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Document of
The World Bank

Report No: ICR2760

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IBRD-48610)

ON A

LOAN

IN THE AMOUNT OF EURO 15.0 MILLION
(US$ 20.0 MILLION EQUIVALENT)

TO THE

FORMER YUGOSLAV REPUBLIC OF MACEDONIA

FOR A

AGRICULTURAL STRENGTHENING AND ACCESSION PROJECT

June 28, 2013

SUSTAINABLE DEVELOMENT DEPARTMENT
SOUTHEAST EUROPE COUNTRY UNIT
EUROPE AND CENTRAL ASIA REGION

CURRENCY EQUIVALENTS
(Exchange Rate Effective 6 June 2013)

Currency Unit = Macedonian Denars
1.00 Macedonian Denars = US$0.02
US$ 1.00 = 48 Macedonian Denars

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AIS	Agriculture Information System
AMIS	Agricultural Market Information System
AS	Agricultural Statistics
BSE	Bovine Spongiform Encephalitis
CAP	Common Agriculture Policy
CFT	Complement fixation test
DA	Designated Account
EAA	Economic Accounts for Agriculture
E-IRR	Economic Internal Rate of Return
ELISA	Enzyme-Linked Immunosorbent Assay
EU	European Union
EUR	Euro
FADN	Farm Accountancy Data Network
FIL	Food Institute Laboratory
FMS	Farm Monitoring System
FYR Macedonia	Former Yugoslav Republic of Macedonia
GIS	Geographic Information System
GMP	Good Manufacturing Practices
HACCP	Hazard Analysis and Critical Control Points
IACS	Integrated Administration and Control System
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion and Results Report
IFR	Interim Financial Reports
IPARD	Instrument for Pre-Accession on Rural Development
IWC	Irrigation Water Community
LPIS	Land Parcel Identification System
MAFWE	Ministry of Agriculture, Forestry, and Water Economy
MIS	Market Information System
NEA	National Extension Agency
NPV	Net Present value
PA	Paying Agency
PAAISD	Policy Analysis and Agriculture Information System Department
PAD	Project Appraisal Document
PDO	Project Development Objectives
SAI	State Agricultural Inspectorate
SAPARD	Special Accession Programme for Agriculture and Rural Development
SCF	Standard Conversion Factor

SSO	State Statistical Office
TA	Technical Assistance
VD	Veterinary Directorate
VL	Veterinary Laboratory
WE	Water Economy
WED	Water Economy Directorate
WMO	Water Management Organization
WOP	Without Project
WP	With Project

Vice President:	**Philippe H. Le Houerou**
Country Director:	**Ellen A. Goldstein**
Sector Manager:	**Dina Umali-Deininger**
Project Team Leader:	**Malathi S. Jayawickrama**
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FORMER YUGOSLAV REPUBLIC OF MACEDONIA
AGRICULTURAL STRENGTHENING AND ACCESSION PROJECT

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A. Basic Information

Country:	Macedonia, former Yugoslav Republic of	Project Name:	Agriculture Strengthening and Accession Project
Project ID:	P101216	L/C/TF Number(s):	IBRD-48610
ICR Date:	06/28/2013	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	
Original Total Commitment:	USD 20.00M	Disbursed Amount:	USD 20.94M
Revised Amount:	USD 19.84M		
Environmental Category: B			
Implementing Agencies: Ministry of Agriculture, Forestry & Water Economy			
Cofinanciers and Other External Partners:			

B. Key Dates

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	11/28/2006	Effectiveness:	10/02/2007	10/02/2007
Appraisal:	04/06/2007	Restructuring(s):		03/08/2010 01/10/2011
Approval:	06/12/2007	Mid-term Review:	12/07/2009	12/07/2009
		Closing:	09/30/2011	12/31/2012

C. Ratings Summary

C.1 Performance Rating by ICR

Outcomes:	Moderately Satisfactory
Risk to Development Outcome:	Moderate
Bank Performance:	Moderately Satisfactory
Borrower Performance:	Moderately Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)

