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Report No: 61299 - MA

PROJECT APPRAISAL DOCUMENT

ON A PROPOSED

**GLOBAL ENVIRONMENT FACILITY TRUST FUND GRANT
FROM THE SPECIAL CLIMATE CHANGE FUND**

**IN THE AMOUNT OF
US\$4.35 MILLION**

TO THE

THE KINGDOM OF MOROCCO

FOR

**INTEGRATING CLIMATE CHANGE
IN THE IMPLEMENTATION OF THE PLAN MAROC VERT PROJECT**

April 21, 2011

Agriculture & Rural Development Unit
Middle East and North Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective of December 2010)

Currency Unit = Moroccan Dirham (DH)
DH8.4 = US\$1
US\$0.12 = DH1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ADA	Agency for Agricultural Development (<i>Agence pour le développement agricole</i>)
CQS	Consultants' Qualifications Selection
CPS	Country Partnership Strategy
CRPII	Pillar II Resources Center (<i>Centre des ressources Pilier II</i>)
DIAEA	Department of Irrigation and Agricultural Space Development (<i>Direction de l'irrigation et aménagement de l'espace agricole</i>) of the MAPM
DF	Financial Directorate (<i>Direction Financière</i>) of the MAPM
DPA	Provincial Agricultural Directorate (<i>Direction provinciale de l'agriculture</i>) of the MAPM
DPL	Development Policy Loan
DRA	Regional Agricultural Directorate (<i>Direction régionale de l'agriculture</i>) of the MAPM
DSS	Strategy and Statistics Directorate (<i>Direction de la stratégie et des statistiques</i>) of the MAPM
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GoM	Government of Morocco
GID	Integrated System of Expenditures (<i>Gestion intégrée de la dépense</i>)
ICB	International Competitive Bidding
INRA	National Institute for Agronomic Research (<i>Institut national de la recherche agronomique</i>)
IUFR	Interim Unaudited Financial Report
MAEG	Ministry of Economic and General Affairs (<i>Ministère des affaires économiques et générales</i>)
MAPM	Ministry of Agriculture and Fisheries (<i>Ministère de l'agriculture et de la pêche maritime</i>)
M&E	Monitoring and Evaluation
MEF	Ministry of Economics and Finance (<i>Ministère de l'économie et des finances</i>)
MMEEE	Ministry of Mines, Energy, Water and Environment (<i>Ministère des mines, de l'énergie, de l'eau et de l'environnement</i>)
NCB	National Competitive Bidding

OPA	Professional Agriculture Organization (<i>Organisation professionnelle agricole</i>)
ORAF	Operational Risk Assessment Framework
PAR	Regional Agricultural Plan (<i>Plan agricole régional</i>)
PDO	Project Development Objective
PICCPMV	Integrating Climate Change in the implementation of the <i>Plan Maroc Vert</i> Project (<i>Projet d'intégration du changement climatique dans la mise en œuvre du Plan Maroc Vert</i>)
PMV	Green Morocco Plan (<i>Plan Maroc Vert</i>)
QCBS	Quality- and Cost-Based Selection
SBD	Standard Bidding Document
SCCF	Special Climate Change Fund
SOE	Statement of Expenses

Regional Vice President:	Shamshad Akhtar
Country Director:	Neil Simon M. Gray
Sector Director:	Lazslo Lovei
Sector Manager	Hoonae Kim
Task Team Leader:	Gabriella Izzi

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PAD DATA SHEET

Morocco
INTEGRATING CLIMATE CHANGE
IN THE IMPLEMENTATION OF THE PLAN MAROC VERT PROJECT

PROJECT APPRAISAL DOCUMENT

*Middle East and North Africa Region
Agriculture & Rural Development Unit*

Date: April 21, 2011 Country Director: Neil Simon M. Gray Sector Director: Lazslo Lovei Sector Manager: Hoonae Kim Team Leader: Gabriella Izzi Project ID: P117081 Lending Instrument: GEF (FSP)	Sector: General agriculture, fishing and forestry sector (30%); Crops (30%); Irrigation and drainage (30%); Agricultural extension and research (10%) Theme: Climate Change EA Category: B
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Project Financing Data:

[] Loan [] Credit [x] Grant [] Guarantee [] Other:

Source	Total Amount (US\$M)
Total Project Cost (SCCF/GEF):	4.35
Co-financing (Government):	26.95

Borrower: Government of Morocco

Responsible Agency: Agency for Agricultural Development (ADA)

Contact Person: Ahmed Hajjaji, Director General

Telephone No.: (212) 537 276543

Fax No.: (212) 537 670994

Email: a.hajjaji@ada.gov.ma

Estimated Disbursements (Bank FY/US\$ m)

FY	FY12	FY13	FY14	FY15
Annual	0.64	0.88	1.42	1.41
Cumulative		1.52	2.94	4.35

Project Implementation Period: 4 years

Expected effectiveness date: June 15, 2011

Expected closing date: October 15, 2015

Does the project depart from the CAS in content or other significant respects?	<input type="radio"/> Yes <input checked="" type="radio"/> No
If yes, please explain: N/A	

Does the project require any exceptions from Bank policies? ¹ Have these been approved/endorsed (as appropriate by Bank management)? ¹	<input checked="" type="checkbox"/> Yes <input type="radio"/> No <input checked="" type="checkbox"/> Yes <input type="radio"/> No <input type="radio"/> Yes <input checked="" type="checkbox"/> No
Is approval for any policy exception sought from the Board? If yes, please explain: N/A	
Does the project meet the Regional criteria for readiness for implementation? If no, please explain: N/A	<input checked="" type="checkbox"/> Yes <input type="radio"/> No
Project Development Objective: To strengthen the capacity of public and private institutions and of farmers to integrate climate change adaptations in projects directed to small farmers in five target regions.	
Project description:	
<ul style="list-style-type: none"> - Component 1: Development of the capacities of public and private institutions to integrate climate change adaptations in projects directed to small farmers in five target regions. This Component is distinguished in two sub-components. Activities of sub-component 1.1 will be to: (i) provide training sessions and carry out workshops and field visits; (ii) produce dissemination materials; and (iii) launch awareness campaigns. The activity of sub-component 1.2 will be to provide training sessions to selected staff of the implementing entities. - Component 2: Dissemination of climate change adaptations among small farmers in five target regions. This Component will implement about ten Sub-projects. Activities of each Sub-project will be to: (i) implement climate change adaptations through the provision of goods, small-scale civil works, and services; (ii) provide training sessions and carry out workshops and field visits; and (iii) carry out the Monitoring and Evaluation. 	
Safeguard policies triggered?	
Environmental Assessment (OP/BP 4.01)	<input checked="" type="checkbox"/> Yes <input type="radio"/> No
Natural Habitats (OP/BP 4.04)	<input type="radio"/> Yes <input checked="" type="checkbox"/> No
Forests (OP/BP 4.36)	<input type="radio"/> Yes <input checked="" type="checkbox"/> No
Pest Management (OP 4.09)	<input checked="" type="checkbox"/> Yes <input type="radio"/> No
Physical Cultural Resources (OP/BP 4.11)	<input type="radio"/> Yes <input checked="" type="checkbox"/> No
Indigenous Peoples (OP/BP 4.10)	<input type="radio"/> Yes <input checked="" type="checkbox"/> No
Involuntary Resettlement (OP/BP 4.12)	<input type="radio"/> Yes <input checked="" type="checkbox"/> No
Safety of Dams (OP/BP 4.37)	<input type="radio"/> Yes <input checked="" type="checkbox"/> No
Projects on International Waters (OP/BP 7.50)	<input type="radio"/> Yes <input checked="" type="checkbox"/> No
Projects in Disputed Areas (OP/BP 7.60)	<input type="radio"/> Yes <input checked="" type="checkbox"/> No

¹ The condition for Board presentation concerning the submission of an overdue audit report for the MOROCCO: Basic Education Reform Support Program (PARSEM P043417), implemented by the Ministry of Education and closed on June 30, 2009, was not met. An exception in accordance with the Bank Policy (BP) 10.02 – Financial Management (Annex A on “Actions that the Bank Takes in Respect to Noncompliance with Financial Management Requirements”) was requested and approved.

Conditions and Legal Covenants:

Effectiveness conditions:

- (i) The Project Implementation Manual, satisfactory to the World Bank, has been adopted by the Recipient and the Project Implementing Entity, and had been posted on the website of the Project Implementing Entity.
- (ii) The execution and delivery of the Project Agreement on behalf of the Project Implementing Entity have been duly authorized by all necessary governmental and corporate action.
- (iii) The Subsidiary Agreement referred to in Section I.B of Schedule 2 to the Grant Agreement has been executed on behalf of the Recipient and the Project Implementing Entity.

Legal covenants:

- (i) The Project Implementing Entity shall be responsible for the overall coordination of Project implementation. The Recipient shall vest MAPM, through its DRAs for the Project Area, with the overall responsibility for implementation of Part 2 of the Project. The DRA for the relevant region of the Recipient Area where a Sub-project shall be implemented, shall be responsible for the implementation of such Sub-project.
- (ii) The Recipient shall take all necessary measures to implement Part 2 of the Project in accordance with the Project Implementation Manual. The Recipient shall not amend, suspend, abrogate, repeal or waive any provision of the Project Implementation Manual without prior approval of the World Bank.
- (iii) The Recipient shall ensure that the DRAs for the Project Area are maintained at all times during the implementation of the Project with qualified staff and adequate resources.
- (iv) The Recipient shall ensure that each Pillar II Project in connection to which a Sub-project will be implemented, is carried out in an appropriate manner.
- (v) The Recipient shall ensure that the Sub-projects, including the implementation schedule and the estimated cost of the activities to be carried under such Sub-projects, are pre-selected by the Project Implementing Entity in consultation with the DRAs for the Project Area and in accordance with the criteria and procedures set forth in the Project Implementation Manual. Such Sub-projects shall then be submitted by the Project Implementing Entity to the MAPM for its approval.
- (vi) The Recipient shall: (i) implement Part 2 of the Project in accordance with the ECIES and the EIESs; (ii) not amend, suspend, abrogate, repeal or waive any provision of the ECIES and the EIESs, without prior approval of the Bank; and (iii) ensure that adequate information on the implementation of the ECIES and the EIESs is suitably included in the Project Reports referred to in Section II.A.1 of the Schedule 2 of the Grant Agreement.
- (vii) The Recipient shall ensure that no Sub-project shall be implemented before the EIES for such Sub-project has been: (i) prepared by the Project Implementing Entity; (ii) approved by the MAPM after the Project Implementing Entity shall have addressed any feedback or comment provided by the World Bank; and (iii) publicly disclosed.

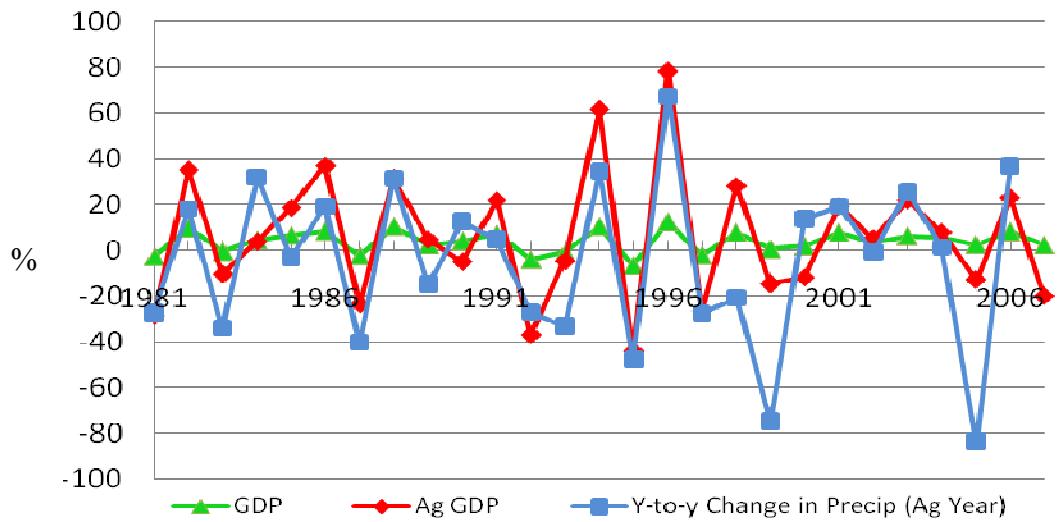
- (viii) The Project Implementing Entity shall be responsible for the implementation of Part 1 of the Project.
- (ix) The Project Implementing Entity shall take all necessary measures to implement Part 1 of the Project in accordance with the Project Implementation Manual. The Project Implementing Entity shall not amend, suspend, abrogate, repeal or waive any provision of the Project Implementation Manual without prior approval of the World Bank.
- (x) The Project Implementing Entity shall maintain at all times during the implementation of the Project qualified staff and adequate resources for the execution of Part 1 of the Project and for providing assistance to the Recipient for the execution of Part 2 of the Project.
- (xi) The Project Implementing Entity shall be responsible for the overall coordination of Project implementation.
- (xii) The Project Implementing Entity shall: (i) pre-select the Sub-projects in consultation with the DRAs for the Project Area and in accordance with the criteria and procedures set forth in the Project Implementation Manual; and (ii) submit such pre-selected Sub-projects to the MAPM for its approval.
- (xiii) The Project Implementing Entity: (i) shall prepare and furnish to the World Bank and the MAPM the EIES for each Sub-project to be implemented under Part 2 of the Project; and (ii) once approved by the World Bank and the MAPM, shall disclose such EIES by posting it on its website.

