessons and Recommendations**

### Lessons

11. The Bank's strategy prioritized lending operations not preceded by non-lending operations such as sector studies. Moroccan authorities increasingly desire Bank interventions in the form of technical assistance (3.1.1 ; 4.2.2 ; 4.2.3)

12. The Bank did not especially participate in the identification and preparation phases of most projects. This often resulted in overestimation during appraisal and in implementation difficulties. Lessons may be learnt from the experience of other donors (JICB). ( 4.3.9)

13. Moroccan authorities are very particular about Bank financing conditions. The choice of financing is systematically the outcome of a comparative analysis with other financial institutions. The Bank's financial products should be permanently marketed to ensure their competitiveness. The Bank's competitiveness in the country is also undermined by inadequate dialogue. Considering the fact that Morocco is not eligible for the concessional window, other instruments should be envisaged for middle-income countries (4.2.3; 4.2.4).

14. Harmonization of interventions between donors may improve the quality of aid coordination. The process initiated should be pursued and strengthened (4.3.10).

15. The experience of the PDPEO has shown that a two-tier administration can hamper the management of a project. Projects covering excessively vast areas may cause management difficulties. Integrated rural development projects (IRDPs) should be confined to smaller areas (3.5.3).

16. The poor implementation of projects is often due to the inadequate ownership of Bank rules and procedures by Moroccan officials (5.1.1).

17. The sustainability of some projects is threatened by beneficiaries' lack of resources. There is a need to strengthen the community-based small producer financing system in order to render micro- credit accessible to them (3.6.1. to 3.6.4.).

18. Morocco is currently engaged in policy dialogue on its agricultural and rural development. Any agricultural development strategy to be defined must take into consideration the following main thrusts: (i) limitations of the impact of drought on agricultural production and basic resources; (ii) decentralization; (iii) sustainable management of natural resources; (iv) competitiveness of sub-sectors; (v) land tenure; (vi) financing ; and (vii) the gender dimension (5.1.2).

## Recommendations

### **Recommendations to the Bank**

19. **Country Assistance Strategy** : the Bank should gear its assistance strategy towards the preparation of in-depth sector studies (agroindustry, training, fisheries, rural crafts, etc.) likely to enhance both its policy and programme dialogue and project portfolio. Such an option should be the basis of a programme approach.
20. **Project Cycle** : the Bank should participate vigorously in project identification and preparation phases in order to improve performance in the processing of goods and services contracts. Decentralization could contribute towards this process.
21. **Aid Coordination**: the Bank should support Morocco in its desire to see it assume leadership in the conduct of consultation and harmonization actions between donors. This will entail taking initiatives to revive such consultations which could enhance the efficacy of the interventions of the various partners (4.3.10).
22. **Bank Competitiveness** : the Bank's financial products should be marketed permanently to ensure their competitiveness (4.2.3).
23. **Training of Project Managers** : the Bank's Agricultural Management Training Program for Africa (AMTA) should be used to train Moroccan project managers. The procedures mastery and performance improvement plan (PIP) modules should be taught to potential project officers.

### **Recommendations to the Government**

24. **Training of Managers** : the Government should use the Bank's AMTA programme to periodically update the knowledge of the sector's project officers on Bank procedures and project management. The performance improvement plan (PIP) is a very useful module for project management.
25. The Government should avail itself of the PDPEO experience (Figuig, Oujda) to adopt a more local and restricted integrated development approach. Considering the role played by women, they should be the subject of a specific component in the various development projects.
26. In the face of difficulties in financing small farms, the Government should design a new approach that makes a distinction between farms on the basis of production, agricultural land base and specific content.
27. The sector's policy dialogue should be extended to include the various donors, with effective Bank participation.

## **1. CONTEXT**

### **1.1 Review Objectives and Methodology**

1.1.1 The main objective of this evaluation is to systematically review Bank assistance in the agriculture and rural development sector in Morocco, from the point of view of Bank and country strategies as well as aid in the form of lending and non-lending operations. This evaluation covers the outcomes of the 1996-2004 assistance programme. The Bank has not approved any loan in the sector since 1991. The last project was completed in 2001.

1.1.2 Loans granted to Morocco in the agricultural sector concern 14 operations including seven projects in the area of agriculture, one stockbreeding project, two reform projects and four credit projects. Non-lending operations include particularly policy and programme dialogue (EPCP, CSP, portfolio reviews, seminars, identification missions, etc.) and coordination of donor interventions, and a study in the form of a grant.

1.1.3 In a first phase which lasted one week and which took place at the Bank in Tunis, relevant information and documents were gathered during working sessions held with the concerned officials of operational departments. The second phase took place in Morocco and lasted 15 working days. The following tasks were carried out following the programme of work prepared in conjunction with the authorities of the country: (i) exchanges with the competent players of the Ministry of Finance, the Ministry of Agriculture, and the High Commission for Forestry Resources; (ii) visit of the (Doukkala) irrigation project site in the company of a Japanese mission (financier of the 2<sup>nd</sup> phase of Doukkala); (iii) meeting with other donors intervening in the country (World Bank, JICB, EU, UNDP); (iv) collection and use of documentation on the sector provided to us; and (v) visit of relevant web sites.

1.1.4 Assistance outcomes are evaluated in accordance with guidelines issued by the Bank's Operations Evaluation Department (OPEV) for the evaluation of Bank assistance, preparation of PCR and PPER evaluation note and on the basis of the combined action of the following four factors : (a) the Bank ; (b) Morocco (Borrower); (c) partners and stakeholders; and (d) external forces (natural phenomena, economic crises, etc.). Four of the operations listed were chosen as benchmarks for this review, on account of available documentation.

### **1.2 Morocco's Socioeconomic Context**

1.2.1 Morocco is a middle-income country with a per capita gross national product estimated at US\$ 1 250. Since the mid-1980s, Morocco has embarked upon a liberal economy. The various economic and structural reform programmes implemented by the Government since this period have helped restore internal and external financial balances for the most part, liberalize foreign and domestic trade, render the exchange system flexible, contain inflation and revitalize the financial sector. The country recorded economic growth of 4% on average between 1996 and 2003 as against 1.5% between 1990 and 1995 due to an increase in agricultural value added of 8.1% compared with a drop of 7.4% during the same periods. The trade deficit worsened to 10.2% of GDP in the 1996-2003 period compared with 9.5% during the 1990-1995 period. This situation was due to an increase in the oil bill which stood at 21.8% of total exports and 4.5% of real GDP in the period 1996-2003. The rate of coverage of food needs also worsened to 123.1% between 1996-2003 as against 131.3% between 1990-1995. Inflation was relatively contained as it dropped from 6.2% in 1990-1995 to 1.7% in 1996-2003.

1.2.2 Agriculture occupies a lead position in the national economy. Because of its many roles (food, economic, social, environmental, etc.), the agricultural sector is one of the pillars of the country's economic and social development. Employment, value added, contribution to coverage

of food needs and foreign trade indicators underline the decisive role played by agriculture in the national economy. Concerning employment, rural employment, which is still very significant, is essentially centred on agriculture. The agricultural sector currently has about 1.5 million farms for a rural population representing nearly 45% of the country's total population. Owing to the lack of diversification of non-agricultural economic activities in rural areas, direct employment in agriculture alone represents 80% of rural employment and about 50% of employment at national level.

1.2.3 In some areas, agriculture accounts for between 80% and 100% of the income of rural dwellers. The agricultural sector still contributes significantly to total GDP formation. Depending on annual climatic changes, such contribution could range from 12% to 24%. Retrospectively, the share of agricultural value added in GDP dropped from 23% on average in the 1960s to 17% in the 1990s. In absolute terms, the agricultural GDP however practically doubled between the 1970s and 1990s (rising from 10.5 billion to 19 billion 1980 constant MAD). The primary sector's contribution to real economic growth stood at 29.5% over the 1996-2003 period. The irrigation sector, whose contribution to agricultural GDP stands on average at about 45% and reaches up to 70% in a bad crop year, plays an essential buffer role.

1.2.4 Morocco has made food self-sufficiency a key objective of its agricultural policy. This has enabled it to ensure the coverage of a significant portion of its needs in staple food products, despite rising domestic market demand. Trends in livestock products were positive with coverage rates ranging from 87% for milk to 100% respectively for red and white meat. In contrast, coverage rates for oils and sugar, and more particularly for cereals, dropped dramatically. This was essentially due to recurrent droughts which affected both rainfed farming and irrigation areas. In some areas, agriculture accounts for between 80% and 100% of the income of rural dwellers. The agricultural sector still contributes significantly to total GDP formation. Depending on annual climatic changes, such contribution ranges from 12% to 24%.

1.2.5 The agricultural sector plays an important role in the country's foreign trade. Over the last decade, agricultural imports have represented between 14% and 24% of the value of total imports, with an average of 19%. They mainly comprise cereals (wheat), sugar and milk products. Farm exports account for around 18% on average of the value of total exports, fluctuating between 15% and 21%. The irrigation sector accounts, on average, for 75% of exports of agricultural products. The rate of coverage of agricultural imports by farm exports varies between 40% and 75% from year to year. Such variation also affects the rate of coverage of food imports by food exports. Depending on the year, the rate stands at between 45% and 102%. In addition to their contribution to foreign trade, export crops play an important role in employment. They currently generate about 500 000 permanent jobs and about three million people depend on them for their livelihood.

1.2.6 Real GDP growth stood at 3.5% in 2004 compared with 5.5% in 2003 and 3.2% in 2002, thus confirming its irregular trends due to its dependence on the agricultural sector. In 2003, the primary sector recorded an 18% growth in real terms, compared with 5.6% in 2002, thanks to the remarkable performance of cereal production which stood at about 79.6 million quintals. In 2004, cereal production reached 83 million quintals. The sector also benefited from the good performance of stockbreeding due particularly to the improvement of rangeland, increase in fodder crop production and efforts to ensure the regular supply of feed and veterinary products. Regarding fish production, the expiry of the fishing agreement with the European Union resulted, at the beginning, in a significant rise in fish production from 0.7 million tonnes in 1999 to 1.1 million tonnes in 2001. Then, fish stocks dropped due to successive extensions of the period of biological dormancy.

### 1.3 Morocco's Main Constraints and Sectoral Development Strategies

#### 1.3.1 Main Constraints

1.3.1.1 **Poverty in rural areas :** in Morocco, poverty is basically a rural phenomenon. The incidence of poverty in rural areas was estimated at 27.2% in 1998/99 compared with 18% in 1990/91. Moreover, although the rural population represents only 46% of the total population, about 66% of the poor, 77% of the very poor and 90% of the extremely poor live in rural areas.

1.3.1.2 **Illiteracy :** while the over ten-year olds' illiteracy rate is 50% on average across the country, it is about 70% in rural areas. Some 80% of farm heads are illiterate and three-quarters of the literate have only the primary or Koranic school level. About 9 out of 10 rural women are illiterate. Besides illiteracy, rural women are hard hit by many problems: the supply of drinking water and fuelwood which is the duty of women in more than 90% of cases, lack of health centres which means that only 20% of deliveries are attended to and that the after-effects of pregnancy and childbirth are a serious public health problem.

1.3.1.3 **Inadequate infrastructure in rural areas :** rural areas are far behind urban areas in terms of economic and social infrastructure. Many indicators were at alarming levels in 1995. In spite of the ambitious goal of making in 15 years (1995-2010) an effort 6 to 7 times greater than the one made in 40 years (1956-1995) through several programmes (national rural roads construction programme-PNCRR; grouped rural drinking water supply programme – PAGER; comprehensive rural electrification programme-PERG; and socio-educational programmes), economic and social infrastructures in rural areas are inadequate. The road network is very limited. The rate of access to drinking water estimated at 37% in 1999 was 60% at end 2004. The number of inhabitants living over 6 km from a school or health centre (with only an access path) is very high : 53% for health centres.

1.3.1.4 **Rural-urban migration :** in 2004, Morocco's population was estimated at 29 892 million 46% of whom are rural dwellers. The rural/urban ratio was reversed in the early 1990s. By 2025, even if growth slows down because of a spectacular reduction in fertility, population projections, according to UNFPA (United Nations Population Fund) projections, show a total population of 39 million including about 14 million rural dwellers, or a ratio of around 35/65. Rural/urban migration is intensifying.

1.3.1.5 **Geographical differentiation of agriculture :** the summary characterization of the country's major agro-ecological zones carried out by the Ministry of Agriculture, by combining morphological structure data and climatic criteria, helped generate an aggregated tabulation which properly illustrates the major geographical differentiation of agriculture in Morocco. The characterization highlights the seven main agro-ecological zones (Annex1, page 4). Less than 30% of the AAU (agricultural area in use) is irrigable. This potential concerns less than 30% of farms. Rainfed agriculture is predominant.

1.3.1.6 **Land acts :** Moroccan agrarian structures constitute an obstacle to the development of agricultural production because of the many minifundios and the extreme diversity of legal land tenure systems. This is confirmed by the last farm censuses (RGA 1973 and 1996) ; The 1996 general agricultural census revealed that (i) 70% of Moroccan farms are less than 5 ha (average size of 2 ha) and occupy one-quarter of the cultivable area; and (ii) 87% of farms are less than 10 ha in size and cover about half of the UAA. The land area is structured by acts some of which do not provide the stability and guarantees necessary for undertaking long-term investments: (i) the largely predominant Melk (76% of the UAAA) estimated at 7 million hectares can belong in full ownership in an individual capacity to one person just as it can belong to several individuals. It is

however confronting allotment and co-ownership problems and weaknesses of the traditional system of issuing deeds of property ownership; (ii) common land (about 1.5 million hectares or 17% of the UAA) belonging in full ownership and co-ownership to the entire ethnic community and quich land (about 240 000 hectares or 3% of the UAA). These two acts subdivide ownership rights to the extent that the occupants only have a tenuous hold on usufruct rights.

1.3.1.7 Vagaries of the weather : at the sectoral level, the main constraint concerns the heavy dependence of the agricultural sector on the vagaries of the weather. The occurrence of droughts affected 6 out of 16 crop years during the 1980-1995 period and 4 out of 7 in 1996-2002. Rainfed crop yields can be affected by such instability as shown by the coefficients of variation of yields of some crops over the 1996-2004 period: (i) cereals (39%); (ii) durum wheat (40.6%). (iii) barley (47%); and (iv) corn (44.2%) (Annex I, page 8). Variations in yields also result in variation in the income of producers in these sub-sectors.

1.3.1.8 The forest estate is quite vast, covering 21% of the national territory. However, the forest is seriously threatened by overgrazing, harvesting of fuelwood, clearing (4 500 ha/year), fires (3 000 ha/year) and urbanization (1 000 ha/year). Environmental sensitivity, the vagaries of the weather and low investments have led to the decline of 31 000 ha of forests annually.

1.3.1.9 **Irrigation water management :** Morocco's lead partners in the water and sanitation sector are the African Development Bank (ADB), the World Bank (IBRD), the Islamic Development Bank (IDB), the European Investment Bank (EIB), the European community and various European donors, the Arab Fund for Economic and Social Development (AFESD), Japanese Cooperation (JICA), United States Agency for International Development (USAID), Canadian Cooperation, etc. The involvement of these donors helped finance projects in all water sub-sectors, water resource mobilization (dams), irrigation projects, DWS projects in urban and rural areas, etc. The silting up of dams because of lack of protection of catchment areas is a very big constraint to the sustainability of facilities acquired at great cost to the community. According to a very rough estimate including losses in yield relating to land losses, the cost of silting due to the resulting erosion would stand at about MAD 10 billion (by 2030) on the 15 million hectares upstream the 22 biggest dams in Morocco. In fact, the erosion of catchment areas and silting up of dams result in a storage capacity loss of about 50 million m<sup>3</sup>/year at national level and compromise the sustainability of water resources. Overall loss rates recorded in irrigation are high, standing at between 50% and 60%. Yet, these are avoidable irrigation water losses (transport, distribution and parcel networks) estimated at 600 million cubic metres a year, which corresponds to about 6%-7% of volumes currently allocated to the irrigation sector. A diagnosis of irrigation systems in ORMVA highlights a problem related to the deterioration of tangible assets and service to users due to the poor maintenance of equipment. In fact, maintenance budgets have been on the decrease since 1995. Irrigation agriculture is confronting a two-fold challenge that it must meet. It will be necessary to extend irrigation to new land areas and, at the same time, improve the performance of irrigated areas.