Bank	Ratings	Borrower	Ratings
Quality at Entry:	Moderately Satisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Satisfactory
Overall Bank Performance:	Moderately Satisfactory	**Overall Borrower Performance:**	Moderately Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	**Indicators**	**QAG Assessments (if any)**	**Rating**
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Moderately Satisfactory		

D. Sector and Theme Codes

	Original	Actual
Sector Code (as % of total Bank financing)		
Central government administration	76	76
General agriculture, fishing and forestry sector	2	2
Irrigation and drainage	15	15
Sub-national government administration	7	7
Theme Code (as % of total Bank financing)		
Administrative and civil service reform	17	17
Regional integration	17	17
Rural policies and institutions	33	33
Rural services and infrastructure	33	33

E. Bank Staff

Positions	At ICR	At Approval
Vice President:	Philippe H. Le Houerou	Shigeo Katsu
Country Director:	Ellen A. Goldstein	Orsalia Kalantzopoulos
Sector Manager:	Dina Umali-Deininger	Marjory-Anne Bromhead
Project Team Leader:	Malathi S. Jayawickrama	Julian A. Lampietti
ICR Team Leader:	Malathi S. Jayawickrama	
ICR Primary Author:	Maurizio Guadagni	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)
The Project Development Objective is to improve the delivery of government assistance to the agriculture sector in a manner consistent with the European Union's pre-accession requirements.

Revised Project Development Objectives (as approved by original approving authority)

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1:	Improved MAFWE ability to disburse and track the use of subsidies and rural development funds and to evaluate their impact on the agri-food sector			
Value quantitative or Qualitative)	Information lacking to forecast uptake, report and analyze subsidies; poor targeting, monitoring, and verification. No or inadequate: (a) PAAISD, (b) Farm Registry, (c) LPIS, (d) MIS, and (e) FADN	PAAISD established and operational. FADN, Farm Registry in place.		PAAISD, MIS, FADN, Farm registry and LPIS are in place.
Date achieved	06/20/2007	06/15/2011		06/15/2012
Comments (incl. % achievement)	Achieved			
Indicator 2:	EU IPARD funds are paid to farmers in an EU compliant manner			
Value quantitative or Qualitative)	No IPARD funds paid	Payments are being made	No Revisions	IPARD payments are being made
Date achieved	06/20/2007	06/15/2010	06/15/2009	06/15/2009
Comments (incl. % achievement)	Achieved			
Indicator 3:	Timely delivery of EU compliant food safety certification to producers and agro-processors			
Value quantitative or Qualitative)	No baseline in PAD or negotiated document. Baseline was added later: No EU compliant official control procedures established; No food establishment approved as EU compliant; Brucellosis/tuberculosis control and eradication programs ineffective	No target in PAD.	75% of food establishments inspected and approved; 75% of sheep/goat flocks and bovine herds tested and declared free from BRU/TBC; National legislation compliant with EU	75% of food establishments inspected and approved; 75% of sheep/goat flocks and bovine herds tested and declared free from BRU/TBC
Date achieved	06/20/2007	06/20/2007	01/03/2011	06/15/2012