I. Strategic Context

A. Country Context

1. Agriculture is an important part of the Moroccan economy, but rural living standards continue to lag behind those in urban areas. This sector currently represents 15 percent of Gross Domestic Product (GDP), 23 percent of exports, and employs close to half of the labor force. Notwithstanding the sector has the potential to grow substantially, people living in rural areas remains economically vulnerable. Although rural poverty decreased from 25 percent in 2001 to 14 percent in 2007, rural areas are still home to 70 percent of the poor. Unemployment is common especially among youth, and a large proportion of the labor force is employed in informal and low-paid jobs. In addition, Moroccan farmers face mounting water scarcity, fragile soils, water and wind erosion, and land and water degradation.
2. Agricultural growth is constrained by the dualistic nature of the sector. The majority of agricultural holdings are subsistence farms that have low productivity, unsatisfactory product quality levels, and limited market integration. These farms are small (70 percent are less than 5 hectares), largely rainfed, and located on marginal lands. They often have aging heads of households with a low education level (more than 45 percent of the heads of farming families are over 55 years old, and 81 percent are illiterate), make limited use of technologies, and lack technical know-how. In order to meet their food consumption and animal feed needs, smallholders typically grow low-value crops such as cereals. In parallel to this subsistence agriculture, an efficient group of farmers practice an agriculture integrated in the market, make use of modern agricultural practices, and produce high-value crops (vegetables, milk, meat). They represent half of agricultural GDP and 75 percent of agricultural exports.
3. Climate change threatens to impact the Moroccan economy and will exacerbate the divide between subsistence and commercial farmers. Since the 1960s, temperatures in Morocco have increased by 0.16°C per decade, and future increases are expected to be even higher than the average global temperature increases. Precipitation is already decreasing, with a 30 percent drop since 1970. The impacts of climate change are difficult to predict, but the Government of Morocco (GoM) cannot afford to ignore them. The World Development Report (2010) classes Morocco among the countries that, at a worldwide level, will suffer the most due to the negative effects of climate change on yield. Swings in precipitation already have strong repercussions on the Moroccan economy (Figure 1). Droughts are extremely costly: the 1994/95 drought caused agricultural GDP to fall by 45 percent and GDP to fall by nearly 8 percent. Smallholders are particularly vulnerable to climate change. Commercial farmers have technical know-how and financial resources to cope with the new adverse climate conditions, but small farmers have no means to buffer them.

Figure 1. GDP and agricultural GDP are highly correlated with precipitation.



(Source: World Bank study on “Climate Change and Agriculture: Impacts and Policy Implications”)

B. Sectoral and Institutional Context

4. The *Plan Maroc Vert* (PMV) is an ambitious government strategy designed to make agriculture a driving force for equitable economic growth. Launched in 2008, the PMV has the goal to double agriculture’s value added within a decade. It is based on two Pillars and various transversal actions. Pillar I targets commercial farmers and supports their integration into the world economy: the GoM has recently signed various free trade agreements, culminating in the recent “Advanced Status” awarded by the European Union. Pillar II is focused on the inclusion of subsistence farmers into domestic markets: it aims to overcome the dualistic nature of Moroccan agriculture by creating the conditions in which smallholders in marginal areas can thrive. The transversal actions include a comprehensive overhauling of the sector’s structure in terms of cropping patterns, irrigation water saving, land tenure, agricultural taxation, and institutional and structural reforms.

5. The PMV envisages massive investments to help smallholders overcome their traditional constraints and bridge the gap with commercial agriculture. Under Pillar II, increases in the income of smallholders in marginal areas of Morocco are pursued through reconversion, intensification, and diversification (including the integration in emerging agri-food chains). To reduce the distance between smallholders and commercial farmers, around 550 projects directed to small farmers (Pillar II Projects)² are expected to be implemented throughout Morocco by 2020. This corresponds to a total investment of about US\$2.37 billion, 70–75 percent of which will be funded by public investments, and the remaining by beneficiaries’ contribution.

6. The benefits of Pillar II for small farmers can be maximized and made more sustainable by integrating climate change adaptation into the PMV. While the PMV acknowledges the risks

² A Pillar II Project is an agricultural project directed to small farmers located in marginal areas of Morocco, partially financed by the Government as part of the PMV. See Annex 8 for details.

that Morocco will face in the coming decades due to climate change, the adaptation actions need to be strengthened. Climate change risks jeopardizing the gains of the PMV by increasing the probability of low harvests or crop failure in marginal areas. This will particularly affect smallholders who depend on low-input, rainfed agriculture as their primary source of income and employment. To the extent that climate shocks will become more intense and/or more frequent, climate change risks limiting the positive social impacts of Pillar II. Solutions are available, and they have been successfully tested in Morocco and locally adopted. These practices and technologies have short-term advantages for agricultural production in addition to increasing resilience to climate change. However, slow transfer of knowledge from research to farmers, low education levels, and the limited financial resources of smallholders hold back the adoption of climate change adaptations.

7. Integrating Climate Change in the implementation of the *Plan Maroc Vert* Project (PICCPMV) will strengthen the capacity of relevant stakeholders to integrate climate change adaptations in projects directed to small farmers in five target regions of Morocco. The PICCPMV will be funded by the Special Climate Change Fund (SCCF). It will develop the capacities of staff of public and private institutions involved in the planning and implementation of Pillar II Projects for integrating climate change adaptations in projects directed to small farmers. At the same time, the PICCPMV will disseminate climate change adaptations among small farmers. Within the five target regions, about ten PICCPMV Sub-projects will be implemented to pilot the climate change adaptations.

8. The proposed project builds on the experience gained in the World Bank's lending and analytical activities in Morocco. The PICCPMV is consistent with the actions of an ongoing programmatic series of two Development Policy Loans (DPLs) in agriculture, aiming to: (i) Improve the efficiency of domestic markets; (ii) Improve the socio-economic impacts of investments directed to small farmers (Pillar II Projects); (iii) Improve agricultural services; and (iv) Improve the use and the management of irrigation water and the planning of irrigation infrastructures. Specifically, the PICCPMV builds on the actions undertaken under the second Component, further strengthening the manual for the prioritization of the financing directed to Pillar II Projects in a climate change perspective,³ and under the third one, involving staff of the newly created agricultural services in awareness activities on climate change adaptation in agriculture. As the Oum-Er-Rbia Basin falls into the regions identified as most vulnerable to climate change, the PICCPMV complements the Oum-Er-Rbia Irrigated Agriculture Modernization project, which focuses on irrigated areas only, supporting modernization of irrigation systems and facilitating farmers' access to technology, financing, and markets. In the same area, a Policy and Human Resources Development (PHRD) Grant seeks to strengthen the Oum-Er-Rbia Basin Agency's capacity to monitor the impact of climate change on water resources and to promote adaptation measurements. The Rainfed Agriculture Development Project focuses on community participation in decision making in rainfed areas of Morocco, integrating research and development related to drought management. Among the most relevant studies for the scope of the PICCPMV, are: the Agriculture Sector Review (2010), the report on "Agriculture and Climate Change: Impacts and Policy Implications", and the ESW on "Impacts of Climate Change on Water Resources." The proposed agricultural practices and techniques aimed at improving resilience to climate change (adaptation) can also prove to have a beneficial

³ See Annex 8.

impact on carbon sequestration (mitigation). Under the Strategic Framework for Development and Climate Change, the climate change adaptations financed under the PICCPMV will be analyzed to assess their potential contribution to mitigation.

C. Higher Level Objectives to which the Project Contributes

9. The PICCPMV will contribute to increasing the resilience of the agricultural sector to climate change in Morocco. The PICCPMV will be a catalyst to including climate change adaptation in the selection criteria of future projects directed to small farmers (Pillar II Projects).⁴ This will allow climate change adaptation to be mainstreamed into the implementation of the PMV, not only in the five target regions but over the whole country. By increasing the resilience of the agricultural sector to climate-related threats, the project will improve food security and promote sustainable agricultural development in Morocco.

10. Morocco is fully committed to reducing poverty through important investments in agriculture that contribute to economic growth. The focus on Pillar II demonstrates the willingness of the GoM to pull small farmers out of low-productivity, subsistence agriculture, making them actively involved in domestic markets. The PICCPMV contributes to the goal of poverty reduction by targeting the most vulnerable segments of the rural population. By increasing resilience to climate change, small farmers could achieve more stable yields over the years, becoming more reliable providers in the agri-food chain. The related stronger integration in domestic markets will result in increases in revenues and improvements to the living standards of rural families. This will induce a virtuous cycle of increased access to knowledge and technologies which can further boost productivity and sustainability. The PICCPMV is in line with the programming principles of the SCCF, which emphasizes the need to focus on the most vulnerable segments of the population, in view of the link between climate change impacts and poverty.

11. The project supports the momentum of GoM investments in agriculture, with the objective of bringing economic benefits to smallholders and bridging the gap with commercial farmers. The focus on profitable agri-food chains, the implementation of the PMV aggregation model, and the integration of small farmers in national markets is expected to increase the economic revenue of agriculture. Farmers will have access to increasing resources, and smallholders will increase their standard of living and will have improved access to agricultural inputs, which will in turn boost productivity. The improvement of agricultural services, together with a deeper integration between research and dissemination, will allow small farmers to benefit from new technologies resulting in increased yields and incomes.

12. The PICCPMV is fully aligned with the objectives and priorities defined in the Country Partnership Strategy (CPS) 2010-2013. Activities under CPS Pillar 3 (Sustainable Development in a Changing Climate) aim to support renewed attention of the GoM to longstanding environmental sustainability issues and future challenges brought about by climate change. As reported in the CPS, climate change issues represent an example of the possible expansion of the World Bank activities in the country beyond the typical areas. The Bank will support the design and implementation of adaptation pilots in the agricultural sector, combining investments, policy

⁴ See Annex 8.

lending, technical assistance, and GEF resources. By targeting smallholder farmers in vulnerable rural areas, the PICCPMV will address the three long term development challenges facing Morocco identified in the CPS: (i) enhancing growth and employment; (ii) reducing social disparities; and (iii) ensuring sustainability of natural resources.

II. Project Development Objectives

A. PDO

13. The Project Development Objective (PDO) is to strengthen the capacity of public and private institutions and of farmers to integrate climate change adaptations in projects directed to small farmers in five target regions. The climate change adaptations considered are: (i) improved crops and varieties, and certified seeds; (ii) direct seeding; (iii) change in seeding dates and/or seeding density; (iv) supplemental irrigation; (v) rainwater harvesting; and (vi) good agronomic practices. The regions targeted by the PICCPMV are the following: Gharb-Chrarda-Beni Hssen, Rabat-Salé-Zemmour-Zaër, Chaouia-Ouardigha, Doukkala-Abda, and Tadla-Azilal.

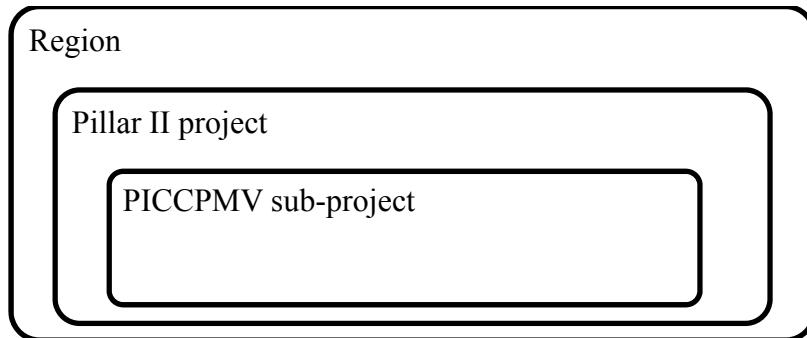
1. Project Beneficiaries

14. At the institutional level, beneficiaries of the PICCPMV will include staff of public and private institutions involved in the planning and implementation of Pillar II Projects, such as: the Ministry of Agriculture and Fisheries (MAPM), including the Regional Agricultural Directorates (DRAs) of the five target regions, the Provincial Agricultural Directorates (DPAs) of the five target regions, and the Directorate for the development of the agri-food chains; the Agency for Agricultural Development (ADA); the regional chambers of agriculture; the Pillar II resources center (CRPII) ; the OPAs of the five target regions; private investors, traders, entrepreneurs, and service providers.⁵

15. At the farmers' level, beneficiaries of PICCPMV Sub-projects will include farmers benefitting from goods, small-scale civil works, and services for the implementation of the climate change adaptations, training, and/or awareness activities. These farmers will be also beneficiaries of a Pillar II Project (Figure 2).

⁵ For details on the role on each institution in the Pillar II Project cycle, see Annex 8.

Figure 2. Farmers benefitting from the PICCPMV Sub-projects.



2. PDO Level Results Indicators

16. Two PDO level results indicators are identified (Annex 1):
- (i) percentage of Pillar II Projects in the five target regions integrating at least one climate change adaptations
 - (ii) percentage of small farmers in the selected Pillar II Projects integrating at least one climate change adaptation.

III. Project Description

A. Project components

Component 1: Development of the capacities of public and private institutions to integrate climate change adaptations in projects directed to small farmers in five target regions. (Indicative budget allocation: 12 percent of the grant)

17. Component 1 aims to develop the capacities of selected staff of public and private institutions involved in the planning and implementation of Pillar II Projects for integrating climate change adaptations in projects directed to small farmers. As a result, Component 1 will allow the PICCPMV to influence the screening mechanism of projects directed to small farmers (Pillar II Projects)⁶ in a climate change adaptation perspective. The ADA will be the implementing entity for this Component.

18. This Component is distinguished in two sub-components. Activities of sub-component 1.1 will be to: (i) provide training sessions and carry out workshops and field visits; (ii) produce dissemination materials; and (iii) launch awareness campaigns. The activity of sub-component 1.2 will be to provide training sessions to selected staff of the implementing entities. The budget will cover all above mentioned activities. In addition, under sub-component 1.2, the budget will be used to cover the incremental operating costs incurred by the ADA.

19. Beneficiaries of Component 1 will be the selected staff of institutions such as: MAPM (including the DRAs, the DPAs, and the Directorate for the development of the agri-food

⁶ See Annex 8.

chains); the ADA; the regional chambers of agriculture; the CRPII; the OPAs; private investors, traders, entrepreneurs, and service providers.⁷

Component 2: Dissemination of climate change adaptations among small farmers in five target regions. (Indicative budget allocation: 88 percent of the grant)

20. Component 2 aims to disseminate climate change adaptations among selected small farmers in the five target regions. For each PICCPMV Sub-project, farmers will benefit from goods, small-scale civil works, and services for the implementation of the climate change adaptations, training, and awareness activities. The MAPM will be the implementing entity for this component, through the DRAs of the five target regions, and with the assistance of the ADA.

21. This Component will include about ten PICCPMV Sub-projects. Activities of each Sub-project will be to: (i) implement climate change adaptations through the provision of goods, small-scale civil works, and services; (ii) provide training sessions and carry out workshops and field visits; and (iii) carry out the Monitoring and Evaluation (M&E). The budget will cover all the above mentioned activities. In addition, the budget under this component will be used to cover the incremental operating costs incurred by the DRAs.

22. Beneficiaries of Component 2 will include farmers benefitting from goods, small-scale civil works, and services for the implementation of the climate change adaptations, training, and/or awareness activities. These farmers will be also beneficiaries of a Pillar II Project.

B. Project Financing

1. Financing Instrument

23. The project will be financed by the Special Climate Change Fund (SCCF). The grant of US\$4.35 million will be implemented over four years. The grant will be used largely to finance the additional cost of climate change adaptations.