1.3.1.10 Morocco must face a dilemma concerning the weighting to be given to the two types of agriculture of the country. Irrigation agriculture is costly in terms of investment and concerns a small farm population. It could however improve the competitiveness of Moroccan agriculture. Rainfed agriculture covers by far the greatest part of the UAA and concerns a bigger population.

1.3.1.11 **Crop production sub-sector :** grain growing, which is predominant and extensive, is carried out at the expense of other crops which can better balance the cropping plans. Note will be taken of trends in planted acreages over the last ten years (Annex 1, Page 5). Between 50% and 60% of the UAA were seeded to cereals.

1.3.1.12 The main constraints on the development of the livestock sub-sector are : (i) structural, due to recurrent droughts, problems of access to livestock farms (because of inadequate infrastructure) and the small size and dispersion of flocks ; (ii) social (illiteracy and average age exceeding 55 years) ; (iii) health of herd : non-existence of a reliable identification system which makes it impossible to track animals and enforce health measures, low participation of breeders in the costs of prophylaxis, absence of regional control programmes (border problems), inadequate means of health coverage expose the herd to severe diseases like tuberculosis and brucellosis, and others ; (iv) technical : underutilization of inputs, low level of productivity of herd, undeveloped processing and development infrastructure unsuited to rules of hygiene (slaughterhouses, etc.) ; (v) socio-professional: low technical level of breeders in herd management, limited, unrepresentative professional organizations; (vi) economic: increase in prices of factors of production resulting in high costs, unsuitable and poorly organized marketing and distribution channels (livestock market, slaughterhouses, informal livestock product channels, etc...); and (vii) environmental (legal status of rangeland, management and use of rangeland, etc.).

1.3.1.13 **Fish production :** the maritime fisheries sector accounts for about 3% of GDP formation and seems to be a major job provider, directly and indirectly employing 400 000 persons (28% of seafaring persons-sailors and officers and 72% of workers in fisheries sub-sectors). The Moroccan fishing fleet comprised 2 923 units in 2002 with a tonnage of 233 492 GRT<sup>3</sup>, including 85% in-shore units and 15% offshore units. There are 29 fishing ports in Morocco, including 8 stretching the length of the Mediterranean coast and 21 the Atlantic coast. There were 359 sea produce processing units in 2002 carrying out varied activities including canned and semi-preserved products, freezing, fresh-pack handling, manufacturing of fish meal and oil, as well as processing marine algae.

1.3.1.14 These results notwithstanding, the country's biological resources are deteriorated by both the concentration of the national fishing fleet in the sensitive biological zone and the absence of fishing grounds development and management plans. On the technical and economic front, the country's fishing fleet is limited by: (i) oversize ships as well as their high level of specialization as regards operation and marketing; (ii) a lot of foreign capital in offshore fishing companies; and (iii) poor adjustment of conditions of preservation of fish catches aboard to international standards. Furthermore, it is necessary to underscore the inadequacy of financial resources allocated for scientific research. The maritime training system is also plagued by problems relating to : (i) lack of supervisory staff aboard in-shore fishing vessels; and (ii) insufficient coverage of maritime areas as regards maritime training and retraining for sea fishermen.

1.3.1.15 **Inadequate financing of sector :** low profitability of the agricultural sector and marketing difficulties are the reason for lack of interest by commercial banks in the agricultural sector. Greater contribution by this sector is dependent on improvement of the rural environment, modernization of land tenure acts and greater coverage of the sector's risks (insurance, guarantee fund, etc.). Moroccan agriculture is not heavily subsidized in comparison to other countries (2% of GDP compared with 73% in the EU and 27% in the United States of America).

1.3.1.16 **WTO and EU agreements :** the partnership agreement with the European Union signed on 26 February 1996 following the Barcelona Conference (1995) committed Morocco to building a Euro-Mediterranean free trade area by 2010. This agreement could be an opportunity for Moroccan agriculture because some of its products are competitive and the European Union, which is the world's leading importer of agricultural products, is a vast market which is profitable and near Morocco. Moreover, this market is already of great importance to the Moroccan economy as it trades mostly with the European Union (62% of exports and 56% of imports). There are, however, very significant risks and difficulties because competition will be keen with the implementation of the agricultural component of WHO agreements which provide for the lifting of

barriers to the sector and the liberalization of trade (end of the preferential system of agricultural tariff quotas). The risks concern particularly the overtapping of natural resources in the race for productivity and competitiveness, and crowding out of many farms with an increase in rural migration and urban unemployment. On the other hand, cereals which play a key role in human food are considered as strategic products for ensuring social peace and some degree of income redistribution. Their lack of competitiveness is a major concern.

### **1.3.2 Sectoral Development Strategies**

1.3.2.1 The 1981-1985 plan earmarked one-third of public sector planned investments for agriculture including 40% for irrigation projects (compared with 60% during the 1978/1980 period) and 52% for support activities to projects concerning dryland farming development and stockbreeding. The basic objectives thus prioritized the development of dryland farming without however hampering the sustained progress of the irrigation sector. Specifically, the objective was to: (i) achieve the country's self-sufficiency in food production; (ii) boost growth in agricultural exports; (iii) reduce social and regional imbalances; and (iv) enhance, where possible, the value of agricultural products by developing agroindustry and processing plants.

1.3.2.2 The attainment of these objectives led the Government to adopt an active and participatory strategy, particularly by intensifying agricultural production through the pursuit of irrigation schemes and the intensification of the development of irrigation areas, mechanization, use of fertilizers and selected food crop seeds and exportation. The Government also decided to revitalize and develop agroindustries.

1.3.2.3 The major agricultural development policy guidelines for the 1988-1992 period were outlined in the Economic and Social Development Plan (1988-1992) and are not different from those of previous plans. They aimed to: (i) remedy the lack of basic infrastructure in rural areas with a view to reducing imbalances between rural and urban areas; (ii) improve the living and working conditions of the rural population; and (iii) increase staple food production, namely cereals, sugar, edible oils and milk products with a view to attaining food self-sufficiency.

1.3.2.4 To facilitate the implementation of this policy, Morocco embarked on a structural adjustment programme (SAP) with the support of the international community, including the Bank. The key measures adopted under this plan were: (i) the liberalization of prices and marketing of agricultural products; (ii) the development of seeds; (iii) the restructuring of extension services; (iv) the conservation of natural resources and control of desertification; (v) State divestiture; (vi) agrarian reforms in rainfed agriculture areas; (vii) streamlining of CNCA loan procedures; and (viii) the maintenance of a competitive and export-oriented agriculture.

1.3.2.5 In the 2000-2004 economic and social development plan, Morocco opted for a greater integration of its economy into the world market, which meant new challenges that it wanted to overcome by formulating a strategy which prioritized improved operation of factor and basic services markets, the development of productive sectors and urban areas, as well as environmental protection. Sectoral policies, including agriculture and rural development policies, stemmed from these strategic guidelines. They can be summarized as: (i) the need for improved water resource mobilization in order to sustain irrigation policy achievements; (ii) use, to a large extent, of supplemental irrigation to face the negative challenges of drought; (iii) the effective implementation of research and agricultural extension to concretize on the ground the transfer of appropriate technologies to farmers and to reduce the impact of the vagaries of the weather; (iv) the adoption of a community-based approach to the problem of development ; (v) the adoption of policies that incorporate the various types of farms; (vi) a new agricultural and rural development financing approach through the establishment of mechanisms that address the requirements of

climatic contingencies and farm structures; (vii) the strategic need to diversify the economic activities of rural populations; and (viii) the mobilization and effective participation of human resources involved in this strategy.

1.3.2.6 Instruments used in the implementation of the new strategy relate to : (i) price policy : three major forms of direct interventions stand out among measures influencing agricultural price formation, namely subsidies, taxes and border protection. The relevant instruments have undergone reforms to adapt them to the objectives of policies successively implemented since the launch of the first Agricultural Sector Adjustment Programme (ASAP I) in 1985. It should also be pointed out that since 1984, by virtue of a decision of the King taken before the adjustment period, all agricultural incomes were exempted from all taxes up to the year 2000, which deadline was extended up to 31 December 2010. Despite these exemptions, agriculture is not completely exempted from taxation since it is liable to several taxes, notably: the Domestic Energy Consumption Tax (TIC), all indirect taxes on the marketing of agricultural products (VAT, market access fees, slaughter charges, etc.), as well as the urban tax and business tax, etc; (ii) implementation of the Agriculture Agreement (AA): since 1996, Morocco has been sending notifications within the framework of WTO regarding the implementation of its commitments under the AA, notably those relating to the liberalization of measures at the border (market access, export subsidies, etc.) and to internal agricultural production support (input subsidies, producer price support, etc); (iii) agricultural credit policy: since the early 1990s, the Moroccan financial system has undergone many reforms aimed at rendering it more efficient and creating a competitive climate between banks as well as reducing the cost of intermediation. The project concerning the institutional restructuring of the National Agricultural Credit Fund (CNCA) was completed in December 2003, with the publication in the Official Gazette of “Law No. 15-99 on the reform of Agricultural Credit”. The Morocco Agricultural Credit (CAM) thus becomes “a bank like others” pursuing profitability and security objectives by prioritizing creditworthy customers. Regional banks were to be set up at the request of interested farmers and on the initiative of Morocco Agricultural Credit which is expected to subscribe to their initial capital. This option should foster a community-based approach, contribute to the development of local and regional activities and allow for the involvement of farmers in the management and sustainability of these institutions.

1.3.2.7 **Irrigation sub-sector :** in the irrigation sub-sector, external (reparcelling, dams and canals) and internal (clearing, trenching and draining) capital costs were shared between the State and irrigators by the Agricultural Investments Code. To ease access to water and the development of irrigation agriculture, the State bears 60% of capital costs, and the remaining 40% constitute the participations of irrigators to investment efforts. Such participation comprises direct participation in the development of irrigated lands and an annual, permanent fee for the use of irrigation water (cf. Box A). However, the 1969 code’s agricultural investment incentive legal framework seems to focus essentially on irrigated areas to the detriment of pastoral, forest and rainfed agriculture areas.

1.3.2.8 **New rural development approach:** Moroccan authorities wondered about the institution of a new rural development policy based on a comprehensive analysis of the situation of rural areas today. The scenario adopted is the maintenance of a large rural population as well as the sustainability of a large number of small farms and the development of rural villages that provide services, small and medium-scale agroindustrial activities and jobs. To develop this new strategy, a number of approaches or principles were defined: (i) adoption of integrated, multidimensional and territorialized approaches; (ii) implementation of decentralization and deconcentration policy provisions; empowerment and participation of stakeholders; and (iii) partnership building.

1.3.2.9 The plan starting in 2005 falls within the framework of the country’s policy to open up to Europe and the free trade agreement recently signed with the United States of America.

## **2. EVALUATION OF BANK ASSISTANCE STRATEGY**

### **2.1 Bank Policy in the Sector**

2.1.1 The Bank's overall vision is to strive, by dedicating itself to the assistance of African countries in their efforts to reduce poverty, to become the lead financial institution in the area of development in Africa. It has defined three levels of intervention for itself, namely: (i) at country level: Agriculture and Rural Development; Private Sector Development; and Human Resource Development; (ii) at regional level: Governance, Cooperation and Regional Integration, and (iii) cross-cutting issues such as gender and the environment. Four objectives are pursued: (i) accelerated, equitable economic growth; (ii) poverty reduction and food security; (iii) sustainable natural resource management; and (iv) human and institutional capacity building. Bank interventions are centred on four main areas: (i) rural "public utility" infrastructure; (ii) agricultural private sector promotion; (iii) improved management of natural resources; and (iv) development of efficient financial networks. Bank policy is implemented through operational lending policies (project cycle and quality at entry assessment, effective monitoring and evaluation and management structures to facilitate implementation), lending instruments (loan programmes, lines of credit, private sector window), implementation strategies, and participation of beneficiaries. Since the launching of the first Bank operations in Morocco, the agricultural sector has always been at the centre of its concerns.

### **2.2 Bank's Strategies in the Country**

2.2.1 The Bank's first interventions in Morocco date back to 1970. Up to 1988, the Bank's strategy, while prioritizing the agricultural sector, was essentially based on resource availability. From this date, the Bank attempted to streamline its interventions through Economic Prospects and Country Programming (EPCP) papers which were replaced by Country Strategy Papers (CSP) from 1996.

2.2.2 Up till 1994, the Bank did not have any clear guidelines on resource allocation and financing of the various sectors. Financing was essentially based on the priorities of the country. The strategy which guided Bank Group action was based on the premise that Morocco had embarked on an intensive, sustained adjustment effort and that it was necessary to place emphasis on the construction of back-up infrastructure, the revitalization of productive sectors and building of human capital. The strategy therefore prioritized infrastructure, including in the agricultural sector, and public utilities.

2.2.3 For the 1996-1998 period, the Bank's assistance strategy as defined in the CSP was to coordinate its interventions with those of other donors, including the World Bank, with a view to supporting the efforts of the Kingdom of Morocco in the modernization of its economy and society with the major objective of rendering them competitive. This document was prepared on the basis of information collected following an economic mission and various documents received from other international institutions (IMF, World Bank, UNDP and the European Community). Assistance was focused on four major areas: (i) support to the agricultural sector and more especially the sub-sectors of irrigation, fisheries and integrated rural development for which priority actions concern the most disadvantaged populations; (ii) assistance to the social sector by carrying out in rural and periurban areas investments aimed at developing human resources and fostering the development of vocational training; (iii) selective pursuance of the construction of basic infrastructure in the transport and public utility sectors; and (iv) support to private sector development and to the financial sector.

2.2.4 For the 2000-2002 period, the Bank's medium-term assistance strategy in the Kingdom of Morocco had to focus on priority areas likely to have a significant impact on : (i) the acceleration of growth and job creation; (ii) human resource development and poverty reduction; (iii) macroeconomic and sectoral reforms ; and (iv) private sector development. The public sector priority areas retained were: (i) support to economic and social reforms; (ii) human resources; and (iii) infrastructure (telecommunications, energy, water and transport). This strategy was updated on the basis of documents provided by the country, notably documents relating to the 2001 Finance Law, as well as on the World Bank Assistance Strategy and the last report on consultations under the June 2001 IMF Article IV.

2.2.5 The medium-term assistance strategy set out in the 2003-2005 CSP aimed at contributing towards the creation of enabling conditions for the attainment over this period of a projected annual growth rate of 6% of GDP up to 2007 necessary to reduce unemployment and poverty. The main objective of the Bank's strategy for the 2003-2005 period would be to support basic reforms through second generation reform programmes, including reforms which contribute to the improvement of good governance, as well as through lending operations for financing investment projects, consulting services and analytical works programmes. The Country Strategy Paper was prepared following a participatory approach. Bank teams held a series of bilateral consultations with the representatives of the different key ministries involved in cooperation with the Bank, with the representatives of Morocco's civil society and private sector and with development partners represented in Morocco. The exchange of views and discussions enabled the missions to properly identify the priority sectors, jointly appraise the relevance, coherence and realism of the Government's policies, strategies and programmes, in particular those aimed at achieving strong and sustainable growth capable of reducing unemployment and poverty.