Comments (incl. % achievement)	Achieved. According to EU: "Good progress was made as regards general food safety, veterinary policy, measures to control animal diseases"			
Indicator 4:	Reduced financial burden to government from irrigation management			
Value quantitative or Qualitative)	Water Economies (WEs) supported by the state	6 WEs established with elected board Operating costs recovery at 90%	WEs effectively representing users' interests, collecting invoiced irrigation user fees at 60%	Share of invoiced fees collected: 54% in the 2011 water season, and 70% in 2010.
Date achieved	06/20/2007	06/20/2007	01/03/2011	12/31/2011
Comments (incl. % achievement)	82% achieved (weighted average of 69% of original target and 100% of revised target)			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1:	MAFWE systematically conducts agricultural policy analysis in accordance with set criteria aligned with EU requirements, and systems for budget planning, project management, monitoring and reporting are established and functional.			
Value (quantitative or Qualitative)	PAAISD not yet formally established (repetition of PDO indicator 1 above). State Agricultural Inspectorate (SAI) operational but not able to carry out EU-required functions	PAAIS Department established and able to carry out policy analysis and monitor IACS and AIS functions. SAI operational and performing to required standards		PAAISD established and carrying policy analyses. SAI operational and performing properly
Date achieved	06/20/2007	06/20/2007		12/31/2012
Comments (incl. % achievement)	Achieved			
Indicator 2:	Integrated Administrative and Control System (IACS) is established and functional, including operational Integrated Farm Register and Land Parcel Identification System (LPIS).			
Value (quantitative or Qualitative)	No LIPS, no Farm Registry in place [no baseline on IACS, but since it is an integration of other systems, it could	Farm registry operational		All IACS components are functional (LPIS is functional even if is still verifying land

	not be in place before the project]			parcels).
Date achieved	06/20/2007	06/20/2007		12/31/2012
Comments (incl. % achievement)	Achieved			
Indicator 3:	Market Information System (MIS) and Farm Accountancy Data Network (FADN) established, fully operational and appropriately linked to IACS.			
Value (quantitative or Qualitative)	No MIS, no FADN in place	Structures for establishing full MIS database in place. Full-sized FADN in place		MIS and FADN in place and operational
Date achieved	06/20/2007	06/20/2007		06/15/2012
Comments (incl. % achievement)	Achieved			
Indicator 4:	Paying Agency obtains necessary accreditation for managing IPARD funds on behalf of the European Commission			
Value (quantitative or Qualitative)	PA being established	National accreditation completed		National accreditation completed
Date achieved	06/20/2007	06/15/2008		06/15/2009
Comments (incl. % achievement)	Achieved			
Indicator 5:	Potential IPARD beneficiaries apply using correct procedures			
Value (quantitative or Qualitative)	Procedures being developed	95% of the planned IPARD funds for the calendar year committed, 80% of previous year commitments disbursed		In total, 25% of applications were contracted and 19% of commitments were disbursed
Date achieved	06/20/2007	06/20/2007		12/31/2012
Comments (incl. % achievement)	23% achieved (27% of commitments and 20% of disbursements)			
Indicator 6:	Paying Agency is delegated administration responsibility for the direct national payments			
Value (quantitative or Qualitative)	National direct payments managed by MAFWE	100% of the payments managed by the PA		100% of the payments managed by the PA
Date achieved	06/20/2007	06/20/2007		06/15/2009
Comments (incl. % achievement)	Achieved			

Indicator 7:	Farmer application and claims procedures digitalized			
Value (quantitative or Qualitative)	IPARD measures developed for manual accreditation	100% IPARD and National Payments administration digitalized		100% IPARD and National Payments administration digitalized
Date achieved	06/20/2007	06/20/2007		06/15/2011
Comments (incl. % achievement)	Achieved			
Indicator 8:	IPARD application and claim processes accelerated			
Value (quantitative or Qualitative)	Test manual processing procedures	70% reduction of processing time for the initial measures		Not available
Date achieved	06/20/2007	06/15/2009		12/31/2012
Comments (incl. % achievement)	Not Available, but indicator not relevant since before PA accreditation, which was achieved thanks to the project, IPARD funds were not available			
Indicator 9:	Reduction of prevalence of bovine TB / BRU – No. officially free herds			
Value (quantitative or Qualitative)	No baseline in PAD or Supplemental Letter. From economic analysis: prevalence of bovine TB / BRU = 0.5%	From economic analysis: prevalence of bovine TB / BRU = 0.1%		TBC/bovines: individual animal prevalence: 0,05%, herd prevalence: 0,13%. BRU bovines: 0,015%
Date achieved	06/20/2007	06/20/2007		12/31/2012
Comments (incl. % achievement)	Achieved			
Indicator 10:	Increased investigation of BSE in fallen stock (bovines)			
Value (quantitative or Qualitative)	0 cases (investigations)	2,000 cases	No investigations due to lack of a system for the collection of dead animals	
Date achieved	06/20/2007	06/20/2007	01/03/2011	
Comments (incl. % achievement)	Activity dropped at restructuring. With no or limited beef exports, BSE is not considered a major issue in FYR Macedonia. While the collection of samples from dead animals and treatment of by-products is challenging.			
Indicator 11:	Preliminary screening of food establishments for granting provisional approval – IPARD. Monitoring of food establishments for granting permanent EU-compliant approval			
Value (quantitative or Qualitative)	Design VIS workflow and audit scheme [unclear, but Similar to PDO Indicator 3.]	Deploy VIS workflow on 75% of establishments		Number of food establishments screened in 2009: 250, in in 2010: 91