24. Co-financing of the SCCF grant will be provided by investments by the GoM of about ten selected Pillar II Projects. Since not all the Pillar II Projects in which a PICCPMV Sub-project will be included have been selected, the co-financing has been calculated as follows. It has been considered that the financing by the MAPM of the first five Pillar II Projects selected corresponds to US\$13.47 million. The co-financing for the overall PICCPMV will be around the double, corresponding to US\$26.95 million.

⁷ For details on the role on each institution in the Pillar II Project cycle, see Annex 8.

2. Project Cost and Financing

Table 1. PICCPMV costs and financing.

Project Components	Project cost (US\$)
1. Development of the capacities of public and private institutions to integrate climate change adaptations in projects directed to small farmers in five target regions	0.50
2. Dissemination of climate change adaptations among small farmers in five target regions	3,85
Total Project Costs	4.35
Co financing (Government)	26.95

25. Incremental operating costs⁸ under Component 1 and under Component 2 will be covered by the budget of the Project. In total, these costs sum up to about 3 percent of the total PICCPMV costs (that is: Component 1 and Component 2).

C. Lessons Learned and Reflected in the Project Design

26. The design of the PICCPMV takes into account lessons learned from similar operations in Morocco and elsewhere, and from the experience gained during project preparation.

27. There is general agreement on the fact that farmers tend to be risk adverse in the choice of technologies and practices. Poor performance of a new practices and technology, even if due to contingent reasons, can reduce farmers' willingness to test new practices and technologies. This is especially true in case of farmers with low level of education and limited income. For this reason, only climate change adaptations that had already been tested in Morocco have been selected for the PICCPMV. This choice will: (i) reduce the risks linked to the uncertainties of the performance of climate change adaptations; and (ii) reduce the time required to implement the climate change adaptations at the farmers' level, thus fitting into the timeframe of the PICCPMV. In line with SCCF programming principles, the adaptation measures should be implemented where sufficient information is available to warrant such activity. At the same time, the innovative characteristic of the PICCPMV has been retained, by choosing climate change adaptation not yet widely disseminated in the five target regions of Morocco.

28. It is well known that a critical mass in terms of financing is needed in order to engage the implementing entities and achieve rapid implementation. Keeping this principle in mind, the institutional arrangement of the PICCPMV was heavily simplified. Considering also the fact that the ADA and the DRAs are newly created agencies, the simplification of the project structure will allow World Bank staff to focus on developing the required capacities of a limited number of the partners involved, rather than diluting the support. The focus on five target regions, instead

⁸ “Incremental Operating Costs” means the incremental operating costs incurred by the MAPM and the ADA on account of the PICCPMV implementation, comprising: communication, including postage and internet; procurement related advertising costs; local transportation; fuel; office equipment and supplies; Project related travel and per diem allowances including accommodation and local transportation; and banking charges.

of the broader scope initially planned, will streamline implementation by involving only five DRAs. In case of future financial resources available, the project could be easily replicated and scaled up.

IV. Implementation

A. Institutional and Implementation Arrangements

29. The coordination responsibility of the PICCPMV will be assumed by the ADA. The implementing entities will be: (i) the ADA, for Component 1; and (ii) the MAPM (through the DRAs of the five target regions), with the assistance of the ADA, for Component 2.

30. The ADA will be responsible of the coordination of the PICCPMV on technical, administrative, fiduciary, safeguard, M&E, and reporting related matters. The ADA will oversee the implementation of the PICCPMV and ensure that the directions chosen, actions undertaken, and results achieved are in accordance with project documents and agreements.

31. The ADA will be the implementing entity for Component 1. In this capacity, the ADA will (i) provide training sessions and carry out workshops and field visits; (ii) produce dissemination materials; and (iii) launch awareness campaigns. In addition, ADA will provide training sessions to selected staff of the implementing entities.

32. The MAPM, through the DRAs of the five target regions, will be the implementing entity for Component 2, with the assistance of the ADA. For each PICCPMV Sub-project, the DRA will: (i) implement climate change adaptations through the provision of goods, small-scale civil works, and services; (ii) provide training sessions and carry out workshops and field visits; and (iii) carry out the M&E. The ADA will be responsible of the pre-selection of the PICCPMV Sub-projects, in coordination with the relevant DRA, according to the criteria and procedures presented in the Project Implementation Manual.

B. Results Monitoring and Evaluation

33. The M&E system of the PICCPMV will be integrated in the overall M&E system of the projects of the PMV. The M&E system of the PICCPMV has been carefully designed in order not to add an additional administrative layer on top of the procedures of the PMV, but to complete the existing M&E system. The M&E system has been designed according to the “Updated Results-based Management Framework for the Least Developed Countries Fund and the Special Climate Change Fund and Adaptation Monitoring and Assessment Tool”, and the corresponding Tracking Tool for Adaptation. Necessary capacity building activities for the staff of the implementing entities with reference to the M&E will be financed under Component 1.

34. Reporting on the result indicators of the PICCPMV, together with the physical implementation and the monitoring on safeguard issues, will be done through Project Reports. The Recipient will have the overall responsibility for the preparation of the Project Reports and

their transmission to the World Bank each semester.⁹ The ADA will collect and organize the necessary information for Component 1. Each DRA will collect and organize the necessary information for the respective PICCPMV Sub-projects for Component 2, and will transmit them to the ADA in agreed format, as described in the Project Implementation Manual. The ADA will have the responsibility to consolidate the information for the two Components into the Project Report, which will be transmitted to the Recipient for review, approval, and transmission to the Bank.

35. Annex 1 presents the Results Framework and Monitoring and Annex 3 details the choice of PDO level and intermediate level results indicators, the methodology adopted for data collection and consolidation, and the responsibilities of the implementing entities.

C. Sustainability

36. The sustainability of the PICCPMV will largely depend on the successful integration of a climate change adaptation component in the screening process of Pillar II Projects. Considering that the manual for the prioritization of financing for Pillar II Projects is in the process of including in the scoring system the presence in the Pillar II Projects idea of climate change adaptations, the PMV will become more resilient to climate change.

37. Sustainability of the PICCPMV will also depend on the integration of the participatory approach at a local level. The farmers' decision to keep adopting climate change adaptations even after the term of the PICCPMV will be driven by: (i) successful results obtained in terms of yield during the implementation of the PICCPMV; (ii) the availability of sufficient household financial resources; and (iii) access and availability of climate change adaptations.

V. Key Risks and Mitigation Measures

38. There is a substantial risk that limited technical and human-resource capacity of public extension and advisory services in marginal zones could limit technology transfer. Adoption by farmers of climate change adaptations may be constrained by inadequate awareness of increased climate risk, and by lack of confidence in unfamiliar practices and technologies. To face this possibility, the project will work closely with the DPL component for improving agricultural services, which supports training activities among relevant actors, together with the creation of the CRPII. Synergies with the activities of other international donors (e.g., FAO, involved in the development of training toolkits to improve "softskills" of extension personnel) will be possible. At the farm level, the project will use participatory approaches to encourage farmers to adopt climate change adaptations. By sharing lessons and experiences with the wider community, farmers involved in the project will spread the message about the advantages of agricultural techniques that are resilient to climate change.

39. The cost for the adoption of climate change adaptations can be a limiting factor for those farmers for whom no PICCPMV financing is available. Even when knowledge and technical constraints are overcome, and the farmers are convinced of the advantages of the climate change

⁹ See Table 4.

adaptations, the additional cost might not be sustainable given the limited financial resources of smallholders in marginal areas of Morocco. This risk would be mitigated by the development of a screening mechanism for future Pillar II Projects that includes climate change adaptation criteria; if these adaptations become part of future projects, they would be partially financed by the GoM.

40. The ADA and the DRAs lack of knowledge of World Bank procedures, in particular with reference to procurement and safeguards. To help mitigate this risk, training sessions will be organized for selected staff of the implementing entities before the start of project activities and during project implementation. In addition, the World Bank Team will closely supervise the activities of the PICCPMV.

VI. Appraisal Summary

A. Economic and Financial Analysis

41. The US\$4.35 million grant under the PICCPMV will strengthen the capacity of relevant stakeholders to integrate climate change adaptations in projects directed to small farmers in five target regions of Morocco. While about 88 percent of the grant will be used to pilot climate change adaptations among farmers to demonstrate their additional advantage compared to the business as usual, the remaining financing will be used to influence the institutional process of selection and implementation of future projects directed to small farmers (Pillar II Projects).¹⁰ In total, there will be about ten PICCPMV Sub-projects. For the five PICCPMV Sub-projects already identified, the total allocation by the MAPM will be US\$13.48 million. Assuming that MAPM will allocate a similar investment for the remaining five projects, it can be estimated that the total co-financing by the MAPM will be approximately US\$26.96 million.

42. Economic and financial rate of return analyses are not usually conducted for GEF climate change adaptation projects, an additional cost analysis was carried out instead.¹¹

B. Technical

43. The choice of climate change adaptations to be implemented under the PICCPMV has been done considering: (i) the incertitude in predicting future climate change scenarios; (ii) the limited know-how of farmers; (iii) the limited financial availability of farmers; and (iv) the willingness to disseminate adaptations having value added compared to the business-as-usual of the PMV. Given these factors, the following practices and technologies are suggested under the PICCPMV: (i) improved crops and varieties, and certified seeds; (ii) direct seeding; (iii) change in seeding dates and/or seeding density; (iv) supplemental irrigation; (v) rainwater harvesting; and (vi) good agronomic practices. Table 2 in Annex 2 provides a description of the advantages and constraints of each climate change adaptation. It should be highlighted that, although the climate change adaptations are presented separately, successful results at the field level can often be achieved through their implementation as a technology package.

¹⁰ See Annex 8.

¹¹ See Annex 8.

44. While the World Development Report (2010) classes Morocco among the countries that will suffer most from the negative effects of climate change on yield, how and how much temperature and precipitation are going to change in each region of Morocco is still an open question. The choice to act now to perform better in an uncertain future should consider the need to shield farmers from the risk of implementing practices and technologies that will perform only under a specific future climate scenario. The PICCPMV will therefore finance flexible practices and technologies that are able to perform under both the current and a range of future climates. They offer short-term advantages for agricultural production, in addition to increasing resilience to climate change—with varying benefits under different future climate scenarios.

45. The range of technical choices is constrained by smallholders' limited know-how. Farmers in marginal areas are often old and poorly educated. Currently, their use of modern technologies is limited. These limits need to be taken into consideration in the choice of climate change adaptations. In addition to choosing practices and technologies that are easy to apply, the PICCPMV reserves budget for training and awareness activities to facilitate the transmission of knowledge to farmers.

46. The cost of the implementation of climate change adaptations can constrain their adoption by smallholders beyond the area of implementation of the PICCPMV Sub-projects. Cost is also linked to the degree of testing of that the climate change adaptations have already undergone. Only climate change adaptations that had already been tested in Morocco were selected for inclusion in the PICCPMV. This was done with the objective of: (i) reducing the time required to implement the climate change adaptations at the farmers' level, thus fitting into the timeframe of the PICCPMV; and (ii) reducing the risks linked to the uncertainties of the performance of climate change adaptations. At the same time, the innovative characteristic of the PICCPMV was retained, by choosing climate change adaptation not yet widely disseminated in Morocco.

47. Finally, the climate change adaptations proposed under the PICCPMV offer clear advantages over the corresponding Pillar II Project baseline. In line with the GEF policy, no practices and technologies already funded under the PMV umbrella will be financed by the PICCPMV. The climate change adaptations will contribute to improving the performance of existing Pillar II Project activities, with or without the effects of climate change.

48. The PICCPMV takes advantage from the experience gained by INRA over the last decades for the implementation of climate change adaptations. The INRA has distinctive experience in Morocco in agricultural applied research, in particular with reference to selection of new varieties, direct seeding, and rainwater harvesting systems. In addition, INRA is uniquely position in terms of knowledge sharing with both farmers and agricultural services.

C. Financial Management

49. Financial management activities will be handled by: (i) the ADA, for Component 1; and (ii) by the MAPM (through the DRAs), for Component 2. The capacity assessment for the ADA was conducted in December 2009 and January 2010 and updated recently in December 2010. In

the same way, a capacity assessment was conducted in two DRAs among the five concerned by the PICCPMV (Gharb-Chrarda-Beni Hssen and Chaouia-Ouardigha). Both ADA and the DRAs are newly created agencies with no previous experience on World Bank financed projects, although they have management capacity in compliance with the World Bank financial management requirements. The World Bank's assessment of the financial management capacity of the ADA and the DRAs found that the accounting and internal control system is adequate and that annual external financial audit arrangements are satisfactory. In addition, the PICCPMV is governed by well developed procedures, and a Project Implementation Manual has been drafted. Fiduciary risk for the PICCPMV is assessed as Moderate High.¹²

50. Since expenses will be totally pre-funded either by the ADA or by the DRAs, grant fund disbursements will be made based on documentary evidence or on presentation of Statements of expenses (SOEs), in compliance with World Bank disbursement procedures. No designated account will be opened. The ADA and each DRA will develop documentary evidences and SOEs, which will be sent to the DF of the MAPM who will be responsible for consolidating and transmitting them to the MEF for reimbursement. The ADA will play a role in controlling the eligibility of expenses incurred by DRAs. Farmers will not receive any direct financing.

51. Reporting on the Financial Management will be done through Interim Unaudited Financial Reports (IUFRs) each semester, and Financial Statements (each year). The Recipient will have the overall responsibility for the preparation of these reports and their transmission to the Bank.¹³ The ADA will collect and organize the necessary information for Component 1. Each DRA will collect and organize the necessary information for the respective PICCPMV Sub-projects for Component 2, and will transmit them to ADA in agreed format, as described in the Project Implementation Manual. The ADA will have the responsibility to consolidate the information for the two Components into one report, which will be transmitted to the Recipient for review, approval, and transmission to the Bank.

D. Procurement

52. Procurement activities will be handled by: (i) the ADA, for Component 1; and (ii) by the MAPM (through the DRAs), for Component 2. The capacity assessment for the ADA was conducted in December 2009 and January 2010 and updated recently in December 2010. In the same way, a capacity assessment was conducted in two DRAs among the five concerned by the PICCPMV (Gharb-Chrarda-Beni Hssen and Chaouia-Ouardigha). The ADA and the DRAs are newly created entities with no previous experience in World Bank financed projects. Their staffs are generally not familiar with World Bank procurement procedures, and there is a lack of training for those who are dedicated to procurement. Given their previous experience in public administration or other state-owned enterprises, staff dedicated to procurement at the level of the ADA and of the DRAs have sound knowledge of Moroccan public procurement decrees and therefore the basis to be able to assimilate and apply World Bank procedures. The level of risk in procurement is considered Moderately High.¹⁴

¹² See Annex 3.