### **2.3 Relevance of Assistance Strategies**

2.3.1 Since the 1981-1985 economic and social development plan which devoted to agriculture one-third of investments earmarked for the public sector including 40% for irrigation projects and 52% for support activities of projects concerning dry farming and stockbreeding up to the 2000-2004 plan when Morocco opted for a greater integration of its economy into the global market, the need for food security and improvement of the living conditions of rural populations make water control, management of agricultural land, conservation of productive land, revival of investment, promotion of technology and professional organization the major determinants of the agricultural policy to be implemented.

2.3.2 Given its importance in the country's economy, the Bank's portfolio (1995 portfolio review) accorded priority to the agricultural sector with a 29.7% share which was also in keeping with the strategy set out in the Economic Prospects and Country Programming Papers. The 1996-1998 CSP, as defined earlier on, shows clearly the coherence of the Bank's assistance strategy in the consideration of Morocco's concerns. Of the entire assistance, about UA 170 million was committed in the irrigation subsector (ORMVAD, ORMVAL, SIDI Dam and Gharb Area). The development of irrigation helped ensure the diversification of crops with the development of market gardening and cash crops (sugar beet). Contribution to integrated rural development resulted in the Settat Province Integrated Rural Development Project. The PDPEO led to the construction of public utilities. The different lines of credit helped support private sector development and the financial sector.

2.3.3 If we consider the period from the start of Bank interventions in the country up to 1991 and the period between 1992 and 2004, we note that the Bank honoured its country strategies in the first phase of operations in the agricultural development subsector. In contrast, in the second phase, the Bank prioritized the social sector. The Water Sector Adjustment Programme of an amount of €

215 million which was approved by the Board of Directors of the Bank in December 2003 is the only operation relating to the sector. It should also be noted that the Bank-backed WATER SAP measures will create the appropriate framework for massive investments in the water sector. Such investments will enable Morocco to achieve the Millennium Development Goals in this sector by bringing drinking water to more than 80% of the essentially rural or periurban population without access to drinking water. Despite this slippage, the Bank's assistance strategies were coherent and relevant. Human development which is one of the dimensions of rural development was prioritized through all social projects (education, health, access to drinking water in rural areas, etc.) On the whole, the Bank's strategy was relevant.

### **3. EVALUATION OF OUTCOMES : LENDING OPERATIONS**

#### **3.1 Lending Operations : Portfolio Composition and Status**

3.1.1 Bank assistance in the agricultural sector was especially through lending operations. All operations initiated by the Bank in the agriculture and rural development sector have been completed. The composition of the operations is shown in Annex A III. This review examines the previous projects, focusing on the last three which have been rated (Doukkala irrigation, natural resource conservation project and the Oriental pastoral and livestock development project). These projects have the advantage of incorporating and addressing the country's strategic options (irrigation, environmental protection and integrated rural development).

3.1.2 Agricultural Sector Structural Adjustment Programmes (ASAP) : the general objectives of ASAP II were to consolidate the adjustments carried out during ASAP I, develop agricultural sector production, reduce the public finance deficit and improve the balance of payments. As in the case of ASAP I, the ASAP II loan was intended to finance the importation of inputs like fertilizers and raw materials, agricultural chemicals, animal feed and veterinary products, oil products, seeds and plants. The specific objectives of the loan were as follows: (i) increase in public and private investments; (ii) improvement of the policy on agricultural production incentives; (iii) government's focus on areas of national interest and on strengthening of public services; (iv) improvement of natural resource management; and (v) institutional building of MARA Directorate for Planning and Economic Affairs (DPAE). On the implementation front, the ASAP measures were implemented very satisfactorily although the time frames envisaged during the appraisal phase were not always respected. ASAP implementation as well as design benefited from the support of an efficient administration. The Government also benefited from the support of other projects which helped guarantee the implementation of ASAP measures. Regarding performance, ASAP contributed significantly to the achievement of objectives which were to increase the contribution of the agricultural sector to overall economic growth and to balance of payments viability and fiscal balance, and to help in the creation of new jobs. However, many ASAP contributions could not be quantified directly because of the qualitative and structural nature of most measures. An analysis of ASAP impacts helped underscore that the promotion of an enabling economic environment helps the economy to better counteract external shocks, on the one hand, and better realized its potential in case of favourable external and exogenous conditions, on the other hand.

3.1.3 Settlat Province Integrated Rural Development Project: the importance accorded irrigation agriculture as described above should not mask the dilemma in Morocco. Rainfed agriculture has a huge potential both in terms of usable agricultural area (90% of the country's UAA) and the number of farmers depending on it for their livelihood. The agricultural development activities carried out in the rainfed areas such as the Settlat Province Integrated Rural Development Project (approved in March 1985 and completed in 1997) covered very vast areas considering the Ministry of Agriculture's intervention possibilities and available credits. The

project aimed at improving the living conditions of the population of Settat Province and, at national level, reducing the country's dependence on imported food products. The project components were: (i) building of storage facilities; (ii) strengthening of technical services; (iii) construction of socioeconomic infrastructure; and (iv) access to credit. The implementation of this project faced many difficulties due to the diversity and complexity of planned actions, the number of stakeholders, budgetary constraints, deficiencies of some service providers, absence of a preliminary study and lack of human resources. Two years of drought also seriously affected the project area and destroyed a part of the outputs. The results obtained are moderate and the lessons learnt from the different experiences helped to formulate a new strategy for the development of dryland areas. It is based on a four-pronged approach: (i) focused and territorialized; (ii) integrated; (iii) participatory and contractual; and (iv) decentralized.

3.1.4 In the implementation of this strategy, many measures were taken at the following levels : (i) institutional, through the formation of the Steering Committee and the Central Rainfed Areas Development, Monitoring and Supervision Commission (PMVB) and the definition of the institutional framework for study and implementation ; (ii) approach, through the definition of a bottom-up and participatory approach and preparation of supporting documents (plans, procedure manuals, guides, etc.); (iii) enabling texts, through the preparation of model implementation texts, decrees and orders of PMVB; (iv) human resources, through the listing of the country's skilled human resources, formation of multidisciplinary teams and training of DPA and TC officials and cadres), and (v) partnership, through the establishment of partnerships with the EU, Agence du Nord, Andalou Government, USAID, IFAD, UNDP, FAO and some ministries.

3.1.5 Thanks to these measures, a pipeline of projects with over 200 project sites identified in different agro-ecological zones was constituted and the preparation of studies of more than sixty projects was initiated. In addition, as part of the implementation of the Rural Development Strategy 2020, a new generation of IRDPs was launched: (i) the MEDA programme in the northern provinces of the country launched in 2000 for a duration of eight years and co-financed by the EU; (ii) the A1 Haouz mountain areas development project co-financed by IFAD is being implemented; (iii) the IRDP focused on small-and medium-scale water management projects (DRI-PMH) co-financed by the World Bank: the first, which covers the 2001-2006 period, concerns the rehabilitation of 9 500 hectares of traditional irrigation areas in Azilal, Khenifra and A1 Haouz provinces; and (iv) the DRI-MVB in seven areas (Tata, Taroudant, Boulemane, Sidi Kacem, Khemisset Khouribga and Errachidia provinces).

3.1.6 Agricultural financing : since it was set up in 1961, the CNCA has always sought to perform its duty of providing financial support to agriculture by seeking adapted resources and putting them at the disposal of farmers. The CNCA initially focused its services on direct support to crop and livestock production and then diversified and extended them to new sub-sectors like rural housing (from 1980), real estate credit, fisheries and exportation (from 1983) and rural handicrafts (from 1989). To implement these programmes, the CNCA resorted not only to State grants and recovery of its debts but also to external assistance. It is in this context that the ADB financed successively lines of credit II, III and IV after having financed a first line of credit. Credit line I to the CNCA was the second operation in the agricultural sector and the twelfth operation financed by the ADB in Morocco (1982). Lines of credit II, III and IV were respectively the third and ninth operations of the Bank in the sector. The loans granted to the CNCA were intended for the development of the agricultural sector through the satisfaction of the country's needs in staple agricultural products, better coverage of imports, increase in exports, improvement of the income of farmers, fishermen and craftsmen and, hence, their standard of living. Lines of credit II, III and IV were intended to strength the CNCA's financial capacity by providing it with additional resources. This was to enable it to increase its interventions in rural areas, diversify its intervention sectors and thus enable farmers, fishermen and craftsmen to have more easy access to input and equipment

markets and landed property and to invest in rural infrastructure. The CNCA obtained satisfactory results attested notably by the volume of credits injected into agriculture. The noteworthy weakness is that the CNCA was unable to assess the impact of the various loan programmes on the beneficiaries in terms of real growth in their incomes.

**3.1.7 Irrigation agriculture :** since the adoption of the irrigation policy, there has been significant progress in the development of irrigation areas thanks to the intensification and diversification of irrigated crops. The most remarkable impacts concerned: (i) the sugar crop whose national production increased steadily owing to the development of beet and sugar cane in large water areas; (ii) fruit growing and market gardening where the national production of fruits and vegetables covers the entire domestic consumption and a substantial part of the production is intended for the agroindustry and export; (iii) citrus fruit sector; and (iv) milk products which benefited from the development of irrigated fodder crops. Irrigation production systems generate higher value added and are big consumers of factors of production and labour. Production costs excluding irrigation costs in irrigation areas are on average 3 to 8 times higher than those of rainfed cereal production systems. This difference gives an indication of the impact of irrigation on the socioeconomic environment and the trade flows that it generates. Irrigation thus contributes to the development of various enterprises and activities that extend and back up irrigation. Upstream, input production and supply, services, equipment and materials industries and downstream the agroindustry, services and transport are the major beneficiaries.

**3.1.8** Concerning job creation, it is estimated that irrigation areas under cultivation procure nearly 120 million working days annually, that is about 1 650 000 jobs of which 250 000 are permanent, representing more than 50% of jobs generated by the entire national agricultural production. In addition, there are jobs created by other activities upstream and downstream irrigation agriculture. Post-evaluation studies conducted on some major irrigation projects showed that incomes generated by irrigation are 4 to 8 times higher than those from a without irrigation situation. In addition, the stabilization of incomes resulting from irrigation is also as important as increase in incomes, because it is such stabilization which determines the adoption of medium-and long-term investment strategies noted in farms having benefited from irrigation.

**3.1.9** Infrastructure constructed during the implementation of irrigation projects contribute to the improvement of the living conditions of the beneficiary populations: rural road networks created or reinforced during farm consolidation helped open up the areas concerned. The grouping of housing, facilitated by land consolidation, created enabling conditions for the putting in place of socioeconomic infrastructure such as electricity, drinking water, sanitation and schools. On the whole, although irrigation areas cover only 13% of the country's usable farm area, they account for 45% of agricultural value added in a year of average rainfall and more than 70% in a drought year and for 75% of exports of agricultural products. Industrial activities driven by the development of irrigation have grown both upstream and downstream of agricultural activity. Upstream, the building of irrigation infrastructure and related works has had significant spin-offs on the public works, industrial and services sectors. However, it is downstream that an important agroindustrial fabric was put in place to process an agricultural production most, if not all, of which comes from irrigation areas (13 sugar mills, 13 dairies, hundreds of packaging stations, refrigerated warehouses and fruit and vegetable canning plants of a capacity of more than one million tonnes per annum, cotton ginning units, rice mills, etc.).

**3.1.10** The Bank's policy in the water and sanitation sector which is based on the 'Integrated Water Resources Management Policy' is underpinned by three basic principles: water should be considered as a social and environmental economic good. The main objective of this policy is to foster an integrated approach to water resources management for economic development and to achieve poverty reduction objectives. The integrated approach takes into consideration the growing shortage of

water and the diverse competing uses of water resources whose major components are as follows: (i) balance the use of water between basic and interdependent requirements in the social, economic and ecological domains ; (ii) manage the use of water in an integrated and comprehensive manner in the areas of agriculture, irrigation, sanitation, household and industrial consumption, hydroelectricity, energy and transport ; (iii) ensure the integrated management of surface and ground water ; (iv) prepare and implement the best possible institutional and technical infrastructure for water management ; (v) facilitate greater private sector participation and the implementation of cost recovery measures without prejudice to access by the poor to water resources ; and (vi) ensure the ecological sustainability and the taking into consideration of issues of equality between men and women in all aspects of water resources development and management.

3.1.11 Over the period under review, the Bank's intervention in the subsector concerned two projects : (i) Management and Development of Loukkos ; (ii) Irrigation of the first phase of Doukkala, high service (Box A) and a study : Study of irrigation of the Gharb areas. The Water-SAP approved in 2003 is in line with the Bank's policy and strategic plan guidelines which made water and sanitation a priority sector. It falls within the framework of the Bank's intervention strategy, in accordance with the 2003-2005 CSP which recommends support to the water sector, including in the form of reform programme. Financing is also in line with the Bank's country risk exposure policy.

### **BOX A : DOUKKALA IRRIGATION PROJECT 1<sup>st</sup> PHASE (HIGH SERVICE)**

#### **1 PROJECT OBJECTIVES**

The national goal of the high service irrigation programme in the DOUKKALA area, of which the project is the first phase, was to contribute to the food security of the country while significantly improving Morocco's trade balance. At the regional level, this project had to contribute to increasing in the medium term the incomes of some 27 000 families of single farm operators. The project design was inspired largely by the experiences of other irrigation areas, notably the experience of the low service Doukkala area of 61 000 hectares of which 36 000 hectares were irrigated between 1974 and 1986. The project consisted in the development and hydraulic equipment of 16 000 hectares which were only the first of the four successive phases of a programme targeting the irrigation of 64 000 hectares. The major activities of the project were : (i) the construction of a power tunnel, a pumping station with four pumping units as well as a main canal; (ii) putting in place of irrigation networks on 16 000 hectares; (iii) consolidation operations, opening of roads and construction of sanitation networks; and (iv) development of infrastructure for the protection of the area and supervision of farmers.

The EIB and AFESD co-financed the project alongside the Bank.

#### **2 OUTCOMES**

Implementation of this first phase of the project resulted in the consolidation of land for the administrative regularization of land titles, which was likely to give some ten thousand (10 000) land owners a feeling of security. Furthermore, this operation encourages the grouping of rural housing the location of which was left to the initiative of the people concerned. Increase in the herd and improvement of the quality of meat and milk production impact positively on the health of the population. Some 90% of areas (16 000 ha) envisaged during the appraisal of the project in 1991 were prepared for irrigation. Crop yields exceeded those initially envisaged right from the first harvest following priming (+56% for wheat and 40% for sugar beet). Real meat production (cattle and sheep) is on the increase. Milk production rose from 57 million to 72.9 million litres (+27%). In this connection, stock production accounts for 37% of the gross profit margin of a standard farm in the context of the first phase of the high-service irrigation carried out. Apart from general and direct benefits of such a project regarding the status of women (availability of water, transport network, grouped housing, monitoring of health conditions in the area), specific positive impacts were recorded. Thus, literacy education classes, workshops and extension activities targeting the female population were organized and monitored by the services of ORMVAD.

#### **3 ORGANIZATIONAL MEASURES**

ORMVAD, like all agencies of the same nature, operates under the supervisory authority of the Directorate of Irrigation Schemes of the Ministry of Agriculture, Forestry and Maritime Fisheries. This Directorate plays the role

of planning and coordination of irrigation schemes. In this capacity, its cadres regularly conduct support missions to agencies including ORMVAD.

- 1- Participatory management of irrigators: ORMVAD involves agricultural users in the management of irrigation water and, in some former compartments, the maintenance of tertiary networks and sprinklers. In addition, to improve the efficiency of parcel irrigation, ORMVAD encourages and motivates users to maintain internal equipment for gravity : (levelling, use of spiles, lining of sprinklers, etc), and for the sprinkling system: renewal of mobile irrigation equipment and meters ;
- 2- Contractualization : in the definition of some responsibilities in the supply of irrigation water and for the purpose of nurturing a climate of confidence between partners, ORMVAD prepared model contracts adapted to each method of irrigation (sprinkling and gravity). The total number of irrigation water supply contracts signed by irrigation farmers at the end of the 2004 fiscal year stands at 12 607 almost all of which concern the new sectors primed in the High-Service area. This represents 33% of all water users in the irrigation area managed by ORMVAD.
- 3- Pricing : prices are one of the major constraints to the financial equilibrium and sustainable development of the water sector. The pricing of irrigation water is governed by the provisions of the Agricultural Investment Code-CIA (Dahir 1-69-25) which determines the obligations of the State and of the beneficiaries in the irrigation areas, notably the participation of beneficiaries in irrigation schemes. Water is supplied to agricultural users under the Agricultural Investment Code against payment by the latter of : (i) a direct contribution for the development of farmland covering a part of investments in irrigation schemes broken down into 17 equal yearly payments; and (ii) a water fee calculated on the basis of the product of volumes used by a unit of farms and the price charged which is fixed for each price sector by joint order of the Minister of Agriculture and Rural Development, the Minister of Finance and the Minister of the Interior.

#### 4 ENVIRONMENTAL ISSUES

- 1- Soil salinity : at present, the irrigation areas of the High-Service area do not have any soil salinity problem.
- 2- Eutrophication of surface water : to check the development of aquatic vegetation around water transmission channels, ORMVAD carries out each year biological control operations (poisoning) of harmful herbs. This operation consists in throwing about 200 000 Chinese carps in these structures in order to increase their discharge.
- 3- Nitrates in ground water : training sessions were organized for ORMVAD workers to enhance their knowledge in the area of prevention of pollution through the use of pesticides and inputs, tolerance of crops to water and soil salinity, irrigation management and alerts in water sector and at parcel level.
- 4- Monitoring observatory: ORMVAD adopted the following plan of action : (i) establishment of environmental observation : the observatory of water and soil quality set up since 2001 ; (ii) revitalization of field monitoring units and their equipment with technical and scientific monitoring equipment, as well as training and information of cadres and technicians in the area of environment and rationalization of water and inputs.

**3.1.12 Livestock sub-sector :** the livestock sub-sector accounts for 25% to 30% of agricultural GDP according to the results of crop years. The value added of stock production is estimated at DH 10 billion annually, that is about 33% of the agricultural value added. Socially, stockbreeding contributes to farmers' incomes as 74% of farmers derive their income from stockbreeding, or about 1 100 000 farmers out of 1 500 000 farmers listed. This population manage a large number of animals estimated in 2004 at more than 25 million head, including 2.7 million cattle, 17 million cheep, 5.3 million goats and 180 000 camels in addition to a chicken, rabbit and bee population and equidae. Stockbreeding contributes to the promotion of economic activity in rural areas, particularly by financing agricultural operations or any other investment by farmers (permanent liquidity), procures animal draught power, provides agro-food industries and handicrafts with essential raw materials (leathers, skins, wool, etc.) and plays a very well-known ritual and cultural

role in the Moroccan society (religious and family feasts, equestrian festivities, etc). Changes in the herd are shown in Annex A 1-7. During the period under review, the Bank financed the Oriental Pastoral and Livestock Development Project (approved in 1990 and completed in 2001).

**3.1.13 Natural resources conservation :** droughts also aggravate the phenomena of soil erosion and the other forms of environmental degradation, because during drought periods farmers and stockbreeders generally increase pressure on natural resources. In Morocco, the most significant contribution of the forestry sector to the national economy comes from the ecological role it plays and its protection of watersheds: biodiversity protection, protection against soil erosion, regularization of the moisture balance and preservation of the quality of internal waters, preservation of infrastructure and agricultural production. The forestry sector's share of value added in the gross domestic product is estimated at about 2% and corresponds to 12% of Morocco's agricultural value added. In addition, the sector contributes to the supply of energy and non-market fodder which benefit essentially the disadvantaged population segments. It also supplies the forest industrial subsector. The Bank funded a natural resources conservation project (approved in 1990 and completed in 1998).

## **3.2 Relevance and Quality at Entry Assessment**

**3.2.1** The Bank got deeply involved in support to irrigation policies (Enlargement of Doukkala Canal; SIDI DRISS Dam, Second Phase of Gharb Irrigation, ORMVAL of Loukkos, Doukkala Irrigation, 1<sup>st</sup> phase (High Service), and Study on the Irrigation of Gharb Areas) which were expected to allow for poverty reduction through food security, improvement of the living conditions of the populations, limitation of rural-urban migration, development of human resources and improvement of the trade balance of the country. The Natural Resources Conservation Project, the Pastoral and Livestock Development Project and the Settat Province Integrated Rural Development Project addressed concerns about the improvement of the living conditions of the populations and environmental protection. These objectives are in line with the Bank's strategies (CEPP 1994, CSP 1996 and CSP 2000) and those defined in the various development plans of the country (Morocco's Development Plans). The social and environmental dimensions were taken into consideration. The Bank's assistance was therefore very relevant during the period under review.

**3.2.2** Quality at entry assessment of the operations portfolio refers essentially to the quality of identification and preparation of projects. The Bank hardly participated in any stage of identification and preparation of all projects. This was likely to affect implementation of projects such as the Oriental Pastoral and Livestock Development Project. However, the projects had well-defined objectives. The environmental dimension was effectively taken into consideration, whereas gender was not specifically mentioned.

## **3.3 Efficacy of Operations**

**3.3.1** The ASAP contributed tremendously to the achievement of objectives which were to increase the contribution of the agricultural sector to overall economic growth, balance of payments equilibrium and budget viability, and to help create new jobs. The CNCA's performance is satisfactory as demonstrated notably by the volume of credits injected into agriculture. An analysis of the physical outputs of the projects retained (Annex IV) helps affirm that on the whole the objectives were achieved (contribution to the country's food security, improvement of the standard of living of farmers, environmental protection, etc). The efficacy of operations is considered satisfactory.

3.3.2 Natural Resources Conservation Project : all objectives of the project were attained. At completion, the major outputs of the project attributable to 371 contracts included : (i) the rehabilitation, maintenance or renovation of 287 forest houses; (ii) the opening of 110 km of road, rehabilitation of 1153 km and maintenance of 569 km of road; (iii) 7 362 ha of reforestation, (iv) development of watersheds through the reforestation of 1,990 ha, building of 1,108 mechanical thresholds, review of biological treatment of 10.66 km; (v) forestry-pasture management of 12 905 ha; (vi) 585 723 ha of new plans, 172 617 ha of layout and 12 367 ha of forest regeneration; and (vii) three studies respectively on 165 protected areas, development of Ouergha watershed and management plan of Haut Atlas Oriental National Park. In the context of Morocco's forestry policy which was redefined in January 1999 in the "National Forestry Programme" document, the National Resources Conservation Project can be considered as a large-scale test of the capacity of the Ministry to organize, coordinate and implement these programmes, as well as an indication of external and internal constraints some of which, by dint of repetition, are structural (weather constraints, tight budgets, administrative procedures, logistics, etc).

3.3.3 Oriental Pastoral and Livestock Development Project: the three objectives of the project were: (i) to improve the living conditions of the populations of Oriental, (ii) to limit rural-urban migration; and (iii) to check desertification through appropriate actions on the environment and with the participation of the populations organized into cooperatives. The major project components were : (i) action on the environment; (ii) animal health; (iii) training-extension and research-development; (iv) project management; (v) credit, and (vi) monitoring-evaluation. On the whole, all project components, with the exception of the credit component, were successfully implemented.

3.3.4 The Doukkala High-Service Irrigation Project aimed mainly at improving the standard of living of farmers in the area concerned by increasing and diversifying agricultural production, while contributing to the reduction of the import of some products (sugar, milk and cereals). The project was implemented in accordance with the components retained which were : (i) construction of headrace structures; (ii) management of irrigation areas; (iii) study and supervision of works; (iv) agricultural development and management of irrigation areas; and (v) project management and coordination. Of the 16 000 hectares envisaged, 1 600 hectares were not developed. The contribution of irrigation schemes to development, given the ripple effect of their direct and indirect impacts (jobs, value added, trade balance, development of industrial activities, etc.), is assessed through the close correlation between the trends in gross domestic product (GDP) and those in the agricultural gross domestic product (AGDP) which accounts for 18% of GDP on average. Although irrigation areas represent only about 13% of the useful agricultural area (UAA), they account for about 45% on average of the agricultural value added and 75% of agricultural exports and generate more than one-third of jobs in rural areas. In this respect, irrigation schemes are a real catalyst of the national economy. In particular, an appropriate agroindustrial fabric has been put in place to process and/or transform an agricultural production most, if not all, of which comes from the irrigation sector: 13 sugarbeet and sugarcane mills, 9 sugar refineries, 13 dairies and hundreds of packaging stations, refrigerated warehouse and fruit and vegetable canning plants.

### **3.4 Efficiency of Operations**

3.4.1 The rates of return (economic and financial) were not always calculated as thoroughly as expected. Maybe they were neither estimated: (i) at appraisal nor in the Project Appraisal Report (PAR) (FRR), (ii) at PCR (for want of a financial expert in the evaluation team, the Completion Report was unable to confirm the ERR of 22% obtained at appraisal of the Natural Resources Conservation Project); (iii) at evaluation: the 5% rate of return calculated for the PDPEO at completion had not been calculated at appraisal. Only the ERR of the Doukkala Irrigation Project was estimated at appraisal (11%) and evaluated in the PCR (10%).

3.4.2 A weakness that seemed to have persisted throughout the intervention period concerns the significant slippages on project approval, signature, effectiveness and completion dates. Of all projects (excluding lines of credit), the average period between the date of approval and date of signature is five months, while the period between the date of signature and the date of effectiveness is 25 months. The variation coefficients are respectively 40% and 41%. These slippages could constitute qualitative and quantitative determinants likely to impact negatively on the profitability of projects. The PCRs of the projects analysed indicate that the Bank was not involved in identification and preparation missions (Doukkala, PDPEO and Natural Resources Conservation). There were cancellations of some items of the initial amounts to be disbursed by the Bank for all these projects. Such cancellations which are explained in part by savings on costs made by the borrower during works could also be due to an overestimation at appraisal. The efficiency of operations is considered unsatisfactory.

### **3.5 Institutional Development Impact**

3.5.1 The natural resources conservation project contributed to the improvement of the technical capacities of forestry officers. It also contributed to improving the organization of the Directorate of Forestry and Soil Conservation which was restructured twice during the project period and which henceforth operates as Ministry in charge of forestry. These changes have improved the functioning and efficiency of forestry services whose project management capacities and technical knowledge of forestry have been strengthened. Multidisciplinary teams were formed. The studies funded by the TAF helped establish a database which has become a benchmark for the country with respect to new projects.

3.5.2 The Doukkala irrigation project enables the cadres of the Ministry of Agriculture to conduct support missions to ORMVAD. The experience of this area also resulted in an internal restructuring of the ministry which separated agricultural development from network management for greater efficacy. An economic and social observatory was established for better monitoring of the economic and social assessment of the agricultural status of the High Service (project area).

3.5.3 The PDPEO which covered two administrative regions (Figuig and Oujda) caused some management difficulties. Problems of coordination and human and material resource mobilization were sometimes encountered. Nevertheless, the experience acquired by cadres from this project is quite exceptional in Morocco. The project was an incubator for engineers. The negative aspect of the project is the periodical rotation which could impact on the implementation of the project. On the whole, the impact of the Bank's operations on the country's institutional development was very satisfactory.

### **3.6 Sustainability of Operations**

3.6.1 Technical sustainability : the sustainability of the achievements of the natural resources conservation project is dependent on Morocco's forestry policy guidelines. It is observed that councils (communes) do not plough back into reforestation and that the State remains the main agent of restoration of forest resources though, following a consultation with councils, it was stated that at least 20% of forestry revenue had to be ploughed back by councils into forestry and rural development operations. This procedure could threaten the sustainability of investments in the event that the Government no longer guarantees the implementation of reforestation and regeneration operations. For the PDPEO, the establishment of the contagious diseases surveillance system, the training of stockbreeders in modern herd management methods and the establishment of the Beni Guil breed selection plan are important assets for the sustainability of the project. Oriental stockbreeders also have an ancestral way of rearing sheep. It is however to be feared that

a premature withdrawal of the State may threaten such sustainability, considering the fact that stockbreeders lack financial resources. In Doukkala, associations of water users are increasingly involved in the management and development of water resources in like manner as the various regional farmers' groups (beet growers, dairy workers, market gardeners, stockbreeders, etc.) thereby guaranteeing the sustainability of the project. The method of pricing water, which includes a network maintenance component, is likely to ensure the technical sustainability of the investment. The Water SAP under way envisages, among other things, the improvement of the efficiency of irrigation systems which involves the following investment programmes : (i) Development of Mobilized Water Resources; (ii) Rehabilitation and Modernization of Irrigation Areas; (iii) Encouragement of Parcel Water Conservation; and (iv) Public-Private Partnership. Overall, the investments are technically sustainable. Technical sustainability is considered satisfactory.

3.6.2 Economic sustainability : Morocco has embarked on the rehabilitation of its economic environment and recent macroeconomic outcomes indicate that the Bank's operations will be economically sustainable. In the sector, some tax provisions and subsidies to factors of production create conditions for sustainability as long as these measures are maintained. Any lifting of subsidies may threaten some agricultural sub-sectors (cereals). Economic sustainability is therefore considered unsatisfactory.

3.6.3 Financial sustainability : the Doukkala and the Oriental livestock projects are income-generating and especially job-creating projects. However, there is a need to master the produce marketing channels and to further develop livestock production and by-products. In general, agricultural projects are financially high-risk projects because of the vagaries of the weather. Financial sustainability is considered unsatisfactory.

3.6.4 Social sustainability : the projects allowed for the formation of producer and stockbreeder associations engaged in the management of activities. If the extension service maintains its support activities, the social sustainability of investments can be considered as assured. It is considered satisfactory.

3.6.5 Factors conducive to stakeholder participation : the projects are often located in underprivileged regions where the levels of unemployment and underemployment are very high. The projects initiated bring hope in the quest for better living conditions. The system of supervision established ensures the participation of beneficiaries.

3.6.6 Factors unfavourable to stakeholder participation : the vagaries of the weather are the first factor unfavourable to stakeholder participation. They are the source of agricultural risk, especially when rainfed agriculture is very dominant. The non-participatory approach is another unfavourable factor. The concerns of the populations were not always addressed. Consolidation activities on areas encountered enormous difficulties. Some projects did not place enough emphasis on activities downstream livestock or agricultural production (marketing, processing of products for value added, etc.).

### **3.7 Consideration and Impact on Cross-cutting Issues**

3.7.1 Gender : projects financed by the Bank in Morocco and particularly those covered by this review did not devote a specific component to gender. These projects took into consideration the concerns of the various segments of the beneficiary populations (access to inputs, land and financing, better living conditions, etc.) without however these being stipulated in the form of gender approach. Women, without being specially targeted, were able to participate in activities and benefit from the outputs of projects. Under the PDPEO, actions like disease prevention, immunization of children, family planning, herd management, hygiene and environmental

awareness are modules corresponding to a gender approach. Furthermore, three training centres were set up for women (sewing and knitting workshop). Besides general and direct benefits regarding the status of women (availability of water, transport network, monitoring of health conditions, grouped housing, etc.), they were able to benefit from literacy education and extension workshops and actions under the Doukkala project. On the whole, the Bank's operations over this period, without having specified gender components in their design, took this aspect into consideration. Sight should not be lost of the sensitive nature of this concept in some rural areas.