¹³ See Table 4.

¹⁴ See Annex 3.

53. The procurement plan for the first 18-month period has been prepared during the Project preparation in a format acceptable to the World Bank. It will be updated at least once a year to reflect the latest circumstances. It will set forth those contracts which will be subject to the Bank's prior review.

54. Goods, small-scale civil works, and services other than consultants will be generally procured using International Competitive Bidding (ICB). Other procurement methods could be used, such as: (i) National Competitive Bidding (NCB); (ii) shopping; and (iii) direct contracting. Consultants' services will be generally procured under contracts awarded on the basis of the Quality- and Cost-Based Selection (QCBS). Other procurement methods could be used for those assignments which are specified in the Procurement Plan: (i) Consultants' Qualifications Selection (CQS); (ii) Single-source selection; (iii) Selection of Individual Consultants; and (iv) Sole Source Procedures for the Selection of Individual Consultants.

E. Environment and Social (including safeguards)

55. The PICCPMV is expected to have significant positive environmental and social impacts. By focusing on Pillar II Projects in marginal areas of Morocco, the PICCPMV will address small farmers, traditionally characterized by high poverty rates, low level of education, and low productivity. The project will address the vulnerability of these smallholders to climate change, and it will contribute to overcome the dualistic nature typical of Moroccan agriculture. The project will raise awareness among small farmers about future risks, giving them more time and adequate instruments to face the new climate scenario. By helping to make agriculture more resilient to climate change, the project will help to make it more sustainable in the long term.

56. The above notwithstanding, due attention has been paid to the possible environmental and social negative impacts of the PICCPMV. Considering the programmatic nature of the PICCPMV, and the fact that all PICCPMV Sub-projects have not yet been already identified, a framework study of the environmental and social impacts (ECIES) has been developed. The ECIES provides indications for the development of studies of the environmental and social impacts (EIES) with reference to each specific PICCPMV Sub-project.

57. The PICCPMV involves environmental interventions and therefore triggers the World Bank Environmental Assessment Policy OP 4.01. Given the nature of Sub-projects being considered under the PICCPMV, OP 4.09 on pest management is triggered for those PICCPMV Sub-projects financing pesticides. All other safeguards are not expected to be triggered by the PICCPMV. Concerning social safeguard policies, the ECIES clarifies that no social safeguards are triggered by the PICCPMV and that no major risk is envisaged.

Annex 1: Results Framework and Monitoring

Morocco: Integrating Climate Change in the Implementation of the *Plan Maroc Vert Project* Results Framework

Project Development Objective (PDO): Strengthen the capacity of public and private institutions and of farmers to integrate climate change adaptations in projects directed to small farmers in five target regions											
PDO Level Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values				Frequency	Data Source/Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4				
1: Percentage of Pillar II Projects in the five target regions integrating at least one climate change adaptation		%	0	30%	33%	35%	36%	Annual	ADA Analysis of the sheet of the Pillar II Project by the Technical Committee	ADA	The climate change adaptations will be listed separately in the investigation, and then collapsed for this indicator To be counted, a Pillar II Project should integrate at least one climate change adaptation
2: Percentage of small farmers in the selected Pillar II Projects integrating at least one climate change adaptation	<input type="checkbox"/>	%	0	15%	15%	25%	35%	Annual	DRA Investigation by sample of farmers	DRA	The climate change adaptations will be listed separately in the investigation, and then collapsed for the monitoring of the indicator To be counted, a farmer should integrate at least one climate change adaptation

INTERMEDIATE RESULTS

Intermediate Result (Component 1): Development of the capacities of public and private institutions for integrating climate change adaptations in projects directed to small farmers in five target regions

<i>Intermediate Result indicator One:</i> Number of staff of the public institutions trained	<input type="checkbox"/>	Cumul. no.	0	80	120	120	120	Annual	ADA	ADA	Public institutions are: MAPM (including DRAs, DPAs, Directorate for the development of the agri-food chains), ADA, regional chambers of agriculture, and CRPII
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<i>Intermediate Result indicator Two:</i> Number of staff of private institutions trained	<input type="checkbox"/>	Cumul. No.	0	25	50	75	100	Annual	ADA	ADA	Private institutions include: OPAs, private investors, traders, entrepreneurs, and service providers
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Intermediate Result (Component 2): Dissemination of climate change adaptations among small farmers in five target regions

<i>Intermediate Result indicator One:</i> Number of farmers in the PICCPMV Sub-projects integrating at least one climate change adaptation	<input type="checkbox"/>	No.	0	1,000	1,500	2,500	2,500	Annual	DRA <i>Fiche Sub-project</i>	DRA	The climate change adaptations will be listed separately in the investigation, and then collapsed for this indicator
<i>Intermediate Result indicator Two:</i> Number of farmers in the PICCPMV Sub-projects benefitting from training and awareness activities	<input type="checkbox"/>	No.	0	1,300	2,000	3,200	3,200	Annual	DRA	DRA	

Annex 2: Detailed Project Description

58. The PICCPMV aims to strengthen the capacity of public and private institutions and of farmers for integrating climate change adaptations in projects directed to small farmers in five target regions.

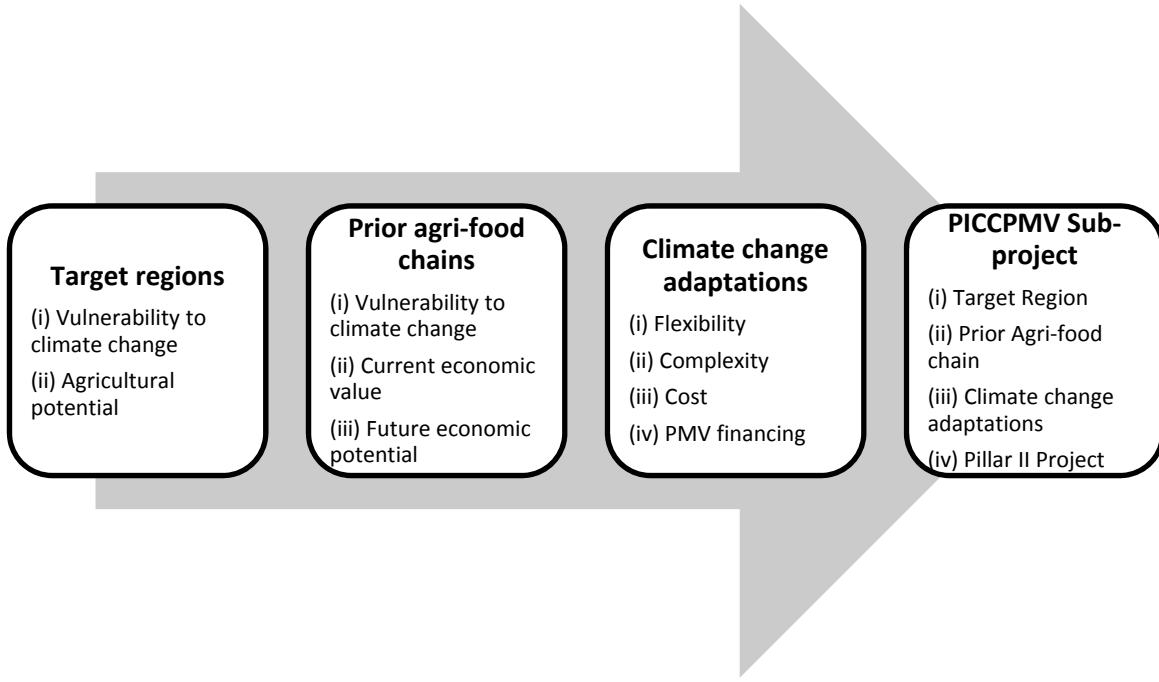
59. The detailed project description below is based on two reports prepared by the ADA and validated by a Steering Committee created to increase the participation of Ministries and public institutions in the design of the PICCPMV. The Steering Committee included representatives of: MAPM; MEF; Ministry of Economic and General Affairs (MAEG); Ministry of Mines, Energy, Water and Environment (MMEEE); and National Institute for Agronomic Research (INRA). The reports are the following:

- (i) Technical background report, which identifies the target regions, prioritizes the agri-food chains, lists climate change adaptations, and presents the first five Pillar II Projects selected for implementing climate change adaptations; and
- (ii) Draft Project Implementation Manual, which describes the implementation, financial management, procurement, disbursement, M&E, and reporting arrangements for the PICCPMV, including standard bidding documents.

The scope of the activities and the indicative budget allocation presented below could vary during implementation because of the innovative topic tackled by the PICCPMV, the selection of PICCPMV Sub-projects during the implementation of the PICCPMV, and the importance of responding to institutional and farmers' demands.

60. Figure 3 synthesizes the process followed and the criteria used during the conception of the PICCPMV. The four consecutive steps followed during project preparation (selection of the target region, prioritization of the agri-food chains, identification of the climate change adaptations, and selection of the PICCPMV Sub-projects) are described below and in more detailed in the Project Implementation Manual, followed by a detailed description of the two Components of the Project.

Figure 3. Cash flow of the PICCPMV.



61. The project area corresponds to the following five administrative regions of Morocco: Chaouia-Ouardigha; Rabat-Salé-Zemmour-Zaër; Tadla-Azilal; Doukkala-Abda; and Gharb-Chrarda-Beni Hssen. The selection of the five regions to be targeted by the PICCPMV (out of the sixteen regions of Morocco) has been carried out striking a balance between regions highly vulnerable to climate change and regions with high agricultural potential:

- (i) vulnerability to climate change has been determined in terms of relative reduction in yield of main crops due to climate change by 2050; and
- (ii) agricultural potential has been defined in relation to the annual precipitation, this being one of the most important factors determining the productivity of rainfed crops.

On the basis of a combination of these two criteria, the Regions of Morocco have been classified in descending order, and the top five Regions have been targeted. The decision of targeting five Regions only derives from the well known fact that a critical mass in terms of financing is needed in order to engage the implementing entities and achieve rapid implementation. The focus on five target regions, instead of the broader scope initially planned, will streamline implementation by involving only five DRAs.

62. The five target regions are all in the central part of Morocco. The analysis excluded the northern regions (characterized by lower vulnerability to climate change) and the most desert ones in the south (characterized by lower agricultural potential). Some target regions are largely devoted to cereal production (Chaouia-Ouardigha, Doukkala-Abda), while in others tree crops prevail (olive trees in Tadla-Azilal). In some cases the PMV will finance the switch from cereals to tree crops over the coming years, especially in marginal lands where the cereal production is limited (Doukkala-Abda, Gharb-Chrarda-Beni Hssen, and Chaouia-Ouardigha). In some regions, meat and milk production can contribute to agricultural value added (Chaouia-Ouardigha), even more than crops (Tadla-Azilal). Some of the target regions are characterized by large irrigated

areas (Tadla-Azilal, 35 percent of the agricultural area), while others remain mostly rainfed (Chaouia-Ouardigha, only 3 percent).

63. The prior agri-food chains targeted by the PICCPMV include: cereals (wheat, barley, oat, maize); legumes (beans, lentils, chickpeas); tree crops (olive, almond); and sunflower. The selection of the prior agri-food chains has been done targeting those which are at once most vulnerable to climate change, and at the same time relevant in terms of current or future economic value:

- (i) vulnerability to climate change has been determined in terms of relative reduction in yield of each crop due to climate change by 2050;
- (ii) current economic value has been determined in terms of percentage of surface cropped in the Region; and
- (iii) economic potential has been described on the basis of the priorities in the PMV for emerging agri-food chains.

64. The climate change adaptations considered in the PICCPMV are: (i) improved crops and varieties, and certified seeds; (ii) direct seeding; (iii) change in seeding dates and/or seeding density; (iv) supplemental irrigation; (v) rainwater harvesting; and (vi) good agronomic practices. The selection of the climate change adaptations to be implemented under the PICCPMV has been done on the basis of the following criteria:

- (i) flexibility in response to climate variability should be high, considering due to the incertitude in predicting future climate change scenarios;
- (ii) complexity of the implementation of the climate change adaptation should be low, considering the limited know-how of farmers;
- (iii) cost of the implementation of the climate change adaptation should be low, considering the limited financial availability of farmers; and
- (iv) financing of the climate change adaptation should not be already available under the PMV, considering the willingness to disseminate adaptations having value added compared to the business-as-usual of the PMV.

The climate change adaptations identified are characterized by their substantial potential to offset negative climate change impacts. The practices and technologies proposed are characterized by having short term advantages for agricultural production, and by increasing the resilience to climate change in the long term. The farmers will record varying benefits in time and entity in relation to the future climate scenario. Such adaptations permit immediate action, while allowing for the incertitude of possible development scenarios and climate change projections.

65. About ten PICCPMV Sub-projects will be selected for the dissemination of the climate change adaptations, each targeting a group of small farmers. To be selected, a PICCPMV Sub-project should:

- (i) be located in one of the five target Regions;
- (ii) focus on one of the prior agri-food chains;
- (iii) be suitable to include at least one climate change adaptation; and
- (iv) be included in a Pillar II project.

The fact that the area of intervention of the PICCPMV Sub-project is included in the area of intervention of a corresponding selected Pillar II Project guarantees that small farmers are organized in associations and/or cooperatives, grouped under an OPA. In analogy with the

selection process of Pillar II Projects, the technical feasibility of the PICCPMV Sub-project is assessed by the Technical Committee, while the Investment Committee approves it.¹⁵

Component 1: Development of the capacities of public and private institutions for integrating climate change adaptations in projects directed to small farmers in five target regions. (Indicative budget allocation: 12 percent of the grant)

66. Component 1 aims to develop the capacities of relevant staff of public and private institutions involved in the planning and implementation of Pillar II Projects for integrating climate change adaptations in projects directed to small farmers. The ADA will be the implementing entity for this Component.

67. This Component is distinguished in two sub-components. Activities of sub-component 1.1 will be to: (i) provide training sessions and carry out workshops and field visits; (ii) produce dissemination materials; and (iii) launch awareness campaigns, in order to share knowledge about the concepts of climate change, climate change impacts on Moroccan agriculture, climate change adaptation advantages and costs, and lessons learned from Component 2. The activity of sub-component 1.2 will be to provide training sessions to selected staff of the ADA and of the MAPM in weaker project management related areas (procurement, M&E, and environmental and social safeguards according to World Bank procedures) with the goal to mitigate risks identified during the PICCPMV's design and implementation.¹⁶ The budget will cover all above mentioned activities. In addition, under sub-component 1.2, the budget will be used to cover the coordination costs of the PICCPMV incurred by the ADA

68. Beneficiaries of Component 1 will be the selected staff of institutions such as: MAPM (including DRAs of the five target regions, DPAs of the five target regions, and Directorate for the development of the agri-food chains); ADA; the regional chambers of agriculture; the CRPII; OPAs of the five target regions; private investors, traders, entrepreneurs, and service providers.¹⁷

69. The rationale behind developing the capacity of the staff of institutions involved in the planning and implementation of the Pillar II is the willingness of the PICCPMV to influence the Pillar II screening mechanism from a climate change adaptation perspective. Relevant staff will be provided with successful lessons demonstrating the advantage of practices and technologies that reduce vulnerability to climate change in agriculture in comparison to the business-as-usual of Pillar II (Component 2). They could thus decide to enhance the existing screening process of Pillar II Projects¹⁸ by including a selection criterion concerning practices and technologies that reduce vulnerability to climate change. A list of proposed climate change adaptations could be included in the submission form for Pillar II Projects, and the screening mechanism could provide additional points in proportion to their relevancy. The PICCPMV will constitute a catalyst to mainstream climate change adaptation in the PMV.

¹⁵ For the composition of the Technical and Investment Committees, see Annex 8.

¹⁶ See Annex 4.

¹⁷ For details on the role on each institution in the Pillar II Project cycle, see Annex 8.

¹⁸ The screening mechanism for Pillar II Project is presented in the manual describing procedures for prioritizing the budget allocation for Pillar II Projects developed by ADA and adopted in November 2010. The manual is available to the public on ADA website (<http://www.ada.gov.ma/>).

Component 2: Dissemination of climate change adaptations among small farmers in five target regions. (Indicative budget allocation: 88 percent of the grant)

70. Component 2 aims to disseminate climate change adaptations among selected small farmers in the five target regions. For each PICCPMV Sub-project, farmers will benefit from goods, small-scale civil works, and services for the implementation of the climate change adaptations, training, and awareness activities. The MAPM will be the implementing entity for this component, through the DRAs of the five target regions, with the assistance of the ADA. The DRAs will be in charge of the implementation of the PICCPMV Sub-project, as well as of the correspondent II Project. The ADA will be responsible of the pre-selection of the PICCPMV Sub-projects, in coordination with the relevant DRA, according to the criteria and procedures presented in the Project Implementation Manual.

71. This Component will include about ten PICCPMV Sub-projects. Activities of each Sub-project will be to: (i) implement climate change adaptations through the provision of goods, small-scale civil works, and services; (ii) provide training sessions and carry out workshops and field visits; and (iii) carry out the M&E. The budget will cover all above mentioned activities. In addition, the budget will be used to cover the incremental operating costs of the PICCPMV incurred by the DRAs. Farmers will not receive any direct financing.

72. A list of climate change adaptations is presented in Table 2, and corresponding technical sheets are available in the Technical background report. It should be highlighted that even if the climate change adaptations are presented separately, successful results at field level can often be achieved through the implementation of a package of climate change adaptations.

Table 2: Climate change adaptations.

Climate change adaptation	Agri-food chain	Advantages under climate change	Constraints	Goods, small-scale civil works, and services provided
Improved crops and varieties, and certified seeds	Cereals Legumes Fodders	<p>Compared to traditionally cultivated crops and varieties, improved crops and varieties can help better coping with biotic and abiotic stresses which are going to occur more frequently under climate change:</p> <ul style="list-style-type: none"> - water stress: cultivation of drought resistant crops and improved varieties record can allow recording higher yields during dry years; - temperature stress: cultivation of crops with different thermal requirement and improved varieties more plastic in adapting to modified temperature regimes can allow recording more stable yields. Improved crops and varieties can be selected to be more suitable under higher temperature regimes or lower ones (e.g., improved chickpea varieties allow winter seeding instead of the traditional spring seeding, avoiding summer droughts and taking full advantage of winter rainfall); - pests and diseases: improved crops and varieties with higher resistance to specific pests under the new climatic conditions can help reducing the yield losses as well as the use of chemical inputs (e.g., higher resistance to hessian fly in cereals; higher resistance to anthracnose in chickpeas). 	Morocco suffers from slow transfer of new varieties to the farmer. For the improved varieties recently listed in the Official Catalogue, there is the risk of unavailability of sufficient certified seeds to be used on an extended surface. To mitigate this risk, coordination is required between the implementing entities and the seed producers.	Goods: Purchase of seeds. Training.
Direct seeding	Cereals Legumes	<p>Compared to the traditional soil plowing and sowing, direct seeding (or conservation agriculture, or no-tillage) allows better conservation of the natural resources, which are expected to become more scarce and/or vulnerable under climate change:</p> <ul style="list-style-type: none"> - water conservation: when direct seeding is combined with the practice of leaving organic residues on the soil (mulching) evaporation is reduced and soil moisture is increased; - soil conservation: direct seeding increases the soil organic matter content and reduces erosion; and - energy conservation: by avoiding plowing for soil preparation, direct seeding reduces energy requirements. 	<p>Machines for direct seeding are not produced yet at an industrial scale in Morocco. This results in high prices to import them (e.g., from Spain), making the climate change adaptation unappealing to farmers because of less competitive prices.</p> <p>It can be difficult to convince farmers to keep organic residues on the soil for mulching instead of letting their animals graze in the field.</p>	Goods: Purchase of agricultural inputs to be used as a compensation for farmers who agree to keep organic residues on the soil for mulching. Service: Seeding using the machine for direct seeding. Training.
Change in seeding date and / or	Cereals Legumes	Dry seeding, usually adopted in combination with the direct seeding, allows anticipating the sowing of winter crops before the beginning of the rainy season. The crop can take thus full	As a result of the lower seeding (or planting) density, yields are reduced.	Training.

seeding density		<p>advantage of the first part of the rainy season, with positive effects on yields. In that way, the crop cycle can be better scheduled in function of the changing precipitation pattern under climate change.</p> <p>In order to cope with the reduction in precipitation amount, seeding density can be modified. By reducing the crop density, the crop water requirement in the field is reduced. As a result, yields can be more stable, and with lower possibility of crop failure under the climate change. This same concept is applicable to tree crops (change in planting density).</p>		
Supplemental irrigation	Cereals Fruit trees	Compared to traditional irrigation scheduling practices, which aim at maximizing yield, supplemental irrigation aims at maximizing water productivity by making the best use of limited water resources. Irrigation is practiced during the most sensitive stages of crop growth, when rain fails to provide sufficient water. Water stress, and the consequent effect on yield, is accepted during the less sensitive stages of crop growth. Supplemental irrigation allows stabilizing production under climate change, while limiting the use of the scarce water resources.	To be properly scheduled, supplemental irrigation requires advanced knowledge of crop physiology and soil characteristics, which are sometimes out of reach not only to farmers, but also to advisory services.	Service : Water distribution. Training.
Rainwater harvesting at a plot level	Cereals Legumes Fruit trees	Rainwater harvesting consists of collecting runoff to either concentrate water close to the plant root system or to keep it in storages. Rainwater harvesting can be realized at different scales, with the runoff area being inside or outside the crop field. For the scope of the PICCPMV, small scale rainwater harvesting is being considered, with runoff areas within the crop field (i.e., around each tree crop, and in strips between cereals and legumes), collecting water directly to the root system. This allows increasing the availability of water to the crop under climate change.	Rainwater harvesting systems usually require high maintenance.	Small-scale civil works: Construction of the harvesting system at plot level. Training.
Good agricultural practices	All crops	Compared to the traditional low-input agriculture practiced by small farmers in Morocco, good agricultural practices (or integrated crop management) aims to use inputs in a synergistic way to improve yields and increase sustainability under climate change. Good agricultural practices include, among others: <ul style="list-style-type: none"> - increased fertility, especially nitrogen supply; - pest management; and - weed control to decrease competition for natural resources. 	Pest management and weed control can require the adoption of chemical products which might have a negative impact on the environment if not properly used.	Goods: Purchase of fertilizers and chemicals. Service: Products distribution; Integrated pest management. Training.

73. The selection of the about ten PICCPMV Sub-projects follows the procedure synthesized in Figure 3 and detailed in the Project Implementation Manual. Considering the criteria of target Regions, prior agri-food chains, and suitability for the inclusion of the climate change adaptations, the list of existing Pillar II Projects has been skimmed. Within the five target Regions, 42 Pillar II Projects existed (submitted in March 2009 and March 2010). Out of these 42 Pillar II Projects, five satisfied the requirements concerning the prior agri-food chains and the suitability for the inclusion of at least one climate change adaptation. These five Pillar II Projects were thus selected, and a correspondent PICCPMV Sub-projects was developed. The five PICCPMV Sub-projects (Table 3) are located in three of the five target Regions: Gharb-Chrarda-Beni Hssen, Rabat-Salé-Zemmour-Zaër; and Chaouia-Ouardigha. The second group of (indicatively five) PICCPMV Sub-projects will be selected considering the pool of new Pillar II Projects submitted in March 2011 (and in case 2012) for approval.

Table 3. Activities envisaged under the first five PICCPMV Sub-projects identified.

#1	Pillar II Project: Conversion from cereal to olive trees Khouribga, Chaouia–Ouardigha 940 farmers over 1,600 ha
	PICCPMV Sub-project
	Support for integrated crop management through financing of inputs and training, for: - Optimal fertility - Weed control - Control of pests and diseases 300 farmers over 500 ha (estimated)
#2	Pillar II Project: Development of livestock farming for milk production Benslimane, Chaouia–Ouardigha 4,300 farmers over 400 ha
	PICCPMV Sub-project
	Support in the introduction of triticale for animal feeding through financing of inputs and training, for: - Improved varieties - Direct seeding and change in sowing date - Integrated crop management (sowing density, improved fertility, weed control, control of pests and diseases) 1,075 farmers over 100 ha (estimated)
#3	Pillar II Project: Intensification of cereal (bread wheat) production Khemisset, Rabat-Salé-Zemmour-Zaër 350 farmers over 1,000 ha
	PICCPMV Sub-project
	Support for integrated crop management of bread wheat through financing of inputs and training, for: - Improved varieties - Direct seeding and change in sowing date - Integrated crop management 90 farmers over 250 ha (estimated)

#4	<p>Pillar II Project: Conversion from cereal to olive trees</p> <p>Khemisset, Rabat-Salé-Zemmour-Zaër</p> <p>400 farmers over 2,000 ha</p>
	PICCPMV Sub-project
	<p>Support for management of olive trees through financing of inputs and training, for:</p> <ul style="list-style-type: none"> - Supplemental irrigation - Rainwater harvesting - Integrated crop management (sowing density, improved fertility, weed control, control of pests and diseases) <p>100 farmers over 500 ha (estimated)</p>
#5	<p>Pillar II Project: Intensification of olive trees</p> <p>Had Kourt, Sidi Kacem, Gharb-Chrarda-Beni Hssen</p> <p>865 farmers on 500 ha</p>
	PICCPMV Sub-project
	<p>Support for management of olive trees through financing of inputs and training, for:</p> <ul style="list-style-type: none"> - Supplemental irrigation - Integrated crop management (sowing density, improved fertility, weed control, control of pests and diseases) <p>215 farmers on 125 ha (estimated)</p>

Annex 3: Implementation Arrangements

A. Project administration mechanisms

74. The coordination responsibilities of the PICCPMV will be assumed by the ADA. Implementing entities will be: (i) the ADA, for Component 1; and (ii) the MAPM (through the relevant DRAs), with the assistance of the ADA, for Component 2.

75. The ADA is a specialized agency, legally independent from the MAPM, created in 2009 with the objective of overseeing the implementation of the PMV's investment program.¹⁹ The ADA is a public entity with legal personality and financial autonomy, established under the tutelage of the state. The ADA is administered by a Board and managed by an executive director. The Board is composed by Government representatives, two professional representatives elected among the presidents of the regional chambers of agriculture, and two others elected by the Government authority in charge of Agriculture.

76. The DRAs are MAPM directions which were created in 2009. The DRAs' main mission is to elaborate and ensure the appropriate implementation of the regional agricultural plans (PARs). They ensure the coordination of the different structures affiliated to the Department at the regional level, such as the DPAs, the Agricultural Technical Institutes, the Haras, and the artificial Insemination centers. The DRA's support and finance divisions comprise four services: (i) Logistics Department, (ii) Financial Department, (iii) Information System Department, and (iv) Human Resources Department.

77. The ADA will be responsible of the coordination of the PICCPMV on technical, administrative, fiduciary (financial and procurement), safeguard (environmental and social), M&E, and reporting related matters. The ADA will oversee the implementation of the PICCPMV and ensure that the directions chosen, actions undertaken, and results achieved are in accordance with project documents and agreements.

78. The ADA will be the implementing entity for Component 1. In this capacity, the ADA will (i) provide training sessions and carry out workshops and field visits; (ii) produce dissemination materials; and (iii) launch awareness campaigns. In addition, it will provide training sessions to selected staff of the implementing entities.

79. The MAPM, through the DRAs of the five target regions, will be the implementing entity for Component 2, with the assistance of the ADA. Each DRA will implement the climate change adaptations and the related training and awareness activities in the PICCPMV Sub-projects. The DRAs will keep regular contact with ADA by providing all required data in the timeframe defined in the M&E system. The DRAs will be responsible for ensuring the participation of the farmers in all phases of the project's implementation. This will be possible through keeping close collaboration with the OPA, and the correspondent associations and/or cooperatives of farmers. The ADA will be responsible of the pre-selection of the PICCPMV Sub-projects, in coordination

¹⁹ Law 42-08 (March 2, 2009) on the creation of ADA promulgated by the dahir n° 1-09-16 du 22 safar 1430 (February 18, 2009).

with the relevant DRA, according to the criteria and procedures presented in the Project Implementation Manual.

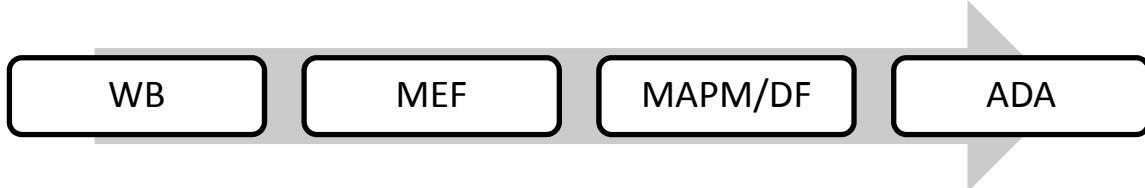
80. In order to guarantee the implementation of the PICCPMV, the ADA and the DRAs should assign to the PICCPMV qualified staff and adequate resources. The management capacity represents the main risk identified during the evaluation process as ADA's and DRA's employees are not familiar with the projects financed by the World Bank. Hence, to mitigate the identified risk, tailored training will be provided before starting the project to selected staff of the implementing entities.