3.7.2 **Environment** : all projects under study had an environmental component. In the case of the Natural Resources Conservation Project, the main objective was environmental protection. Through its forestry and watershed protection actions, the project contributed to biodiversity and soil protection, wind and water erosion control and the fight against desert encroachment. The opening or rehabilitation of forest roads contributed to the improvement of forest fire control conditions. It contributed towards the reduction of greenhouse gas (GHG) emissions. In the case of the Pastoral and Livestock Development Project, the major achievement is stockbreeders' awareness of the need to protect their environment. Environmental concern is considered very satisfactory.

3.7.3 **Poverty** : the goal of all Bank-funded projects was contribution to poverty reduction. Income-generating activities and facilities improving the living conditions of people translate this determination to fight against poverty. Integration of this aspect is considered very satisfactory.

3.7.4 **Private sector** : the inclusion of the private sector was only reflected by the service providers in the projects. The Bank's operations are not directly intended for operators of the private sector in the agricultural sector. However, production activities resulted in the development of the private sector through the setting-up of milk collection centres, sugarcane and beet factories, etc. The maritime fishing and agroindustry sub-sectors and the training of farmers through chambers of agriculture for example are surely great potentials. Inclusion of the private sector is considered very unsatisfactory.

3.7.5 **Governance** : the decentralization process in the area of rural development started in the 1960s and 1970s but it would appear that in the absence of a precise timetable the process was not actually launched, other than in the form of devolution and delegation which, when all is said and done, are quite moderate. The impact of the Bank's intervention is seen through the cooperatives formed which are increasingly participating in decision making in their activities. The PDPEO allowed for the formation of cooperatives which are a new form of solidarity and attachment to one's identity. The democratic election of several officials reflects a desire to ensure good governance.

3.7.6 **Regional integration** : the Bank is conducting a study which has not yet been approved for the preparation of an Arab Maghreb Union (AMU) Regional Assistance Strategy Paper (DSAIR) whose goal will be to address the need for the integration of the region with a view to establishing a larger market economy, and attracting and fostering investment. Regional integration contributes to the objective of stimulating economic growth and sustainable development. The objective of the Doukkala project was, among other things, to contribute towards the improvement of the country's trade balance. The marketing in the sub-region of agricultural and livestock produce from the irrigation areas and rangelands will contribute towards the concretization of such integration. For the moment, inclusion of regional integration is considered unsatisfactory.

## **4. EVALUATION OF NON-LENDING ASSISTANCE**

4.1.1 The Bank's major non-lending intervention instruments in Morocco during the 1996-2004 period included: (i) a study financed with ADF resources amounting to UA 2.44 million approved on 31 August 1993, signed on 19 November 1993, implemented on 10 January 1995 and completed in 1999; (ii) country strategy papers (CEPP 1994, CSP 1996-1998, 2000-2002 and 2003-2005); (iii) portfolio reviews (1999, 2000, 2001 and 2002); (iv) supervision of the different projects covered by the evaluation; (v) identification missions; and (vi) seminars.

### **4.1 Economic and Sector Work**

4.1.2 The objective of the study was to establish the technical and economic feasibility of the third phase of the irrigation of the Eastern region (14 844 ha) on the one hand, and the development of Gharb plains (65 000 ha in rainfed agriculture) on the other hand. This study properly covered the two types of agriculture of the country (irrigation and rainfed). The delay in implementation was due to unmet conditions. The study allowed for the identification of rainfed areas development projects and an irrigation project feasibility study. The study results were instead used by other donors as the Bank did not embark on any other intervention in the area following the study. Moroccan authorities are seeking financing for the development of the third phase of the Gharb project. The study is considered satisfactory.

### **4.2 Policy Dialogue**

4.2.1 On the whole, the EPCP and CSP corresponding to the period covered by this evaluation aimed to support Morocco in its efforts to modernize its economy and render it more competitive. Focus in the agriculture and rural development sector was on irrigation and integrated rural development. Though agriculture contributed to the improvement of the economy, its competitiveness is yet to be ensured.

4.2.2 Portfolio reviews (1999, 2000, 2001 and 2002) were regularly conducted. They highlighted the possible problems which could confront projects and recommended solutions. They attributed the slippage on implementation of most projects especially to the vagaries of the weather, disbursement problems, occasionally incompetent enterprises and inadequate national budget allocations for some projects. The major characteristic of these reviews was the significant decline over time of Bank operations in the sector. Their quality improved owing to a more participatory approach.

4.2.3 Supervision missions conducted by the Bank were carried out according to standards as concerns frequency. To continue to improve the country's portfolio, the Bank maintained the rate of 1.5 supervision missions on average for each project being implemented. Furthermore, to improve familiarization, by Moroccan officials in charge of projects funded by the Bank, of Bank rules and procedures on the procurement of goods and on disbursement, the Bank organized in Rabat a training seminar in these two domains in 2002. The agricultural sector, which does not have any project under implementation, did not sufficiently benefit from this training. However, despite such performance, the project implementation outcomes would have been better, in terms of deadlines, if they had not been limited by inadequate preparation and disbursement problems. The Bank recently embarked on identification missions in the sector which tend to resume relations with Moroccan authorities (2004 and 2005). For the Bank, the main lessons learned from these contacts concern the need for the permanent marketing of its financial products, on the one hand, and the existence of many projects or project ideas, on the other hand. The Government, however, prefers concessional resources for project financing in the sector. Moroccan authorities really desire technical assistance.

4.2.4 Following an evaluation of the performance of countries carried out in 2002, Morocco was classified in the second quintile on a scale of five. However, beyond this overall good performance, the country was required to pursue its efforts in some areas in order to make up for some weaknesses. It is in these areas requiring additional progress that the Bank had to hold dialogue with the Government. For the sector, they concern the Government's policy and actions in the area of poverty reduction and exclusion. Dialogue during the period under review is considered unsatisfactory.

### **4.3 Aid Coordination, Co-financing and Resource Mobilization**

4.3.1 Coordination of assistance with the World Bank has improved considerably since the signing, in March 2000, of the memorandum of understanding between the Bank and the World Bank with a view to establishing a strategic partnership between both institutions. Under the strategic partnership established between the Bank and the World Bank, Morocco is classified in category 1 corresponding to countries for which both institutions have agreed to collaborate closely. Regarding the preparation of strategy papers (CAS/CSP), collaboration translated into the sharing of views and information in the preparing of papers and consultations with other stakeholders (NGOs and representatives of civil society). Thus, in April 2001, a tripartite video-conference session brought together directors in charge of Morocco at the World Bank, the European Union and the Bank to review the intervention strategies of the three institutions. Education and health were identified as priority cooperation areas. Concerning the integrated development framework (IDF) no progress was made as Moroccan authorities prefer their 2000-2004 economic and social development plan to the IDF as an external assistance coordination tool.

4.3.2 The experience of co-financing the « Oriental Pastoral and Livestock Development Project » with the International Fund for Agricultural Development (IFAD) is considered quite satisfactory. The fact that there is a coordinator within the Bank in charge of liaison between IFAD and the Bank and that IFAD funds are managed by the Bank facilitated the complementarity of interventions and information sharing between the two co-financiers throughout the project cycle.

4.3.3 Aid coordination is carried out by the Ministry of the Economy, Finance and Privatization in consultation with sectoral departments (Ministry of Agriculture, Rural Development and Maritime Fisheries) especially for the agricultural sector. At end 2004, the country's major creditors representing more than 60% of total outstanding external debt were as follows: (i) IBRD : 18% ; (ii) France : 16% ; (iii) EIB : 9% ; (iv) ADB 7%. (v) Japan: 5.5%; and (vi) AFESD: 5%. Moreover, new loan agreements were concluded in 2004 for an overall amount of about DH 15 billion, including about 50% by the Treasury and 50% by public establishments. These funds are intended to finance structural reforms to the tune of DH 4.5 billion and investment projects for DH 10 billion of which DH 3 billion by the Treasury and DH 7.5 billion by public establishments. These commitments were contracted notably with the ADB (16%), EIB (15%), Germany (11%), IBRD (8%), IDB (7%) and AFESD (7%). The authorities met emphasized especially the need for eligibility for concessional loans and, hence, the gearing of the Bank's activities toward technical assistance.

4.3.4 During the three year period between 1997 and 2000, the commitments of the EIB in Morocco reached a total of €617 million, including €47 million in the form of contribution to risk capital financed thanks to EU budget resources (MEDA programme). The Moroccan transport sector received substantial support from the Bank: significant amounts were allocated to the road sector for the construction and rehabilitation of rural roads in the Northern provinces and to the superhighway sector for the construction of Rabat-Fez and Rabat-Tangier motorways.

4.3.5 The Japanese Bank for International Cooperation which financed the second phase of Doukkala project (1996-2001) has, since 2004, reviewed its lending conditions to better address the needs of developing countries. Interest rates were revised downward with several options depending on the classification of the borrower on the income scale (very low-income, low-income, middle-income, etc.). This bank was a party to international discussions for harmonization of interest rates.

4.3.6 In 1997, within the framework of financial protocols, more than 40% of total operations funded by the European Union in Morocco (non-repayable community budget assistance and loans by the European Investment Bank) were in the agricultural sector: (i) irrigation infrastructure projects; (ii) assistance to small farmers in the most disadvantaged areas of the Kingdom given in the form of subsidy facilities through the FDA and agricultural credit with the CNCA. Non-protocol actions concerned “horizontal” operations (desertification control, support to the World Phosphate Institute, locust control, veterinary laboratory, etc.) and specific cooperation operations in the agricultural sector such as the rehabilitation of farmland, watersheds, development of rainfed agriculture, management of forest ecosystems, etc. In 2001, projects funded by the EIB totalled € 280 million, including €40 million for the rehabilitation of irrigation equipment for irrigation land in the south of the country.

4.3.7 In the agriculture and rural development sector, other donors actually compensated for the absence of the Bank. Their local representation in Morocco was a major asset for a sustained communication policy. The first element of the weakness of the Bank with respect to competitiveness is its absence in the field. Its consequence is the information gap which is perceived among some representatives on new relief measures taken by the Bank.

4.3.8 In general, the Bank has a problem of human resources. On the basis of 2003 data, Bank staff in country offices represented 6% of total staff whereas the World Bank had 34%. Centralization and size are therefore major constraints to assistance coordination and harmonization.

4.3.9 Another weakness of the Bank is its low capacity for rapid disbursements. Many representatives have dwelled on this point. KFW and JICB were mentioned as being very rigorous at project identification and preparation. However, disbursement is carried out much more easily (use of the electronic tool). It was possible to carry out disbursements in 48 hours (JICB). The Moroccan authorities emphasized this point which deserves special attention at the Bank. Concerning procedures for the procurement of goods and services, the Bank seems to have the longest time frame among donors. A comparison with the WB shows that the Bank takes on average 413 days between the delivery of bidding documents and delivery of the contract. The World Bank takes 323 days.

4.3.10 The strength of the Bank is that it is, in the first place, an African bank. In this capacity, Morocco wishes to see it assume leadership in the putting in place of a framework for consultation between donors. Aid coordination and resource mobilization in the sector are very unsatisfactory.

## **5. PERFORMANCE OF PARTNERS**

### **5.1 Borrower and Executing Agencies**

5.1.1. Quality at entry assessment of some projects suffered from an insufficiently participatory approach during identification and preparation. This resulted in implementation difficulties (land consolidation). Projects covered extremely vast areas thus rendering supervision ineffective. Conflicts were noted in some cases (PDPEO). At implementation, long disbursement

time frames were sometimes attributable to lack of mastery of Bank procedures by some project officers. In ASAP implementation, ASAP measures were implemented very satisfactorily, although the schedules envisaged during the appraisal phase were not always adhered to. Implementation as well as design benefited from the support of an efficient administration. In connection with lines of credit, the CNCA achieved satisfactory results which are shown notably by the volume of credits injected into agriculture. A weakness to be noted is that the Fund was unable to assess the impact of the various loan programmes on the beneficiaries, in terms of real growth of their incomes.

5.1.2 The lessons learned from project experiences helped to make significant strides in the institutional, legal and financing domains and practices of implementation of development projects and programmes in rural areas. At the legal, institutional and financing mechanisms levels, the major achievements were: (i) establishment of an institutional framework for decentralization and deconcentration through the adoption of a new communal charter which recognizes the key role of communes in rural development, including through the organization of partnerships, enactment of a law on provinces and divisions (prefectures) which established the creation of regions and the progressive setting up of deconcentrated structures; (ii) setting up of a permanent Interministerial Council responsible for rural development whose mandate is to adopt and support government policy in this domain which it initiated through the implementation of a new generation of integrated rural development projects: the DRI-PMH and DRI-MVB; (iii) establishment of new financing mechanisms and instruments (revival of the Rural Development Fund, setting up of the Social Development Agency, adoption of new budgetary procedures, organization of the micro-credit sector, etc.); (iv) amendment of the law on associations and adoption of new provisions for strengthening their role in development by providing them with public resources in the context of partnerships; and (v) adoption of the National Regional Development Charter which endorses the Rural Development Strategy 2020 and owns its guidelines and options. Among the approaches recommended, participation has had operational extensions in programmes and projects. Moreover, the multiplication of grass-roots associations gives rise to the emergence of more structured associations capable of successfully and autonomously implementing actions and playing a real role of intermediation with stakeholders outside the local community. We should however wonder about the functioning of all these achievements. This is why a study on the status of implementation of Strategy 2020 is being conducted by the Ministry of Agriculture.

5.1.3. From 68% in 1995, the external debt/GDP ratio dropped to 48% in 2000 and 26% in 2004. This ratio of exposure to risk clearly demonstrates that the country is a good risk for the Bank. Although the budget allocations of some projects did not always coincide with the agricultural schedule, Morocco has always provided its counterpart to financings. The ORMVA and administrative directorates of the Ministry of Agriculture and Rural Development which are the executing agencies maintained close ties with consultants, contractors and suppliers. Appropriate restructuring was carried when necessary (Natural Resources Conservation Project). The performance of the borrower and executing agencies is considered satisfactory.

## **5.2 The Bank**

5.2.1 The Bank did not take part in the identification and preparation phases of the various projects. This resulted in overestimations which resulted in substantial cancellation of some items of project amounts. It should however be noted that the cancellations were also the result of the elimination of components or the borrower obtaining other low-cost financing. The objectives of the various projects were always well defined and reflected the Bank's option in matters of assistance and were also in line with the country's options. As regards disbursement, the Bank is criticized for its rigour which results in delay, and hence inefficacy in project implementation. The Bank regularly conducted supervision missions for all projects reviewed with the requisite skills

and within the prescribed time limits. Six missions were conducted respectively for the Doukkala and natural resources conservation projects, and 12 missions including 5 with the co-financier (IFAD) for the PDPEO. The completion reports of these projects were prepared. The projects impact on social development. Apart from the improvement of living conditions, the projects permitted a better organization of beneficiaries. The sustainability of achievements is moderate because of lack of resources for some projects (PDPEO). The Bank's performance is considered satisfactory. There are however two weaknesses: (i) its local representation at the institutional level; and (ii) its lack of efficacy in disbursement.