B. Financial Management, Disbursements, and Procurement

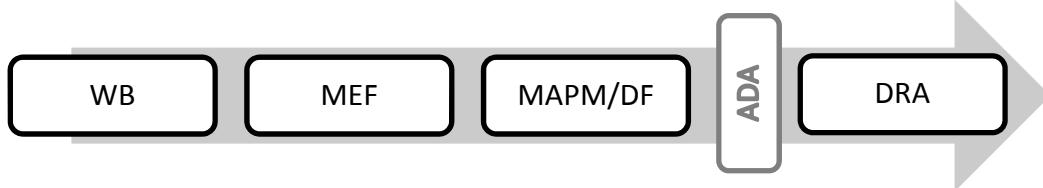
81. The financial flow is presented in Figure 4. With reference to Component 1, each year the ADA will communicate to the Financial Directorate of the MAPM the annual budget for the PICCPMV, which will be thus allocated. With reference to Component 2, each year the DRAs will communicate to ADA and to the Financial Directorate of the MAPM the budget for the PICCPMV Sub-projects. The request will be first evaluated by the ADA for approval. Only at that point, the Financial Directorate of the MAPM would be able to allocate the necessary budget.

Figure 4. Financial flow of the PICCPMV by Component.

Component 1:



Component 2:



a. Financial Management

82. Financial management activities will be handled by: (i) the ADA, for Component 1; and (ii) by the MAPM (through the DRAs), for Component 2. The capacity assessment for the ADA was conducted in December 2009 and January 2010 and updated recently in December 2010. In the same way, a capacity assessment was conducted in two DRAs among the five concerned by the PICCPMV (Gharb-Chrarda-Beni Hssen and Chaouia-Ouardigha). Both ADA and the DRAs are newly created agencies with no previous experience on World Bank financed projects, although they have management capacity in compliance with the World Bank financial management requirements. The World Bank's assessment of the financial management capacity of the ADA and the DRAs found that the accounting and internal control system is adequate and

that annual external financial audit arrangements are satisfactory. In addition, the PICCPMV is governed by well developed procedures, and a specific Project Implementation Manual has been drafted. Fiduciary risk for the PICCPMV is assessed as Moderate High.²⁰

83. The ADA and the DRAs have adopted the budget accounting in order to monitor the budget in term of receipts and expenditures. The ADA and DRA are using the Kingdom's General Treasury's Integrated System of Expenditure (GID) to follow up on their commitments and monitor their budget.

84. The general accounting principles for the PICCPMV are as follows: (i) Project accounting will cover all sources and all uses of project funds including payments made and expenses incurred. All transactions related to the project will be entered into the accounting system; (ii) Project transactions and activities will be distinguished from the other activities undertaken by the ADA or the DRAs; and (iii) The project chart of accounts will be compliant with the classification of expenditures and sources of funds indicated in the Project documents and the general budget breakdown. The chart of accounts should allow for data entry to facilitate the financial monitoring of project expenditures by component and Sub-project, expenditure classification, and disbursement category.

85. Since expenses will be totally pre-funded either by the ADA or by the DRAs, grant fund disbursements will be made based on documentary evidence or on presentation of Statements of expenses (SOEs), in compliance with World Bank disbursement procedures. No designated account will be opened. The ADA and each DRA will develop documentary evidences and SOEs, which will be sent to the DF of the MAPM who will be responsible for consolidating and transmitting them to the MEF for reimbursement. The ADA will play a role in controlling the eligibility of expenses incurred by DRAs. Farmers will not receive any direct financing.

86. Reporting on financial management aspects will be done through Interim Unaudited Financial Reports (IUFRs) and Financial Statements.²¹

87. The IUFRs summarizing the commitments, receipts, and expenditures made under the project should be produced every semester. The Recipient will have the overall responsibility for the preparation of the Interim Unaudited Financial Reports (IUFRs) and their transmission to the World Bank within 45 days after the end of each semester. The ADA will prepare the IUFR for Component 1 within 15 days after the end of each semester. Each DRA will prepare the IUFRs for the respective PICCPMV Sub-projects, and will transmit it to ADA within 15 days after the end of each semester. The ADA will consolidate the IUFRs for the two components into one document, and will transmit it to the Recipient, the Technical Committee, and the Investment Committee within 30 days after the end of each semester. These reports should include: (i) a statement of funding sources and uses for the period covered and a cumulative figures, including a statement of the project account balances; (ii) a statement of use of funds by component and by expenditure category; and (iii) a budget analysis statement indicating forecasts and discrepancies relative to the actual budget.

²⁰ See Annex 3.

²¹ See Table 4.

88. The Financial Statement of the PICCPMV should be produced annually. The Recipient will have the overall responsibility for the preparation of the Financial Statement and their transmission to the World Bank by July 1st each year. The ADA will prepare the IUFR for Component 1 by May 1st each year. Each DRA will prepare the IUFRs for the respective PICCPMV Sub-projects, and will transmit it to ADA by May 1st each year. The ADA will consolidate the IUFRs for the two components into one document, and will transmit it to the Recipient, the Technical Committee, and the Investment Committee by June 1st each year. The Financial Statements should include (i) a cash flow statement; (ii) a closing statement of financial position; (iii) a statement of ongoing commitments; and (iv) an analysis of payments and withdrawals.

89. The ADA's internal Control System is consistent with the Country System (based on the principle of segregation of duties between the Officer, the State Controller, and the Treasury Payer, and has been considered acceptable by the Bank. Thus, according to the Law No. 69-00 related to the financial control of the government on the public entities and other agencies, it states that the control of ADA's expenditures should be performed by a state controller (commitment stage), a treasury payer (payment stage), all designated by the Public enterprise and Privatization Direction. The designated state controller is in charge of performing all the required a priori controls regarding the procurement process to insure the consistency with the regulatory system. The Treasury Payer is part of the co-signature of all ADA's payments. This segregation of duties is also ensured at the DRA (between the Officer and the Treasury Payer).

90. An annual external audit will cover all aspects of the project and all uses of funds and all the committed expenditures of the PICCPMV. It will also cover the financial operations, internal control, and financial management systems and would also include a comprehensive review of SOEs. An external auditor will be appointed according to term of references acceptable to the Bank and should conduct the audit in accordance with international auditing standards. The auditor should produce: (i) an annual audit report including his opinion on the project's annual financial statements; and (ii) a management letter on the project internal controls. These reports should be submitted to the World Bank within six months from the closure of each fiscal year.

b. Disbursements

91. The proceeds of the grant would be disbursed in accordance with the traditional disbursement procedures of the Bank and will be used to finance project activities through the disbursement procedures currently used, that is Direct Payment and Reimbursement accompanied by appropriate supporting documentation (Summary Sheets with records and/or SOEs) in accordance with the procedures described in the Disbursement Letter and the Bank's "Disbursement Guidelines". The minimum application size for direct payment and reimbursement will be the equivalent of US\$ 50,000. No designated account will be opened.

92. In order to allow activities to start during the agricultural season 2011-2012, retroactive financing is allowed to finance eligible expenditures made prior to the Grant signing date but on or after April 15, 2011. The aggregated amount should not exceed 10 percent of the Grant amount.

93. The Bank will honor eligible expenditures for services rendered and goods delivered by the Project closing date. A four months' grace period will be granted to allow for the payment of any eligible expenditure incurred before the grant closing dates.

94. Necessary supporting documents will be sent to the Bank in connection with contract that are above the prior review threshold, except for expenditures under contracts with an estimated value of (i) US\$100,000 or less for consulting firms; (ii) US\$50,000 or less for individual consultants, as well as all operating costs, training, workshops and field visits, which will be claimed on the basis of SOEs. The documentation supporting expenditures will be retained at the ADA and will be readily accessible for review by the external auditors and periods Bank supervision missions. All disbursements will be subject to the conditions of the Grant Agreements and disbursement procedures as defined in the Disbursement Letter.

95. The frequency and scope of World Bank supervisory missions will be adapted to the needs of the PICCPMV and will be delivered both at central and regional levels. Supervisory frequency will be half-yearly, though this may be increased if needed.

c. Procurement

96. The procurement for the PICCPMV will be carried out in accordance with: (i) the World Bank's Guidelines On Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, known as the 'Anti-Corruption Guidelines' dated on October 15, 2006 and revised in January, 2011; (ii) the 'Guidelines: Procurement of Goods, Works, and non-consulting services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers' (known as Procurement Guidelines) published by the Bank in January 2011; (iii) the 'Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers,' (known as Consultant Guidelines) dated January 2011; and (iv) all the accompanying standard bidding documents for any new procurement and the provisions stipulated in the Grant Agreement. The various items under different expenditure categories are described below. For each contract to be financed by the grant, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Recipient and the World Bank in the Procurement Plan.

97. Procurement activities will be handled by the ADA for Component 1, and by the MAPM (through the DRAs of the five targeted regions) for Component 2. The capacity assessment for the ADA was conducted in December 2009 and January 2010 and updated recently in December 2010. At the same time, a capacity assessment was also conducted in two of the five DRAs involved in the PICCPMV. Those DRAs are located in Kenitra (Region of Gharb-Chrarda-Beni Hssen) and Settat (Region of Chaouia-Ouardigha). Overall, the result of the capacity assessment showed the following results: The ADA and the DRAs are newly created entities (2009) with no previous experience in World Bank financed projects. Their staffs are generally not familiar with World Bank procurement procedures, and there is a lack of training for those who are dedicated to procurement. Therefore, the level of risk in procurement is considered moderately high. However, given their previous experience in public administration or other state owned enterprises, staff dedicated to procurement at the level of the ADA and of the DRAs have a good

knowledge of Moroccan public procurement decree and therefore the basis to be able to assimilate and apply World Bank procedures.

98. The procurement plan for the first 18-month period has been prepared during Project preparation in a format acceptable to the World Bank. It will be updated at least once a year to reflect the latest circumstances. The procurement plan will set forth those contracts which will be subject to the World Bank's prior review. All other contracts will be subject to the World Bank's post review.

99. Goods, small-scale civil works, and services other than consultant (comprising purchase of equipments and office supplies; purchase of seeds, fertilizers, pesticides; agricultural services) will be procured using the following methods:

- (i) ICB: except as otherwise provided below, goods, small-scale civil works, and services other than consultants will be procured under contracts awarded on the basis of ICB;
- (ii) NCB: each package estimated to cost more than the equivalent of US\$50,000 may be procured on the basis of the NCB procedures as found acceptable by the Bank. Standard Bidding Document (SBD) prepared by the implementing entities and found acceptable by the Bank will be used;
- (iii) Shopping: contracts estimated to cost the equivalent of US\$50,000 or less may be procured using the Shopping procedures; and
- (iv) Direct Contracting: under circumstances which meet the requirements of paragraph 3.7 of the Procurement Guidelines, goods, small-scale civil works, and services other than consultant can be procured using the Direct Contracting procurement method.

100. Consultants' Services (comprising technical assistance, support to implementing entities, training, and studies) will be procured using the following Bank methods and corresponding standard documents:

- (i) Quality- and Cost-based Selection (QCBS);
- (ii) Consultants' Qualifications Selection (CQS): services estimated to cost less than the equivalent of US\$100,000 per contract may be procured in accordance to the provisions of paragraph 3.1 and 3.7 of the Consultant Guidelines;
- (iii) Single Source Selection: under circumstances which meet the requirements of paragraph 3.8 through 3.11 of the Consultant Guidelines for Single Source Selection, consultant services may be procured using Single Source Selection methods, with the Bank's prior agreement; and
- (iv) Selection of Individual Consultants (IC): Services for assignments that meet the requirements set forth in the paragraph 5.1 of the Consultant Guidelines may be procured under contracts awarded to individual consultants in accordance with the provision of paragraph 5.2 through 5.5 of the Consultant Guidelines. Under the circumstances described in paragraph 5.6 of the Consultant Guidelines, such contracts may be awarded to individual consultants on a sole-source basis.

Short list may be composed entirely of national consultants for contracts less than the equivalent of US\$200,000 per contract, complying with the remarks mentioned above.

101. Some activities of Component 1 (launch of awareness campaigns) and of Component 2 (implementation of climate change adaptations) could be implemented by entering into

agreements with entities having a unique role in the specific domain. Specifically, under Component 1, an agreement with television and radio channels will be necessary to disseminate of audio and video messages concerning climate change. With reference to Component 2, an agreement with the INRA will be necessary for the provision of services for: (i) silage of new fodder crops; (ii) direct seeding; and (iii) weeding required under good agricultural practices. The INRA is considered a unique operator at a national level, having the experience and the proficiency for the management of fodder crops, specifically for silage and direct seeding. In addition, in Morocco the machine for direct seeding is available at the INRA only. The INRA has the knowledge to provide technical assistance to farmers as well as of the capacity to work on large agricultural surfaces, as demonstrated by the fact that a surface of 2,000 ha of cereals is seeded each year by the INRA using the direct seeding in the Region of Chaouia-Ouardigha.

102. The main risks are the lack of knowledge of World Bank procurement procedures at the level of the ADA and of the DRAs. To help mitigate those risks, the PICCPMV will: (i) conduct trainings in procurement for all people involved in the project implementation, before the start of project activities and during the project implementation; and (ii) closely supervise procurement activities with prior review thresholds set accordingly.

103. Supervision of procurement by the World Bank is an integral part of project supervision and implementation monitoring. In addition to the prior review supervision to be carried out from World Bank offices, and based on the capacity assessment of the implementing entities, it is recommended that the World Bank conduct two supervision missions, including the post review of procurement actions. The ex-post review will concern about 10 to 15 percent of the contracts. This percentage will be adjusted during project implementation according to the performance of the implementing agencies and the results of reviews.

C. Environmental and Social (including safeguards)

104. The PICCPMV is expected to have significant positive environmental and social impacts. By focusing on Pillar II Projects in marginal areas of Morocco, the PICCPMV will address small farmers, traditionally characterized by high poverty rates, low level of education, and low productivity. The project will address the vulnerability of these smallholders to climate change, and it will contribute to overcome the dualistic nature typical of Moroccan agriculture. The project will raise awareness among small farmers about future risks, giving them more time and adequate instruments to face the new climate scenario. By helping to make agriculture more resilient to climate change, the project will help to make it more sustainable in the long term.

105. The above notwithstanding, due attention is paid to the possible environmental and social negative impacts of the PICCPMV. Considering the programmatic nature of the PICCPMV, and the fact that all PICCPMV Sub-projects have not yet been already identified, a framework study of the environmental and social impacts (ECIES) has been developed and disclosed on the website of the ADA on March 2, 2011. The objective of the ECIES is to: (i) describe the relevant legal and regulatory system for the preparation of the environmental and social impact assessment, in particular with reference to the PICCPMV Sub-projects, including the assessment of whether the PICCPMV and its Sub-projects will trigger World Bank safeguard policies; (ii) define the potential environmental and social, positive and negative impacts of the PICCPMV

Sub-projects that can be already defined at this level; and (iii) provide the procedures for the preparation of the individual environmental and social impacts assessment for each PICCPMV Sub-project (EIES). The ECIES provides indications on which data should be recorded, the consultation process to be carried out, and the definition of potential mitigation, monitoring, and institutional measures to be applied during the implementation of the PIICCPMV Sub-projects in order to offset or reduce adverse environmental and social impacts and increase their positive impacts. It details the institutional arrangements as well as the capacity- strengthening measures needed to ensure proper follow-up of the ECIES. If needed, the ECIES can be updated from time to time, in agreement with the World Bank.

106. The EIES for each Sub-project will need to evaluate the potential environmental and social impact in the context of the applicable safeguard policies. In accordance with the ECIES, the EIES describes: (i) the potential environmental and social impact of the PICCPMV Sub-project; (ii) the mitigation, monitoring, and institutional measures to be applied during the implementation of the PICCPMV Sub-project in order to offset or reduce adverse environmental and social impacts and increase the positive impacts; and (iii) the consultation of relevant stakeholders and disclosure. Each EIES will be carried out by ADA prior to the implementation of each PICCPMV Sub-project.

107. In order to facilitate and help to establish common norms between the EIES, the ECIES contains a menu of the climate change adaptations which can be financed under the PICCPMV.²² This menu outlines the expected environmental and social impacts of each climate change adaptation, and guidance on which safeguard policies apply. In this way, a PICCPMV Sub-project that employed given climate change adaptations could extract the relevant sections of the menu and use them as a starting point for assessing the PICCPMV Sub-project's impact and for prescribing mitigation measures.

108. Concerning environmental safeguard policies, the PICCPMV involves environmental interventions and therefore triggers the World Bank Environmental Assessment Operation Policy OP 4.01. Given the nature of the Sub-projects being considered under the PICCPMV, OP 4.09 on pest management is triggered. All other operation policies are not expected to be triggered by the PICCPMV, considering also that Morocco, particularly in the area of agriculture and climate change, has adequate environmental legislation, institutional capacity, and mechanisms to deal with environmental issues during project preparation or implementation.

109. Concerning social safeguard policies, the ECIES clarifies that no social safeguards (OP 4.12) are triggered by the PICCPMV and that no major risk is envisaged. The ECIES indicates that the only possible minor risk is related to the choice of the farmers benefitting from the PICCPMV Sub-projects compared to the larger pool of beneficiaries of the Pillar II Projects. Because of this, the ECIES indicates criteria for the clear and transparent selection of beneficiaries by each DRA.

²² See Table 2.

D. Monitoring & Evaluation

110. The objective of the M&E system is to regularly provide information on the PICCPMV's activities and on the results indicators. The M&E is to be considered an operational management instrument from which the implementing entities should benefit, evaluating and improving their performances throughout the project implementation, and helping to achieve the PDO. It will provide a basis for regular interaction with farmers, to get a good understanding of the pros and cons of the climate change adaptations, as well as of the possible constraints limiting their adoption.

111. The M&E system of the PICCPMV will be integrated into the overall M&E system of the Pillar II Projects. For this reason, the M&E system of the PICCPMV has been carefully designed not to add an additional administrative layer on top of the procedures of the PMV, but on the contrary to complete the existing M&E system. The M&E system has been designed according to the "Updated Results-based Management Framework for the Least Developed Countries Fund and the Special Climate Change Fund and Adaptation Monitoring and Assessment Tool", and the corresponding Tracking Tool for Adaptation.

112. The Results Framework and Monitoring is summarised in Annex 1. The choice of the indicators is discussed below for each of the two Components of the PICCPMV. The monitoring will be done distinguishing among climate change adaptations, whereas for evaluation purposes the climate change adaptations will be collapsed together.

113. With reference to Component 1 (Development of the capacities of public and private institutions for integrating climate change adaptations in projects directed to small farmers in five target regions), the PDO level results indicator is the percentage of Pillar II Projects in the five target regions integrating at least one climate change adaptation. The development of the capacity of the staff of public and private institutions involved in the planning and implementation of Pillar II Projects will influence the Pillar II screening mechanism by taking into consideration the criteria of climate change adaptation. It is thus expected that, out of the total number of Pillar II Projects implemented in the five target regions (a number augmenting throughout the implementation of the PICCPMV as new Pillar II Project ideas are financed), an increasing percentage will include climate change adaptations. In particular, it is expected that 5 out of 17 Pillar II Projects will include at least one climate change adaptation the first year (percent), 10 out of 30 the second year (percent), 14 out of 40 the third year (percent), and 18 out of 50 the fourth year (percent). It is thus expected that the PICCPMV will have a spillover effect in the selection of future Pillar II Projects already during the third and forth years, when more than 10 of the Pillar II Projects selected under the PICCPMV will include climate change adaptations.

114. The intermediate results indicators for Component 1 are the following:

- (i) Number of staff of the public institutions trained (final target: 120). Public institutions include: MAPM (including DRAs, DPAs, Directorate for the development of the agri-food chains), ADA, regional chambers of agriculture, and CRPII; and
- (ii) Number of staff of private institutions trained (final target: 100). Private institutions include: OPAs, private investors, traders, entrepreneurs, and service providers.

115. With reference to Component 2 (Dissemination of climate change adaptations among small farmers in five target regions), the PDO level results indicator is the percentage of small farmers in the selected Pillar II Projects integrating at least one climate change adaptation. The development of the capacity of selected small farmers will offer an alternative to the business-as-usual of the PMV, with a potential catalytic effect towards other farmers. It is thus expected that, out of the total number small farmers of the selected Pillar II Projects implemented in the five target regions, an increasing percentage will include climate change adaptations. In particular, it is expected that more than the about 25 percent of small farmers who will be targeted by the Component 2 of the PICCPMV will implement the climate change adaptation, with a spillover effect particularly visible over the third and fourth year of the PICCPMV.

116. Intermediate results indicators are:

- (i) Number of farmers' primary beneficiaries integrating at least one climate change adaptation (final target: 2,500); and
- (ii) Number of farmers' beneficiaries benefitting from training / awareness activities (final target: 3,200).

117. Reporting on the physical implementation and on the result indicators of the PICCPMV will be done through Project Reports. The Recipient will have the overall responsibility for the preparation of the Project Reports and their transmission to the World Bank each semester. The ADA will collect and organize the necessary information for Component 1. Each DRA will collect and organize the necessary information for the respective PICCPMV Sub-projects, and will transmit it to ADA in agreed format as described in the Project Implementation Manual. The ADA will have the responsibility to consolidate the information for the two components into one Project Report, which will be transmitted to the Recipient for review. Necessary capacity building activities for the staff of the implementing entities with reference to the M&E will be financed under Component 1. Table 4 presents the reports, the involved entities, and the related calendar.

Table 4 – M&E: Reports.

Report	Prepared by:	Transmit ted to:	Date	Consolid ated by:	Transmit ted to	Date	Reviewe d by	Transmit ted to	Date
Project Report	ADA		Each semester, within 15 days after the end of the semester	ADA	Recipient Technical Committee Investment Committee	Each semester, within 30 days after the end of the semester	Recipient	WB	Each semester, within 45 days after the end of the semester
	DRAs	ADA	Each semester, within 15 days after the end of the semester						
IUFР	ADA		Each semester, within 15 days after the end of the semester	ADA	Recipient Technical Committee Investment Committee	Each semester, within 30 days after the end of the semester	Recipient	WB	Each semester, within 45 days after the end of the semester
	DRAs	ADA	Each semester, within 15 days after the end of the semester						
Financial Statement (FS)	ADA		Each year, by May 1 st	ADA	Recipient Technical Committee Investment Committee	Each year, by June 1 st	Recipient	WB	Each year, by July 1 st
	DRAs	ADA	Each year, by May 1 st						

Annex 4: Operational Risk Assessment Framework (ORAF)

Project Development Objective	
PDO: Strengthen the capacity of public and private institutions and of farmers to integrate climate change adaptations in projects directed to small farmers in five target regions	
PDO Level Results Indicators:	1. Percentage of Pillar II Projects in the five target regions integrating at least one climate change adaptation 2. Percentage of farmers' beneficiaries adopting at least one climate change adaptation

Risk Category	Risk Rating ²³	Risk Description	Proposed Mitigation Measure
Project Stakeholder Risks			
Stakeholder	ML	<p>There are several international donors currently active in Morocco in relation to climate change adaptation in agriculture. Their activities are often characterized by limited coordination.</p> <p>There is traditional skepticism among farmers for the introduction of new techniques and practices.</p>	An annual coordination meeting between donors is organized annually by the DSS/MAPM.
Implementing Agency Risks			
Implementing Agency Risks (including FM & PR Risks)	MH	<p>The ADA and the DRAs are newly created entities (2009) with no experience in World Bank financed projects and SCCF/GEF procedures, policies, and standards.</p> <p>ADA administrative procedures for presentation and selection of Pillar II Projects were unclear in the beginning of the preparation of the PICCPMV. In November 2010, a prioritization manual was implemented by the ADA and published on its web-site. The Project Implementation Manual is inspired by this procedure in choosing Pillar II</p>	<p>A decentralized team in the Rabat office will collaborate closely with ADA, providing adequate support when necessary. World Bank staff in Washington, DC will offer remote support, besides planning a suitable number of missions adequately spread over the project lifetime.</p> <p>During the project's implementation, a training plan will be put together for the design of appropriate fiduciary support systems, e.g., developing capacity on procurement, M&E, and environmental and social safeguards among relevant staff of ADA and involved DRAs (Component 1).</p>

²³ L: Low; ML: Medium Low; MH: Medium High; H: High.

		Projects in which to implement climate change adaptations.	The Team will keep supporting the ADA in the development of suitable administrative procedures by using in-house know-how developed in different countries.
Project Risks			
Design	MH	The PICCPMV has intrinsic technical complexity due to the implementation of climate change adaptations.	<p>During project preparation, the selection of climate change adaptations has been based on background knowledge and local expertise in order to reduce the risk of failure. The collaboration with INRA has been particularly effective in this regard.</p> <p>A strong M&E system is under development at the level of ADA and with the support of the World Bank, to provide just-in-time information to introduce corrections as needed.</p>
Social & Environmental	ML	PICCPMV Sub-projects could in principle generate adverse environmental impacts on human populations or environmentally important areas.	An environmental and social management framework is under development by the ADA. This document will include a screening mechanism and standards mitigation measures (Environmental Management Plan) for the different types of PICCPMV Sub-projects. ADA will be responsible for the overall implementation of the environmental and social mitigation measures and of monitoring the impacts of the project.
Program & Donor	L	The achievement of the PDO is partially linked to the success of the PMV.	
Delivery Quality	ML	The overlap with the PMV makes the impacts of the PICCPMV Sub-projects difficult to assess.	During project preparation and implementation, the World Bank team will seek guidance in the development of the M&E system, enabling them to quantify the additional benefits obtained through the additional costs supported by the PICCPMV.

Risk Rating: Preparation	Risk Rating: Implementation	Comments
ML	ML	The Task Team confirms the overall risk rating, considering the simplification of the institutional arrangements carried out during project preparation, and the good performance of the ADA during project preparation.

Annex 5: Implementation Support Plan

Strategy for the implementation support plan

118. The strategy for implementation support has been developed based on the nature of the project and its risk profile. It will aim at making implementation support to the implementing entities more flexible and efficient, and will focus on implementation of the risk mitigation measures defined in the ORAF.

119. **Procurement.** The World Bank's procurement specialists will supervise closely procurement activities and the contract implementation through supervision missions.

120. **Financial management.** Supervision will review the project's financial management system, including but not limited to, accounting, reporting and internal controls. Supervision will cover also PICCPMV Sub-projects on a random sample basis. The World Bank team will also work with the project coordination and management unit to assist in improving coordination among different directions and units for financial management and reporting.

121. **Environmental and Social Safeguards.** The World Bank team will supervise the implementation of the agreed Environmental Management Plan and provide guidance to the project coordination and management unit to address any issues.

Implementation Support Plan

122. Most of the Bank team members will be based in the headquarters office and in the country office in Morocco (Rabat) to ensure timely, efficient and effective implementation support to the client. Formal supervision and field visits will be carried out semi-annually. Detailed inputs from the World Bank team are outlined below.

123. **Technical inputs.** Inputs are required to review the selection of the Sub-project and the related activities to be financed. Technical supervision is required to ensure technical contractual obligations are met. The team members will provide support on agriculture, climate change, irrigation and water management aspects by conducting site visits on a semi-annual basis throughout project implementation.

124. **Fiduciary requirements and inputs.** Training will be provided by the Bank's financial management specialist and procurement specialist during project implementation, as the need arises. Both the financial management and the procurement specialist are based in country office in Rabat. Formal supervision of financial management and procurement will be carried out semi-annually.

125. **Safeguards.** Inputs from an environment specialist and a social specialist are required, though the project's social and environmental impacts are limited and client capacity is generally adequate. Training is required on environment and social monitoring and reporting. The

environmental specialist is based at headquarters, while the social specialist at the country office in Rabat.

126. **Operation.** An operations officer will provide day-to-day supervision of all operational aspects, as well as coordination with the client and among World Bank team members. The operations officer is based at headquarters.

Annex 6: Team Composition

World Bank staff and consultants who worked on the project:

Name	Title	Unit
Gabriella Izzi	Task Team Leader	MNSAR
Julian Lampietti	Lead Economist	MNSAR
Hassan Lamrani	Senior Irrigation Specialist	MNSWA
Andrea Liverani	Social Development Specialist	MNSSO
Andrew Losos	Climate Change Specialist	MNSEN
Anas Abou El Mikias	Senior Financial Management Specialist	MNAFM
Abdoulaye Keita	Senior Procurement Specialist	MNAPR
Jean-Charles de Daruvar	Senior Counsel	LEGEM
Hassine Hedda	Finance Officer	CTRFC
Mohamed Khatouri	Monitoring and Evaluation Specialist	AFR
Michelle Battat	Consultant (FAO)	
Abdellah El Bitar	Consultant	
Marie A. F. How Yew Kin	Program Assistant	MNSSD

Annex 7: Additional Cost Analysis

127. The PICCPMV addresses the extremely relevant and challenging topic for Morocco of the impact of climate change on agriculture. The large reliance on rainfed agriculture (representing 87 percent of the agricultural surface), low agricultural inputs, and presence of vast marginal areas, make the agricultural sector vulnerable to climate change. Considering the observed and predicted changes in climate, repercussions on the performances of the agriculture sector can be critical if climate change is not timely and appropriately addressed. Unless climate change adaptations are integrated in the national agriculture strategy, these changes risk limiting the expected benefits of the PMV. This will be particularly true for smallholders who depend on low-input, rainfed agriculture as their primary source of income and employment.