### **5.3 Other Donors and Co-financiers**

5.3.1 The AFD Group is authorized to intervene in Morocco since 1992. Project monitoring is carried out from the Rabat agency and its Casablanca office. The current portfolio of the group in Morocco is evidence of the different missions entrusted to it: implementation of official development assistance credits represented by AFD loans *stricto-sensu* and by operations undertaken or managed on behalf of the Ministries of Foreign Affairs and of Finance, loans to the private sector granted by its subsidiary PROPARGO and through tools managed by the AFD on behalf of third parties. The AFD intervenes in favour of the Moroccan State and its semi-public sector (loans are hence guaranteed by the Moroccan State) with its usual instruments within the framework of Official Development Assistance to middle-income countries: soft loans, on untied aid conditions, granted for periods between ten and twenty years at an adjustable interest rate (as a general rule EURIBOR - 100 basis points), or at a fixed rate. AFD's financial support in the agriculture and rural development sector over the past few years focused on projects in the water and environment sectors concerning productive activities as well as the delivery of public services and environmental protection: (i) development of 7 100 ha of new irrigation areas (€22 million) managed by Gharb Regional Agricultural Development Agency (ORMVAG); (ii) renovation of small irrigation areas in the Northern provinces (€6.6 million) covering 3000 ha, (iii) improvement of rural drinking water supply (€1.5 million) under the P.A.G.E.R. (Grouped Rural Water Supply Programme); and (iv) six programmes with the National Drinking Water Agency (totalling €92.5 million) essentially for small urban centres. The last loan granted in 2003 concerns the implementation of a priority sanitation programme and a household drinking water supply programme for small rural centres (€ 20 million). The strategy retained by the ADF Group classifies all its activities in Morocco into three intervention areas which contribute directly to national priorities and development constraints: (i) sustainable environmental conservation through the development of water resources, including drinking water supply in rural areas or in small centres as well as irrigation with, upstream, the conservation of water resources (forests, development of rural areas, etc.) and, downstream, sanitation; (ii) social cohesion through the densification of rural and urban infrastructure comprising interventions in favour of rural areas (rainfed agriculture, electrification, rural roads, etc.) and small agglomerations or disadvantaged urban areas (unhealthy housing).

5.3.2 The World Bank's cooperation strategy (CAS), which is the framework for dialogue on loans, assistance and development with other partners, is based on the following four objectives: (i) promotion of human development: this part of the strategy places emphasis on the provision and quality of basic education, health services and gender parity, focusing special attention on disadvantaged rural areas. Social infrastructure and programmes are key instruments of this part and encourage decentralization, community participation and trans-sector integration; (ii) increase in economic growth. This part is based on the strong link between the consequences of poverty and the creation of employment both amongst urban populations and itinerant rural workers. It will be a matter of fostering a growth-oriented economic background and supporting the development of the services sector, in particular in the domain of information technology related activities. More comprehensive reform programmes will also be important, like agricultural incentives and changes

in the business environment; (iii) reduction of vulnerability to droughts: this objective implies the support of the State through the establishment of support mechanisms in the short run and reform of the agricultural incentive framework in the long run. This process implies in part the establishment of safety nets in favour of the poor affected by drought; (iv) improvement of public governance to ensure the sustainability of the objectives mentioned earlier on. Good governance includes diverse issues such as decentralization, budget management, administrative reform, financial accountability and strengthening of civil society. The CAS places emphasis on institution building, technical assistance and a loan for public administrative reform. The World Bank's active projects concern rural roads (approved in June 2004), rainfed agriculture development project (Development of Rainfed Areas-MVB) approved in June 2003, and the irrigation project (Small and Medium-Scale Water Scheme-PMH) approved in May 2001. Two other programmes concern reform support in the cereal and water sub-sectors.

5.3.3 The MEDA programme is the European Union's main financial instrument for implementation of the Euro-Mediterranean partnership initiated during the Barcelona Conference in November 1995. Budget resources allocated to MEDA represented €3.4 billion for the 1995-1999 period and €5.4 billion for the 2000-2006 period. The MEDA programme is made up primarily of subsidies, but also of risk capital financing and interest subsidies relating to loans granted by the European Investment Bank (EIB). The EIB's volume of loans to Morocco for the 1995-2002 stood at € 1, 220 million. To date, Morocco has received a total of € 1,180.5 million in commitments entered into under the MEDA programme: E 656 million under MEDA I (1995-1999) and €524.5 million under MEDA II (2000-2003). The major projects under way in the sector are: (i) Water and Sanitation in Rural Areas (PAGER) (€ 40 billion); (ii) Rural Roads in the North of Morocco (€ 30 million); (iii) Sahla Irrigation Scheme (€ 28.6 million); (iv) Integrated Rural Development Support (€28.4 million); and (v) Chefchaouen Province Forest Participatory Development (€ 24 million). It should be pointed out that EIB's loans to some sectors with an impact on environmental improvement such as sanitation in urban areas bear an interest rate subsidy of 3% financed from MEDA programme resources.

5.3.4 The Islamic Development Bank (IDB) intervenes in the agricultural sector through long-term loans. These are interest-free loans with fees covering IDB administrative costs. The loans are granted for a duration of 15 to 25 years with a grace period of 3 to 7 years. Softer conditions are also reserved for least developed countries.

5.3.5 The AFESD grants loans for a duration of 10 to 15 years for industrial projects and 15 to 20 years for infrastructure projects, generally on concessional terms (annual interest rate: 4% for middle-income countries and 3% for least developed countries): (i) co-financing with private capital and other Arab development bodies; (ii) technical assistance grants. Aid is untied. However, the AFESD prioritizes projects bringing together several Arab countries and joint financing with other development institutions.

5.3.6 Japan intervenes through official development assistance (ODA) funding of which meets the following conditions: (i) is provided by official agencies or by their implementation office; (ii) is administered with the main objective of promoting the economic development and well-being of developing countries; (iii) is concessional with a grant element of at least 25%. Such grant element is an indication of the softness of the loan terms. A low interest rate is coupled with a long repayment period and a greater grant element (advantageous cases for the beneficiary country). The Japanese Bank for International Cooperation financed the 2<sup>nd</sup> phase of the Doukkala Irrigation Project (High-Service). The operation comprised a pumping station (12 generators of a 24 Mw wattage with a unit output of 3.17 m<sup>3</sup>/s), a main coated channel (77.7 km), an irrigation network (880 km); and a road network (1 650 km). This operation is completed and a completion report was prepared.

## **5.4 Other Stakeholders**

5.4.1 In general, suppliers and service providers were chosen following the competitive bidding procedure, with the exception of one case (selection of a testing laboratory which was chosen by negotiation in Doukkala). For this project, ground levelling and internal sanitation works, carried out by a Spanish group FCC-Traga, recorded many complaints and requests for adjustments of agreed prices but these were challenged by ORMVAD. The group was technically inefficient. The building of the main canal (30 km) which was carried out by the Italo-Spanish group ICORI/ESTERO recorded implementation difficulties experienced by subcontractors, leading to various complaints especially late payments on the part of the latter. This resulted in delays, as relations between the successful bidder and its subcontractors never improved until the end of works on the canal.

5.4.2 Concerning the Natural Resources Conservation Project, the performance of the companies which carried out the road and forest houses rehabilitation works is considered very satisfactory. The works were done in compliance with the specifications. The companies responsible for the mechanical and biological surveys concerning the development of watersheds built according to standards the facilities relating to this component. Their performance is deemed satisfactory. The studies on the new forest management plans and review of the former plans were conducted under state control by the forests and watersheds management service and by Moroccan consulting firms according to plan. The companies showed weaknesses (delays in execution) which were punished with financial penalties. Works under state control were executed according to standards. The consulting firms responsible for studies on protected areas and preparation of the master plan for the development of the Oued Ouergha watershed helped to provide Morocco with databases needed for land use planning.

5.4.3 As regards the PDPEO, for the management of contracts, competitive bidding and monitoring of commitments, issuance and payment, a project unit was established comprising an administrative and accounting section and a monitoring and evaluation section. An inter-provincial coordination committee, chaired by either of the provincial governors concerned (Figuig and Oujda), acts as steering committee provided for by the Project. This committee had to meet each year to address major coordination difficulties. It met only once (June 1996) under the chairmanship of the Secretary General of the Ministry of Agriculture. At the same time, committees and sub-committees involving local authorities were formed to solve specific problems. Local development committees, on which cooperatives are represented, facilitated the implementation of project activities. Furthermore, it should be noted that local authorities who were sensitized to project objectives eased the task of managerial staff and members of pastoral cooperatives. Nevertheless, during the last project years, 11 engineers, 5 technicians and 16 workers were transferred, which was bound to impact on the implementation of the project.

5.4.4 Generally speaking, the other stakeholders played their role well, at times thanks to the severity of the Bank and Moroccan authorities. Their performance is deemed satisfactory.

## **6. OVERALL EVALUATION**

### **6.1 Counterfactual Analysis**

6.1.1 It is obvious that the operations financed by the Bank alone could not eliminate the effects of drought and rural-urban migration nor get out of poverty the 46% of rural dwellers living below the poverty line. It is the right moment to point out, in this context, that joint action (sometimes coordinated, other times conflicting) with all donors –World Bank, IFAD, AFD, KfW, Arab funds, etc. – generated a significant beneficial effect, but that coordination between donors should be considerably strengthened.

6.1.2 Moroccan agriculture receives little support compared with other countries: the level of support of Moroccan agriculture represents only 2% of agricultural GDP, whereas the European Union's level of support is 73% and that of the United States stands at 27%. Such contribution is certainly inadequate to finance all agricultural projects, in particular irrigation projects which have mobilized substantial investments. Morocco is heavily dependent on external financing. Up to 31 December 2001, the Bank always granted at least 20% of amounts approved and signed for the country to the agricultural sector. If we consider the period up to 31 December, therefore, we note the substantial contribution of the Bank to the sector (UA 455 123 922 disbursed). In co-financed projects (for example, Doukkala irrigation), the Bank always held the biggest share. The presence of other donors in the sector (EU, AFD, World Bank, Japanese Cooperation, etc.) can be noted during the period after 31 December 2001. Arab banks offer alternative possibilities to Morocco. In the face of this situation, it can be affirmed that Morocco alone would not have been able to take the place of Bank support. On the other hand, even though alternatives are readily available today, it is yet to be demonstrated that during the period of the Bank's intervention, these alternatives had the same interest for Morocco. If this cannot be established, it seems more advisable to conclude that the Bank's contribution during the period under review was very timely. The argument is rather at the level of the choices made. Irrigation agriculture was prioritized. Hence, a larger population could not be covered.

6.1.3 The essential contribution of the Bank to the High Service area of Doukkala-Abda is the financing of the headrace tunnel. This structure is the main feature of the irrigation scheme of the High Service area which conveys irrigation water from the IM'FOUT dam up to the lifting station. As a reminder, three other donors intervened in this project (AFESD, EIB, JICB, and Moroccan State).

6.1.4 The PDPEO was an incubator for several managerial staff who hold high positions of responsibility today (provincial engineers). The project area is a region with difficult living conditions, but which enabled extension workers to see what the realities on the ground are. The Bank contributed not only to opening up a disadvantaged area but also to training officials of the administration.

6.1.5 The Natural Resources Conservation Project contributed to settling down nomad populations. It is a remarkable success from the point of view of the sustainable management of natural resources, maintenance of the rural population in the areas as well from the institutional viewpoint since stockbreeders were able to organize into associations.

## **6.2 Overall Evaluation of Bank Assistance in the Agriculture and Rural Development Sector**

6.2.1 An analysis of the Bank's lending operations in the sector since the start of Bank interventions in Morocco, helps affirm that the Bank's strategy has contributed significantly to the development of the irrigation agriculture sub-sector. Support provided for recovery and structural adjustment of the agricultural sector, the various lines of credit and integrated development projects have also contributed to the improvement of the living conditions of beneficiaries. However, the dominant part of Moroccan agriculture (rainfed) has not benefited from appropriate support. Bank operations were relevant but quality at entry assessment was often unsatisfactory due to the non-participation of the Bank in project identification and preparation phases. In spite of a few slippages, implementation was satisfactory since, on the whole, the objectives were achieved. While improving the standard of living of underprivileged populations, the projects also contributed to environmental protection. Administrative measures and awareness of the people indicated that they are sustainable. There was an improvement in non-lending operations through the quality of CSP and PPR. It is however necessary to underscore the weakness of sector studies which should have contributed to policy dialogue between partners. On the whole, Bank assistance is satisfactory.

## 7. LESSONS AND RECOMMENDATIONS

### 7.1 Lessons

7.1.1 The Bank's strategy prioritized lending operations not preceded by non-lending operations such as sector studies. Moroccan authorities increasingly desire Bank interventions in the form of technical assistance.

7.1.2 The Bank should take all necessary measures to be present at all phases of cycles of projects it finances. The Bank did not especially participate in the identification and preparation phases of most projects. This often resulted in overestimation during appraisal and in implementation difficulties. The experience of other donors should be exploited (JICB).

7.1.3 Moroccan authorities are very particular about the Bank's financing conditions. The choice of financing is systematically the outcome of a comparative analysis with other financial institutions. The financial products of the Bank should be permanently marketed to ensure their competitiveness. The Bank's competitiveness in the country is also undermined by insufficient dialogue. Considering the fact that Morocco is not eligible for the concessional window, other instruments should be envisaged for middle-income countries.

7.1.4 Aid coordination should result in an acceleration of harmonization of interventions between donors. The process initiated should be pursued and strengthened.

7.1.5 The experience of the PDPEO has shown that a two-tier administration can hamper the management of a project. Projects covering extremely vast areas may cause management difficulties. It is necessary to limit Integrated Rural Development Projects (IRDP) to smaller areas.

7.1.6 Poor project implementation is often the result of inadequate ownership of the Bank's rules and procedures by Moroccan officials.

7.1.7 The sustainability of some projects is threatened by beneficiaries' lack of resources. There is a need to strengthen the community-based small producer financing system in order to render microcredit accessible to them.

7.1.8 Any agricultural development strategy to be defined must take into consideration the following main thrusts. (i) limitations of the impact of drought on agricultural production and basic resources; (ii) decentralization; (iii) sustainable management of natural resources; (iv) competitiveness of sub-sectors; (vi) land tenure; and (vii) financing.

### 7.2 Recommendations

#### Recommendations to the Bank

7.2.1 **Country Assistance Strategy** : the Bank should gear its assistance strategy towards the preparation of in-depth sector studies (agroindustry, training, fisheries, rural crafts, etc.) likely to enhance both its policy and programme dialogue and project portfolio. Such an option should be the basis of a programme approach.

7.2.2 **Project Cycle** : the Bank should participate vigorously in project identification and preparation phases in order to improve performance in the processing of goods and services contracts. Decentralization could contribute towards this process.

7.2.3 **Aid Coordination** : the Bank should own the desire expressed by Morocco to see it assume leadership in the conduct of consultation and harmonization actions between donors. This will mean taking initiatives to revive such consultations which could enhance the efficacy of the interventions of the various partners (4.3.10)

7.2.4 **Bank Competitiveness** : the Bank's financial products should be marketed permanently to ensure their competitiveness. (4.2.3)

7.2.5 **Training of Project Managers** : the Bank's AMTA programme should be used to train Moroccan project managers. The procedures mastery and performance improvement plan (PIP) modules should be taught to potential project officers.

### **Recommendations to the Government**

7.2.6 **Training of Managers** : the Government should use the Bank's AMTA programme to periodically update the knowledge of the sector's project officers on Bank procedures and project management. The performance improvement plan (PIP) is a very useful module for project management.

7.2.7 The Government should avail itself of the PDPEO experience (Figuig and Oujda) to adopt a more local and restricted integrated development approach. Given their role, women should be specifically targeted in the various development projects.

7.2.8 In the face of difficulties in financing small farms, the Government should design a new approach that makes a distinction between farms on the basis of production, agricultural land base and specific context.

7.2.9 The sector's policy dialogue should be extended to include the various donors, with effective Bank participation.

**Table AI-3**  
**Country Profile**

1996	1997	1998	1999	2000	2001	2002	ITEM
<b>POPULATION</b>							
27.285	27.732	28.183	28.641	29.108	29.585	30.072	Total (million)
51.3	52.2	53.1	53.9	54.6	55.4	56.1	Urban (%)
49.9	49.9	49.9	49.9	49.9	49.9	49.9	Female (%)
<b>NATIONAL ACCOUNTS (US\$ million, unless otherwise indicated)</b>							
1 300	1 250	1 260	1 210	1 180	1 190	1 170	GNP per capita (US\$)
37 015.03	36 190.44	38 967.99	38 936.90	39 309.36	41 784.65	43 117.61	GDP at market prices (1995 constant prices)
<b>8 579.26</b>	<b>6 309.21</b>	<b>8 071.11</b>	<b>6 725.72</b>	<b>5 666.74</b>	<b>7 230.00</b>	<b>7 634.63</b>	Agriculture
11 444.19	12 029.54	12 351.06	12 700.14	13 084.14	13 755.68	14 134.98	Industry
7 642.01	7 922.11	8 060.92	8 336.46	8 570.94	8 929.56	9 177.40	Manufacturing industry
16 991.57	17 851.69	18 545.82	19 511.04	20 558.49	20 798.98	21 348.00	Services

**Table AI-3**  
**Country Profile (cont'd)**

<b>BALANCE OF PAYMENTS (US\$ million, unless otherwise indicated)</b>							
-2 193.47	-1 863.94	-2 318.93	-2 447.67	-3 234.97	-3 021.93	-3 061.43	Trade balance
6 886.17	7 039.07	7 143.69	7 508.96	7 418.59	7 141.82	7 838.90	Exports
-9 079.64	-8 903.02	-9 462.63	-9 956.63	-10 653.56	-10 163.75	-10 900.33	Imports
- 347.87	- 428.36	- 169.61	126.78	277.43	1 077.84	1 208.17	Factor services & income
2 482.94	2 123.62	2 342.77	2 150.15	2 456.57	3 550.17	3 325.56	Current transfers
- 58.40	- 168.68	- 145.77	- 170.74	- 500.98	1 606.08	1 472.30	Current account balance
- 823.33	- 994.32	- 654.21	- 21.52	- 779.48	- 975.16	-1 342.38	Capital account & financial operations
208.67	174.82	160.44	123.46	114.03	229.59	- 181.92	Errors & Omissions
- 673.05	- 988.18	- 639.54	- 68.80	-1 166.43	860.51	- 52.00	Overall balance
<b>PRODUCTION INDICES</b>							
<b>113.4</b>	<b>96.6</b>	<b>112.3</b>	<b>104.8</b>	<b>96.9</b>	<b>103.6</b>	<b>110.3</b>	Agricultural (1989-91 = 100)
114.1	96.5	112.6	105.2	96.7	103.6	110.6	Food (1989-91 = 100)
<b>SOCIAL INDICATORS</b>							
..	..	..	82.0	82.0	..	..	Access to drinking water
..	..	..	100.0	100.0	..	..	Total population (%)
..	..	..	58.0	58.0	..	..	Urban population (%)
..	..	..	..	..	..	..	Rural population (%)

Source : ADB, 2004

**Table AI-1**  
**Agricultural Gross Domestic Product (AGDP) (DH million )**

Year	AGDP Current prices	AGDP Constant prices (1980)	AGDP/GDP (%)
1995	39.723	12.820	11.6
1996	61.633	23.28	18.3
1997	49.14	17.12	13.8
1998	59.211	21.901	16.4
1999	52.691	18.25	11.5
2000	47.91	15.3	13.8
2001			15.8
2002			16.1
2003			18.3
2004			

**Table AI-2**  
**Morocco's Agro-ecological Zones**

Agro-ecological Zone	% Total UAA	% Rural population	% Farms
Wet mountains	16.9	23	23
Dry mountains	5.3	2.1	5
Plains, hills and semi-wet plateaus	27.4	23.9	21.5
Plains, hills and semi-arid plateaus With irrigation potential	44.8	37.2	38
Without irrigation potential	28.3	27.1	26.5
	16.5	10.1	11.5
Arid pastoral steppes	9	2.9	3.8
Pre-Saharan with dispersed oasis systems	1.1	5.2	4.6
Pre-Saharan without dispersed oasis systems	0.4	1.5	1.3

**Table AI-5**  
**Trends in Areas (1000 ha) of Major Crop Production**

<b>CROP</b>	<b>1995-96</b>	<b>1996-97</b>	<b>1997-98</b>	<b>1998-99</b>	<b>1999-00</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>
<b>CEREALS</b>	<b>5981.1</b>	<b>4905.7</b>	<b>5896.9</b>	<b>5163.8</b>	<b>5435.8</b>	<b>5138.4</b>	<b>4941.7</b>	<b>555.2</b>	<b>5679.5</b>
DURUM WHEAT	1248.9	972.1	1126.7	1077.8	1079.1	976.7	881.7	1092.9	1110.5
WHEAT	1963.5	1520.8	1959.8	1613.8	1822.5	1723.9	1744.7	1896.0	1953.2
BARLEY	2430.3	1996.0	2426.8	2069.8	2250.9	2126.0	2002.4	2266.5	2324.1
CORN	253.5	340.9	309.5	331.0	237.5	254.2	265.4	246.7	244.9
OAT	36.0	37.6	34.3	29.9	19.5	27.4	20.0	22.4	19.5
SORGHUM	36.3	22.5	31.8	29.2	16.1	16.8	16.3	19.6	18.0
RICE	9.2	8.6	3.7	7.7	5.6	7.5	6.4	3.4	4.4
<b>OTHER CEREALS</b>	<b>3.4</b>	<b>7.2</b>	<b>5.1</b>	<b>4.6</b>	<b>4.6</b>	<b>5.9</b>	<b>4.8</b>	<b>6.7</b>	<b>4.9</b>
<b>LEGUMES</b>	<b>312.3</b>	<b>362.4</b>	<b>382.0</b>	<b>334.1</b>	<b>320.5</b>	<b>314.2</b>	<b>382.0</b>	<b>359.3</b>	<b>365.0</b>
BROADBEAN	135.1	153.2	160.9	138.5	137.7	142.5	154.1	151.4	152.9
PEA	30.0	37.5	38.3	27.6	30.1	27.5	39.5	33.1	38.4
LENTIL	48.7	54.0	57.3	42.3	41.4	41.9	61.1	54.2	52.1
CHICKPEA	44.3	59.0	69.5	70.8	66.1	58.0	71.6	70.9	72.0
WOODPEA	18.6	21.3	21.7	21.4	19.2	16.7	19.9	18.5	17.1
<b>OTHER LEGUMES</b>	<b>35.6</b>	<b>37.4</b>	<b>34.3</b>	<b>33.5</b>	<b>26.0</b>	<b>27.6</b>	<b>35.8</b>	<b>31.2</b>	<b>32.5</b>
<b>CASH CROPS</b>	<b>153.8</b>	<b>163.0</b>	<b>169.7</b>	<b>165.5</b>	<b>154.1</b>	<b>186.6</b>	<b>236.4</b>	<b>229.0</b>	<b>78.2</b>
SOWN BEET	56.7	62.9	49.8	64.2	55.1	54.1	59.7	67.1	60.5
HARVESTED BEET	56.7	62.9	48.9	60.7	54.1	52.8	59.5	64.9	59.3
PLANTED SUGAR CANE	14.3	11.1	22.7	21.9	17.4	17.9	17.3	15.0	17.7
HARVESTED SUGAR CANE	14.3	11.1	16.0	17.9	17.4	17.9	13.8	12.6	13.4
COTTON	1.6	2.3	1.2	0.3	0.2	0.2	0.4	0.2	0.0
OTHER CASH CROPS	81.2	86.7	96.0	79.1	81.4	114.4	159.0	146.7	0.0

**Table AI-6**  
**Trends in Areas (1000 ha) of Major Crop Production (cont'd)**

OILSEED CROPS	108.9	135.3	129.1	104.2	58.1	78.1	70.2	125.0	87.2
COMMON SUNFLOWER	95.7	99.4	101.5	78.8	39.9	56.4	49.8	103.5	65.6
GROUNDNUT	13.2	35.9	27.6	25.4	18.2	21.7	20.4	21.5	21.6
FODDER CROPS	211.2	205.9	220.2	199.5	202.6	223.0	205.1	258.1	237.7
MISCELLANEOUS CROPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHELTERED CROPS	273.2	230.5	279.2	224.7	235.0	255.8	247.9	336.3	0.0
MARKET GARDEN CROPS	235.0	234.2	228.5	232.7	224.3	237.9	225.9	268.1	212.8
TOMATO	22.0	18.4	19.8	17.7	20.6	12.5	14.7	19.1	16.2
POTATO	65.6	66.4	58.6	62.4	60.5	61.5	57.5	64.3	57.5
ONION	24.5	27.6	26.3	27.7	24.8	30.6	29.0	30.3	17.0
OTHER MARKET GARDEN CROPS	122.9	121.8	123.8	124.9	118.4	133.3	124.7	154.4	122.2
FALLOW	1826.8	2749.0	1733.3	2397.5	2137.8	2310.4	2340.5	1697.2	0.0
FRUIT PLANTATIONS	736.2	753.0	757.8	769.8	783.2	790.8	817.4	820.6	492.5
OLIVE TREE	418.8	426.6	432.9	445.6	457.6	463.2	477.3	481.0	492.5
ALMOND TREE	91.4	94.1	94.6	95.2	94.6	89.7	87.3	89.1	0.0
CITRUS FRUITS	73.1	73.1	73.1	73.1	73.1	73.1	75.6	75.6	0.0
VINEYARD	49.8	49.9	49.8	49.8	49.8	49.8	522	54.1	0.0
DATE PALM	29.8	29.9	30.4	30.3	30.4	33.6	33.0	33.0	0.0
OTHER FRUIT PLANTATIONS	73.3	79.4	77.2	75.8	77.7	81.4	92.0	87.8	0.0

Source : DPAAE, Statistics Division, 2004

**Table AI-7**  
**TRENDS IN MAJOR CROP PRODUCTION (1000 QUINTALS)**

<b>CROP</b>	<b>1995-96</b>	<b>1996-97</b>	<b>1997-98</b>	<b>1998-99</b>	<b>1999-00</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>
CEREALS	100932.2	40864.0	66195.0	38339.2	19863.0	45930.0	52758.4	79593.9	85891.3
DURUM WHEAT	22697.8	8816.2	15444.0	7995.3	4273.7	10387.9	10315.0	17662.2	20247.7
WHEAT	36460.1	14348.7	28340.8	13540.1	9533.3	22775.9	23251.8	33806.2	35150.7
BARLEY	38311.3	13242.4	19699.8	14739.8	4668.1	11552.4	16689.8	26203.9	27603.4
CORN	2350.9	3744.6	2005.2	1363.8	949.8	535.6	1988.8	1385.8	2241.3
OAT	321.6	235.6	245.1	141.6	58.1	146.5	142.1	175.9	169.7
SORGHUM	219.8	120.1	223.2	182.9	116.0	98.2	81.2	143.0	148.2
RICE	533.6	320.4	200.2	346.5	252.0	395.8	265.3	169.0	295.3
OTHER CEREALS	37.1	36.0	36.7	29.2	12.0	37.7	24.4	47.9	35.0
LEGUMES	2733.8	2135.0	2448.1	1292.8	799.4	1616.8	2365.1	2321.4	2409.9
BROADBEAN	1435.3	929.9	1076.7	554.5	326.0	820.2	887.8	1030.6	1092.4
PEA	276.3	157.7	217.9	107.2	60.9	127.9	215.7	227.5	258.7
LENTIL	358.8	267.2	248.4	129.6	26.8	128.9	416.7	336.2	325.0
CHICKPEA	293.3	399.3	577.5	281.0	150.6	317.9	513.4	430.2	419.1
WOODPEA	126.4	119.2	101.9	57.2	25.1	62.8	125.3	71.4	70.8
OTHER LEGUMES	243.7	261.7	225.7	163.3	210.0	159.1	206.2	225.5	244.1
HARVESTED BEET	27495.9	26128.4	28226.7	32363.8	28834.0	28359.3	29868.5	34285.1	31900.9
HARVESTED SUGAR CANE	8991.1	7427.4	12831.2	13693.7	13184.0	13240.1	9490.8	8986.2	8721.8
COTTON	30.4	46.0	20.0	6.0	4.6	4.1	6.7	1.6	0.0
OILSEED CROPS	1296.2	1151.7	1067.2	848.8	574.2	776.5	737.2	1117.4	1127.6
COMMON SUNFLOWER	1110.1	705.7	616.4	424.5	186.0	331.0	333.8	906.3	612.4
GROUNDNUT	186.1	446.0	450.8	424.3	388.2	445.5	403.4	211.1	515.2

Source : DPAAE, Statistics Division, 2004

**Table AI-8**  
**Trends in Animal Population (March-April) (1000 Head)**

<b>SPECIES</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
CATTLE	2420.5	2575.8	2608.1	2559.8	2674.6	2647.1	2669.6	2688.6	2728.8
SHEEP	16266.7	16843.5	17243.6	16576.4	17299.7	17172.3	16335.5	16743.0	17026.3
GOATS	4657.9	4944.2	5369.6	5114.4	5119.9	5133.3	5090.4	5208.3	5358.6

Source : DPAAE, Statistics Division, 2004

**Table AI-9**  
**Trends in Agro-Outputs (Qx/Ha)**

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	Variation Coefficient (%)
<b>CEREALS</b>	<b>16.9</b>	<b>8.3</b>	<b>11.2</b>	<b>7.4</b>	<b>3.7</b>	<b>8.9</b>	<b>10.7</b>	<b>14.3</b>	<b>15.1</b>	<b>39.0</b>
DURUM WHEAT	18.2	9.1	13.7	7.4	4.0	10.6	11.7	16.2	18.2	40.6
WHEAT	18.6	9.4	14.5	8.4	5.2	13.2	13.3	17.8	18.0	35.6
BARLEY	15.8	6.6	8.1	7.1	2.1	5.4	8.3	11.6	11.9	47.1
CORN	9.3	11.0	6.5	4.1	4.0	2.1	7.5	5.6	9.2	44.2
OAT	8.9	6.3	7.1	4.7	3.0	5.3	7.1	7.9	8.7	29.6
SORGHUM	6.1	5.3	7.0	6.3	7.2	5.8	5.0	7.3	8.2	16.1
RICE	58.0	37.3	54.1	45.0	45.0	52.8	41.5	49.7	67.1	18.2
OTHER CEREALS	10.9	5.0	7.2	6.3	2.6	6.4	5.1	7.1	7.1	34.9
LEGUMES	8.8	5.9	6.4	3.9	2.5	5.1	6.2	6.5	6.6	31.0

Source : Derived from DPAE data (Statistics Division)

**RATING BY PROJECT AND SUMMARY BY SECTOR ACCORDING  
TO EVALUATION CRITERIA**

EVALUATION RATINGSS

Meaning of Scores :

- 4 : Highly satisfactory (HS)  
3 : Satisfactory (S)  
2 : Unsatisfactory (US)  
1 : Highly unsatisfactory (HUS)

**Table 1**  
**Bank Assistance Strategy Evaluation**

Evaluation Criteria	Rating	Remarks
<b>Bank assistance strategy</b>	<b>2.50</b>	<b>Performance is satisfactory</b>
Relevance of country strategy	3	Over the period under review, Bank strategy was in line with the country's development objectives. Poverty reduction and environmental protection were the pillars of the strategy. However, non-lending operations were inadequately taken into account.
Efficacy of strategy	2	The strategy was not sufficiently implemented: after having placed emphasis on the productive sector in rural areas, the Bank opted for the social dimension. Liaison between the two sub-sectors in rural areas is not well perceived in the present operations.

**EVALUATION OF LENDING OPERATIONS**

**Table 2**  
**Doukkala Irrigation Project**

Evaluation Criteria	Rating	Remarks
Relevance and quality at entry assessment	3	The Project was in line with the challenges of drought control and helped diversify production and improve the balance of payments. The Project components were well defined.
Achievement of objectives and outcomes Efficacy	3	The performances are satisfactory and outcomes at times exceeded forecasts.