128. Climate change is expected to induce relevant modifications to the traditional climate pattern of Morocco. Since the 1960s, temperatures in Morocco have increased by 0.16°C each decade, and future increases in Morocco are expected to be even higher than increases to the average global temperature. Notwithstanding a certain degree of incertitude in climate change scenarios, studies project that relative to the current situation, temperatures might increase between 1.1 and 1.6°C by 2030, between 2.3 and 2.9°C by 2050, and between 3.2 and 4.1°C by 2080. Precipitation levels are already decreasing, with a 30 percent drop since 1970. Projections estimate further declines by another 14 percent by 2030, between 13 and 30 percent by 2050, and between 21 and 36 percent by 2080. Not only will the annual average precipitation level decrease, but the variability from one year to the other will increase. The frequency of dry years (less than 400 mm/year of precipitation) has progressively increased from five years out of 40 (12 percent) over the period 1940-1979, to six years out of 16 (37 percent) over the period 1980-1995, and reaching four years out of seven (57 percent) over the period 1996-2002.

129. These changes to Morocco's climate will impose additional challenges compared to the current situation that the country must urgently address. Increases in temperature coupled with decreases in precipitation levels (and increased variability) will result in runoff reduction and decline in the water stored in reservoirs. Large spatial variability is expected throughout Morocco. The Oum-Er-Rbia, the Moulouya, and the Bouregreg will be among the most impacted basins. In particular, the Oum-Er-Rbia basin is critical, because water in the dams there accounts for 35 percent of the national surface water storage and supplies half of Morocco's large scale irrigated areas through transfers to other basins. Water needs could not be met through additional groundwater extraction, considering that the exploitation of phreatic ground water bodies in Morocco is already exceeding the recharge capacity. The rate of exploitation is 114 percent on average, ranging between 75 percent in the Bouregreg basin to 180 percent in the Souss basin.

130. While the PMV acknowledges the risks that Morocco will face in the coming decades due to climate change, the adaptation actions need to be strengthened. Around 550 Pillar II Projects are expected to be implemented throughout Morocco by 2020, reaching a total number of 855,000 farmers. This corresponds to a total investment of about US\$2.37 billion, 70–75 percent of which will be funded by public investments, and the remaining by beneficiaries' contribution (mainly in-kind). Notwithstanding this remarkable effort by the GoM to improve the situation of smallholders in marginal areas of the country, climate change risks jeopardizing the gains of the PMV by increasing the probability of low harvests or crop failure in marginal areas.

To the extent that climate shocks will become more intense and/or more frequent, climate change risks limiting the positive social impacts of Pillar II Projects. Smallholders are particularly vulnerable. Contrary to commercial farmers that have technical know-how and financial resources to cope with the new adverse climate conditions, subsistence farmers have no means to buffer against the changes in climate they face. Technical solutions are available, but have not yet been implemented. Slow transfer of knowledge from research to farmers, low education levels, and small farmers' limited financial resources prevent the wide spread adoption of climate change adaptations that could help buffer against the effects of increased climate variability.

131. The US\$4.35 million grant under the PICCPMV will strengthen the capacity of relevant stakeholders to integrate climate change adaptations in projects directed to small farmers in five target regions of Morocco. It will develop the capacities of staff of public and private institutions involved in the planning and implementation of Pillar II Projects on climate change adaptations (Component 1). The objective is to mainstream climate change adaptation in the screening process of future Pillar II Projects. At the same time, the PICCPMV will support the dissemination of climate change adaptations among farmers (Component 2). While 88 percent of the grant will be used to pilot climate change adaptations among farmers to demonstrate their additional advantage compared to the business as usual, the remaining financing will be used to influence the institutional process of selection and implementation of future Pillar II Projects (Table 5).

Table 5: Estimated disbursements for the PICCPMV (in US\$ million)

	Year 1	Year 2	Year 3	Year 4	Sub-total
Component 1	0.24	0.10	0.08	0.08	0.50
Component 2	0.40	0.77	1.34	1.33	3.85
Sub-total	0.64	0.87	1.42	1.41	4.35

Note: Numbers may not add up due to rounding.

132. In total, there will be about ten PICCPMV Sub-projects selected to be included in a Pillar II Project. Five PICCPMV Sub-projects (and the corresponding Pillar II Projects) have been already identified. They sum up to a total allocation by the MAPM of US\$13.48 million. Assuming that MAPM will allocate a similar investment for the remaining five Pillar II Projects, it can be estimated that the total co-financing by the MAPM will be approximately US\$26.96 million. Meanwhile, US\$2.45 million of the grant has been invested in the first five PICCPMV Sub-projects, which will be spread over four years (Table 6). Approximately US\$1.39 million of the grant will be spent on the remaining five Sub-projects, which will be selected in the following year. Thus, for every dollar invested by the grant in Component 2, the MAPM investments are leveraged at a ratio of 1:7, resulting in the PICCPMV having strong catalytic effects.

Table 6: Breakdown of financing for the five PICCPMV Sub-projects selected (in US\$ million)

	Year 1	Year 2	Year 3	Year 4	Sub-total
PICCPMV Sub-project #1	--	--	0.17	0.17	0.34
PICCPMV Sub-project #2	0.12	0.12	0.12	0.12	0.49
PICCPMV Sub-project #3	0.13	0.13	0.13	0.13	0.50
PICCPMV Sub-project #4	0.14	0.05	0.21	0.21	0.61
PICCPMV Sub-project #5	--	--	0.23	0.23	0.47
Sub-total	0.40	0.31	0.87	0.87	2.45

Note: Numbers may not add up due to rounding.

133. Table 7 displays the number of farmers for whom climate change adaptations are financed under the PICCPMV and the correspondent hectares with reference to each of the first five PICCPMV Sub-projects, as well as the number of farmers and the correspondent hectares for the respective Pillar II Project. Indicatively, more than 25 percent of the small farmers targeted in each Pillar II Project will be targeted in the PICCPMV Sub-project through the financing of goods, small-scale civil works, and services for the implementation of climate change adaptations, summing up to a total of 1,780 (for the first five PICCPMV Sub-projects), or an estimated 3,560 (for all ten PICCPMV Sub-projects). Considering the Component 2 investments, the grant will finance goods, small-scale civil works, and services for the implementation of climate change adaptations for approximately US\$270 per farmer per year.

Table 7: Area and primary beneficiaries targeted by the selected Pillar II Projects, and the estimated figures for the PICCPMV Sub-projects

	PICCPMV Sub-project		Pillar II Project	
	Farmers for whom climate change adaptations are financed under the PICCPMV (no.)	Area of implementation of climate change adaptations financed under the PICCPMV (ha.)	Farmers (no.)	Area (ha.)
PICCPMV Sub-project #1	300	500	940	1,600
PICCPMV Sub-project #2	1,075	100	4,300	400
PICCPMV Sub-project #3	90	250	350	1,000
PICCPMV Sub-project #4	100	500	400	2,000
PICCPMV Sub-project #5	215	125	865	500
Sub-total	1,780	1,975	6,855	5,500

134. Farmers receiving goods, small-scale civil works, and services for the implementation of the climate change adaptations should record benefits over time. They might see an increase in yields and reduced volatility, thus increasing their incomes. As farmers' incomes rise, they will be increasingly able to face the costs of agricultural inputs. Target farmers will become more open to experimenting with new agricultural practices and technologies, further augmenting their ability to adapt to new conditions under climate change. Thus, the PICCPMV will show the farmers that there are alternative techniques they can use to adapt to climate change, rather than continuing with business as usual.

135. Teaching the farmers how to adapt to climate change will provide long lasting economic benefits. There will be positive externalities in that other farmers and other agri-food chains will indirectly benefit from the additional capacity. The grant will increase the knowledge base of climate change adaptations for farmers who are recipients of the grant, and for those who learn through the spillover effects. Since a significant effect of climate change is increased uncertainty and volatility, developing this increased willingness and flexibility to try new agricultural practices is added value.

136. Besides promoting the dissemination of climate change adaptations among farmers, Component 2 will represent a living example of the advantages of implementing climate change adaptations. These examples will provide supporting evidence used to convince relevant stakeholders at the institutional level of the need to mainstream climate change adaptations within the whole PMV. For this reason, Component 1 will target capacity building for public and private institutions. In this sense, the leverage of the SCCF grant has with reference to Component 1 is even more impressive, considering that the US\$0.50 million of allocated budget can influence the overall selection process of Pillar II Projects.

Annex 8: Pillar II Projects

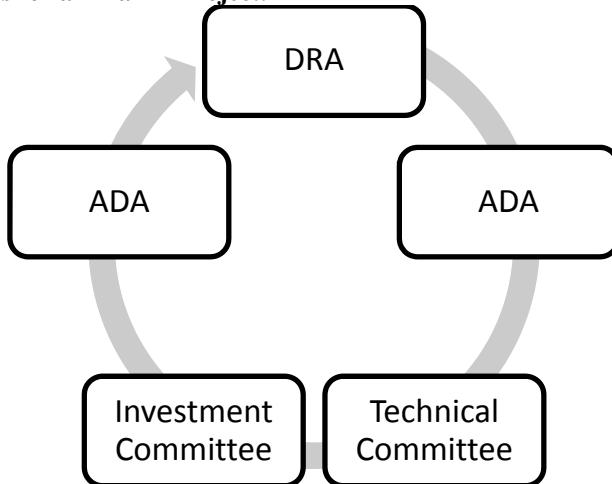
137. A Pillar II Project is an agricultural project directed to small farmers located in marginal areas of Morocco, partially financed by the Government as part of the PMV. Around 550 Pillar II Projects are expected throughout Morocco by 2020. To support the implementation of Pillar II Projects, the GoM has undertaken important institutional reforms. Specialized agencies such as ADA have been created and tasked with implementing the PMV's investment program. Sixteen DRAs have been established to provide more de-concentrated service delivery of the MAPM in each region. In another nod to de-concentration, the DRAs and DPAs have prepared, in consultation with sector stakeholders, 16 PARs including territorial-based agricultural investment proposals, which were adopted in April 2009.

138. Three types of Pillar II Projects are possible: (i) reconversion from existing crops to other crops characterised by a higher value added (typically from cereal to olive trees); (ii) intensification, aiming to increase the productivity of existing crops; and (iii) diversification, including investments in emerging agri-food chains.

139. The participation of farmers and their organization in cooperatives and/or associations are a necessary condition for the design and implementation of a Pillar II Project. Each Pillar II Project corresponds to an OPA, which groups one or more cooperatives and/or associations in which the farmers in the area of implementation of the Pillar II Project have organized themselves in. This farmers' aggregation model around an OPA, as well as around private investors, traders, and/or entrepreneurs is designed to: promote organization; overcome land constraints; enable access to finance, knowledge, technologies, and agricultural inputs; support risk-sharing; and optimize production and marketing links.

140. The design of a Pillar II Project starts at the level of the DRA with the formulation of a Pillar II Project idea, in line with the objectives defined in the regional PAR, and its transmission to the ADA. The Technical Committee, chaired by the ADA and including representatives of the Directorate for the development of the agri-food chains, the Department of Irrigation and Agricultural Space Development (DIAEA) of the MAPM, and the relevant DRA, assesses the technical feasibility of the project idea. If the project idea is positively evaluated, the Investment Committee, chaired by the Minister of the MAPM and including the Directorate for the development of the agri-food chains, the DIAEA, the Financial Directorate of the MAPM, and the Strategy and Statistics Directorate (DSS) of the MAPM, approves the Pillar II Project idea. ADA communicates the decision of the Investment Committee to the relevant DRA. Each year, the Pillar II Project ideas are selected in March, their financing is listed in the budget law in October, and implementation begins in January of the following year.

Figure 5: Validation process for a Pillar II Project.



141. A Pillar II Project is typically financed by the government for about 70 percent of the cost (e.g., fruit tree planting, intensification and diversification, construction works, technical assistance), while the beneficiaries cover the remaining part through maintenance works over time. The government's share of the financing is done through the DRAs (if the area of intervention of the Pillar II Project covers more than one province), the DPAs (if the area of intervention of the Pillar II Project covers one province only), or the ORMVAs (if the area of intervention is within the area of intervention of the office). They are responsible for both the project implementation and for the M&E, besides being responsible for involving the farmers in each phase of the project preparation and implementation. Periodical reporting is transmitted from the DRAs to the ADA, which has to present periodical reporting to the Minister of MAPM.

142. For the share financed by the Government, les prestations agricoles are assured by private companies who take part in a competitive process. The delegation of the credits required each year for the implementation of the Pillar II Projects is guaranteed by the Financial Directorate of the MAPM through the budget law. These credits are validated by the ADA prior to delegation to the implementing entities.²⁴

143. In order to improve the transparency of ADA's governance and public financial management systems for the Pillar II investment program, a manual describing procedures for prioritizing the budget allocation for Pillar II Projects, along with a manual describing procedures for preparing, submitting, and implementing Pillar II Projects, were developed by ADA and adopted in November 2010. The manuals are currently available to the public on the ADA website (<http://www.ada.gov.ma/>). A communication strategy and an information campaign are under development to raise awareness about the investment support program and to provide information about the procedures for accessing Pillar II Projects financing. Indeed,

²⁴ Comme spécifié dans la Circulaire N° 735 du 23 décembre 2009 du Secrétaire Général du MAPM, « en compte tenu des attributions de l'Agence pour le Développement Agricole en matière de suivi de la réalisation des projets, les demandes de délégation de crédits afférents aux projets Pilier II inscrits dans le budget général devront obligatoirement être validées par l'Agence pour le Développement Agricole, préalablement à la délégation desdits crédits aux services déconcentrés. Il en est de même pour les demandes de redéploiement de crédits en cours d'exercice budgétaire ».

international experience shows that transparency and stakeholder participation are critical to the effectiveness of publicly financed projects. The preparation of the manuals constituted one of the prior actions of the first of the programmatic series of two single-tranche Development Policy Loans in agriculture under preparation by the World Bank in Morocco.