Efficiency	3	ERR = 11% at appraisal and 10% at completion. This reflects good efficiency, but implementation time frames were not respected. It sometimes took a long time to obtain disbursements.
Institutional development impact	3	ORMVAs and MADRPM Directorates benefited from this experience. The beneficiaries were organized to participate in the management of irrigation water.
Sustainability	3	The project is sustainable technically, economically and socially. Financially, there are a few risks due to the weather. Incomes may be unstable and beneficiaries would not be able to take care of themselves without support.
Cross-cutting issues	3	The environment is taken into consideration in the project. Without being a specific component, gender is intrinsically taken into account
Borrower performance	3	The agency responsible for project implementation put in place an organization which permitted a satisfactory technical implementation.
Bank performance	3	Excluding the recurrent issue of late disbursements, the Bank monitored this project well.
Aggregate score	3	On the whole, performance is satisfactory.

### Natural Resources Conservation Project

Relevance and quality at entry assessment	4	This is an environmental project which properly addressed the country's concerns.
Achievement of objectives and outcomes Efficacy	3	The performances are satisfactory given the implementation rates.
Efficiency	2	Unsatisfactory. The ERR calculated at appraisal was not confirmed at completion.
Institutional development impact	3	Significant restructuring was carried out at the Ministry of Agriculture in order to take this operation into account. Officials were trained in forestry techniques which helped to conduct an original study (establishment of a reference database).
Sustainability	3	Technically and socially, sustainability has been attained: awareness of the populations enabled them to participate in activities. But financially, sustainability is not obvious, given the limited

		resources of the populations.
Cross-cutting issues	4	It was an environmental protection project.
Borrower performance	3	Good project implementation.
Bank performance	3	The Bank monitored this project well. Its absence at the preparation phase is the only negative aspect.
Aggregate score	3.1	Very satisfactory overall performance.

### Oriental Pastoral and Livestock Development Project

Relevance and quality at entry assessment	3	Very relevant, given the poverty in the project area. Quality at entry assessment is however unsatisfactory. The project was designed without a truly participatory approach.
Achievement of objectives and outcomes Efficacy	3	The objectives were attained.
Efficiency	2	Unsatisfactory. ERR=5% at appraisal. The local budget was not always monitored. The project was implemented over an excessively long period compared with forecasts.
Institutional development impact	3	MADRPM cadres benefited a lot from the project experience. Beneficiaries were organized into cooperatives.
Sustainability	3	Financial sustainability is doubtful. The beneficiaries do not have resources enabling them to ensure the financial sustainability of the project. In contrast, socially, there is satisfaction.
Cross-cutting issues	4	Environment and gender were taken into consideration: the project had an environmental protection character since it was a matter of improving rangeland, among other things.
Borrower performance	2	This project took much time. The borrower however implemented the project well
Bank performance	3	The Bank conducted 12 supervision missions including 5 with the co-financier (IFAD). Its performance is considered satisfactory.
Aggregate rating	2.8	On the whole, the project is satisfactory.

**Sector's aggregate rating = 3.0** (average aggregate ratings per project)

**Summaries of Performances and Outputs of ADB Assistance in the Sector**

**Evaluation of ADB Assistance in the Form of Lending Operations**

**Summary of Evaluation of Lending Operations (from Annex 2)**

<b>Project</b>	<b>Rating</b>
Irrigation	3.0
NR Conservation	3.1
PDPEO	2.8
Aggregate score	<b>3.0</b>

**Evaluation of ADB Assistance in the Form of Non-lending Activities**

<b>Evaluation Criteria</b>	<b>Rating</b>	<b>Remarks</b>
Sector studies	2	Only one study conducted. It was properly conducted but its impact is not felt. The Bank should have gotten involved in other studies (fisheries, agroindustry and training subsectors where possibilities exist).
Contribution to sectoral policy dialogue	3	Instruments improved over time. The participatory approach and consultation with all partners were strengthened.
Aid coordination, co-financing and resource mobilization	2	The Bank was not sufficiently active during the period under review in the sector, compared with other donors.
Aggregate rating	<b>2</b>	<b>Unsatisfactory</b>

**Overall evaluation** : (average of the 2 scores) : **2.5**

**Table AIII-1**  
**Bank Portfolio in Morocco in the Agriculture and Rural Development Sector (UA) (1974 - 2002)**

		Approval Date	Signature Date	Effectiveness Date	Amount Approved	Amount Disbursed	Completion Date
	<b>AGRICULTURE</b>						
1	Enlargement of Doukkala Canal	09/13/74	12/05/1974	12/22/1975	4 000 000	1 267 093	09/30/79
2	SIDI DRISS Dam	06/27/78	11/29/1978	03/09/1981	5 000 000	5 000 000	12/31/83
3	Recovery of the Agricultural Sector	10/24/85	11/18/1985	10/21/1986	45 000 000	45 000 000	09/30/90
4	Second Phase of Gharb Irrigation	05/29/79	10/10/1979	10/21/1982	8 000 000	7 999 163	06/30/94
5	Integrated Development of SETTAT Province	03/12/85	12/23/1985	04/10/1987	41 630 000	8 689 397	12/31/97
6	ORMVAL of Loukkos	10/26/87	03/10/1988	11/19/1990	21 600 000	20 975 468	12/21/99
7	Agricultural Sector Adjustment Programme	12/14/87	03/10/1988	09/30/1988	117 000 000	117 000 000	06/30/94
8	Natural Resources Conservation	05/14/90	10/31/1990	01/27/1994	8 330 000	3 156 917	12/31/97
9	Natural Resources Conservation	05/14/90	11/30/1990	01/27/1994	3 794 734	3 147 321	12/31/98
10	Natural Resources Conservation	05/14/90	10/31/1990	12/29/1992	2 440 788	2 439 199	12/31/98
11	Pastoral and Livestock Development in Oriental	05/14/90	10/31/1990	09/22/1992	5 460 000	3 042 162	12/31/01
12	Pastoral and Livestock Development in Oriental	05/14/90	11/30/1990	09/28/1992	15 473 674	8 271 254	12/31/01
13	Doukkala Irrigation, 1 <sup>st</sup> Phase (High Service)	10/29/91	03/05/1992	07/08/1994	130 000 000	75 373 222	06/30/00
14	Gharb Areas Irrigation Study	08/31/93	11/19/1993	05/06/1996	2 440 788	1 349 122	12/31/99
	<b>TOTAL AGRICULTURE (1)</b>				<b>410 169 984</b>	<b>302 710 318</b>	
	<b>AGRICULTURAL CREDIT</b>						
1	Agricultural line of credit	03/16/82	10/07/1982	03/24/1983	10 000 000	10 000 000	06/30/86
2	Agricultural line of credit II	08/23/83	03/22/1984	07/12/1984	30 000 000	30 000 000	12/31/88
3	Agricultural line of credit III	06/17/86	06/25/1986	02/27/1987	62 400 000	62 400 000	06/30/94
4	CNCA IV line of credit	10/16/89	02/22/1990	12/28/1990	56 160 000	49 996 958	12/31/96
	<b>TOTAL CREDIT (2)</b>				<b>158 560 000</b>	<b>152 396 958</b>	
	<b>TOTAL SECTOR</b>				<b>562 729 984</b>	<b>455 123 922</b>	

**Table AIV-1**  
**SUMMARY OF BANK PROJECTS IN THE AGRICULTURAL SECTOR**

<b>Project</b>	<b>Objectives</b>	<b>Expected Outcomes</b>	<b>Outcomes at Completion</b>
PDPEO	<p><b><u>SECTOR GOAL</u></b></p> <p>1. Improvement of the well-being of stockbreeders in Oriental and poverty reduction through sustainable natural resources management and promotion of environmental protection</p>	<p>1. Improvement of social indicators (school attendance, health, literacy, etc) and reduction of rural-urban migration. Increase in fodder production from 13FU to 42 FU and in stock production from 15.5 kg to 19 kg for 1 SAU and 11.5 kg to 13 kg for 1GAU and wool production from 1.9 kg to 2.5 kg per 1 SAU.</p> <p>2. Increase in the agricultural and extra-agricultural income of operators (stockbreeders and farmers).</p> <p>3. Percentage of the population living below the poverty line drops from 18% in 1992 to 16% in 2000 in Oriental.</p>	<p>1. Improvement of the rate of access to health services and literacy education. Increase in the average size of the flock from 42 to 49 head for small breeders and from 427 to 557 for large-scale stockbreeders. Increase of 10 points in the fertility ratio and reduction in the mortality rate from 6% to 2%. Rise in stock productivity from 15.5 kg to 18 kg for 1 AU.</p> <p>2. Creation of 168 jobs and increase in average income in the project area.</p> <p>3. Reduction in poverty line.</p>
	<p><b><u>PROJECT OBJECTIVES</u></b></p> <p>1. -Improve the living conditions of the local population.</p> <p>2. -Limit rural-urban migration</p> <p>3. -Check desertification and degradation</p>	<p>1. -Additional stock production of : 102,640 t and increase in the number of cattle, sheep and goats</p> <p>- Reduced rural-urban migration</p> <p>2. Mobilization of additional water, soil and pasture resources.</p>	<p>1. Because of persistent drought, reduction in the number of sheep by 18% (925 000 to 760 000 and the number of goats by 45.7% (234 000 to 127 000) and increase in the number of cattle: 11 800 to 18 183 head. Low rural-urban migration affecting some small breeders during the drought period.</p> <p>2. Reduction of drinking water supply chores as the distance separating water points is reduced from 25 km to 18 km.</p>

Project	Objectives	Expected Outcomes	Outcomes at Completion
		<ol style="list-style-type: none"> <li>1. Fallowing of 470.000 ha.</li> <li>2. 6 030 ha of CES developed.</li> <li>3. Plantation of 17 000 of atriplex and fodder shrubs and 4 250 ha of fuelwood ; 850 ha for sand dune fixation, 425 ha of developed fodder reserves.</li> <li>4. 33 cooperatives set up.</li> <li>5. 66 tanks repaired, 65 water points developed, 41 ghdirs created, 13 wells rebuilt, 67 km of piping laid, 4 bore-holes sunk.</li> <li>6. Increase in stock production and reinforcement of the supervision of stockbreeders.</li> <li>7. Number of stockbreeders, cadres, women and girls trained and supervised by the project.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fallowing of 46100 0 ha</li> <li>2. 6650 ha of CES developed</li> <li>3. Plantation of 14350 ha of atriplex and 4 250 ha of fuelwood, 805 ha for sand dune fixation and building of 225 ha of seed reserve</li> <li>4. 44 cooperatives set up (130%)</li> <li>5. 98 tanks repaired, 105 water points developed, 8 points rebuilt, 29 ghdirs created, 53.6 km of piping laid and 186 ml of embankment.</li> <li>6. Fertility ratio increased 10 points and mortality rate dropped from 6% to 2%, the number of breeders increased from 35 to 134, and the number of secondary breeders from 58 to 114.</li> <li>7. 83 technicians and workers trained, 200 awareness-raising meetings organized for breeders.</li> </ol>

Project	Objectives	Expected Outcomes	Outcomes at Completion
DOUKKALA 1 <sup>ST</sup> PHASE	<p><b>1. Sector objective</b></p> <p>Contribute to the country's food security</p>	<p style="text-align: center;"><b><u>Projected</u></b></p> <p>1.1. Increase in production with:            - 210 000 t of beet            - 26 000 t of wheat            - 13.10 million litres of milk            - 2 000 t of meat</p> <p>1..2.1 Irrigable areas increase : from            0 ha to 16 000 ha for high service</p>	<p style="text-align: center;"><b><u>Actual</u></b></p> <p>Increase in production with:            - 250 276 t of beet;            - 26 500 t of cereals;            - 15. 9 million litres of milk;</p> <p>- 2 720 t of meat</p> <p>Water and agricultural irrigation infrastructure of 16 000 ha including 1 600 ha non-gravity dominated.</p>
	<p><b>2. Project objectives</b></p> <p>2.1 Improvement of the standard of living of farmers</p>	<p style="text-align: center;"><b><u>Projected</u></b></p> <p>Incomes expected from 1 ha at peak period :            - Beet : MAD 15 200            - Milk: MAD 18 185</p>	<p style="text-align: center;"><b><u>Actual</u></b></p> <p>Value added per 1 ha in 2000 :            - Beet : MAD 22 500            - Milk : MAD 25 180</p>

Project	Objectives	Expected Outcomes	Outcomes at Completion
		<p><b><u>Projected</u></b></p> <p>3.1 Developed and irrigated area of 16 000 ha including :</p> <p>A. 13 km of power tunnel</p> <p>B. Electromechanical equipment (4 pumping units)</p> <p>C. Civil works on 60 km</p> <p>D. Irrigation network on 16 000 ha</p> <p>E. Levelling of 16 000 ha</p> <p>Wastewater system on 16 000 ha</p>	<p><b><u>Actual</u></b></p> <p>Developed area of 16 000 ha including:</p> <p>A. 13 km of power tunnel</p> <p>Electromechanical equipment for civil works on 60 km</p> <p>B. Irrigation networks on 16 000 ha</p> <p>C. Levelling of 16 000 ha</p> <p>Wastewater system on 16 000 ha</p>
<p><b>NATURAL RESOURCES CONSERVATION</b></p>	<p><b>SECTOR OBJECTIVES</b></p> <p>Environmental protection: development and sustainable management of forest resources with a view to satisfying the various needs of today's society without compromising their production potential and their ability to satisfy the needs of future generations.</p> <p><b>PROJECT OBJECTIVES</b></p> <ul style="list-style-type: none"> <li>- Conservation of natural resources</li> <li>- Supply of wood</li> <li>- Conservation of soils</li> <li>- Control of erosion</li> </ul>		



**Table AV-1**

**MATRIX OF RECOMMENDATIONS AND FOLLOW-UP ACTIONS**

<b>MAIN REMARKS</b>	<b>RECOMMENDATIONS</b>	<b>PROPOSED FOLLOW-UP MEASURES</b>	<b>RESPONSIBLE BODY</b>
<b>1. Country assistance strategy.</b>	The Bank should gear its assistance strategy towards the preparation in-depth sector studies (agroindustry, training, fisheries, etc) likely to enhance both its policy and programme dialogue and project portfolio	Conduct of contact and identification missions Meeting with the private sector	POPR/OPEV/Operational Departments
<b>2. Project cycle</b>	The Bank should take part in project identification and preparation phases vigorously so as to improve performance.	Quickly concretize decentralization policy Multiply identification missions	POPR/OPEV
<b>3. Competitiveness of the Bank's financial products</b>	The Bank should carry out permanent marketing.	Maintain contact through local representation Study the possibilities of agriculture type-related loans (irrigation or rainfed) Study the possibilities of loans in local currency Institute the permanent monitoring of conditions of other donors	OCCW/OCAR
<b>4. Aid coordination</b>	The Bank should own the desire expressed by Morocco to see it assume leadership in the conduct of consultation and harmonization actions among donors.	Take the initiative to organize consultation seminars and meetings	POPR/Operational Departments
<b>5. Training of project managers</b>	The Bank's AMTA programme should be used to train Moroccan project managers. The procedures module should be further strengthened.	Propose training modules to Moroccan authorities. Organize training courses	PRE/ MADRPM
<b>6. Project managers</b>	The Government should use the Bank's AMTA programme to update its cadres' knowledge of Bank procedures.	Solicit AMTA training courses	MADRPM
<b>7. Project administration</b>	The Government should use the experience of the PDPEO (Figuig and Oujda) to adopt a more local and restricted approach to integrated development	Adopt the participatory approach Limit intervention areas	MADRPM
<b>MAIN REMARKS</b>	<b>RECOMMENDATIONS</b>	<b>PROPOSED FOLLOW-UP MEASURES</b>	<b>RESPONSIBLE BODY</b>
<b>8. Think-tank on sector guidelines</b>	The discussion on the sector's guidelines should be extended to various donors, with the effective participation of the Bank	Invite all donors Entrust leadership to the Bank	MADRPM