Date achieved	06/20/2007	06/20/2007		12/31/2012
Comments (incl. % achievement)	Achieved			
Indicator 12:	Reduction in response time for highly infectious outbreak			
Value (quantitative or Qualitative)	Contingency plan developed	Field simulation completed	Removed from list after restructuring	By providing vehicles and other equipment and training the project contributed to reduce response time.
Date achieved	06/20/2007	06/20/2007	01/03/2011	12/31/2012
Comments (incl. % achievement)	Activity dropped at restructuring			
Indicator 13:	Animal Health lab achieves method/test workplan agreed in OM			
Value (quantitative or Qualitative)	40-50 percent	100 percent		7 health and 68 food hygiene tests were accredited
Date achieved	06/20/2007	06/20/2007		12/31/2012
Comments (incl. % achievement)	Achieved. Though the percentage target is unclear, a total of 75 tests accredited is assessed as a good result			
Indicator 14:	Food Hygiene lab ISO 17025 accredited			
Value (quantitative or Qualitative)	0	100 percent		Animal health and food hygiene reference laboratories fully compliant with ISO 17025
Date achieved	06/20/2007	06/20/2007		12/31/2012
Comments (incl. % achievement)	Achieved			
Indicator 15:	List of abattoirs and meat processing facilities established for IPARD funding, and number of EU compliant certifications of facilities			
Value (quantitative or Qualitative)	None of the nation's abattoirs and meat processing plants have EU compliant facilities and procedures (except HACCP app. 10%)	75% of abattoirs and meat processing plants in compliance with EU requirements		75% of abattoirs and meat processing plants in compliance with EU requirements
Date achieved	06/20/2007	06/20/2007		12/31/2012
Comments (incl. % achievement)	Achieved			
Indicator 16:	All remaining WMOs liquidated			

Value (quantitative or Qualitative)	5 WMOs in liquidation proceedings, 4 to begin proceedings	All 9 WMOs successfully liquidated		All 9 WMOs successfully liquidated
Date achieved	06/20/2007	06/20/2007		06/12/2010
Comments (incl. % achievement)	Achieved			
Indicator 17:	Successfully established WEs in Kumanovo, Strumica-Radovis, Pelagonjia, Prilep, Skopje, Juzna, Vardarska Dolina			
Value (quantitative or Qualitative)	None	6 WEs successfully established		6 WEs were successfully established and are functioning
Date achieved	06/20/2007	06/15/2009		12/31/2012
Comments (incl. % achievement)	Achieved			
Indicator 18:	WEs successfully collecting water user fees and breaking even			
Value (quantitative or Qualitative)	10% of irrigation water fees are being collected	Irrigation water fees collected at 70%	The "break-even" target was dropped at restructuring	Share of invoiced fees collected 54% in the 2011 water season, and 70% in 2010.
Date achieved	06/20/2007	06/20/2007	01/03/2011	12/31/2012
Comments (incl. % achievement)	82% achieved (weighted average of 69% of original target and 100% of revised target).			

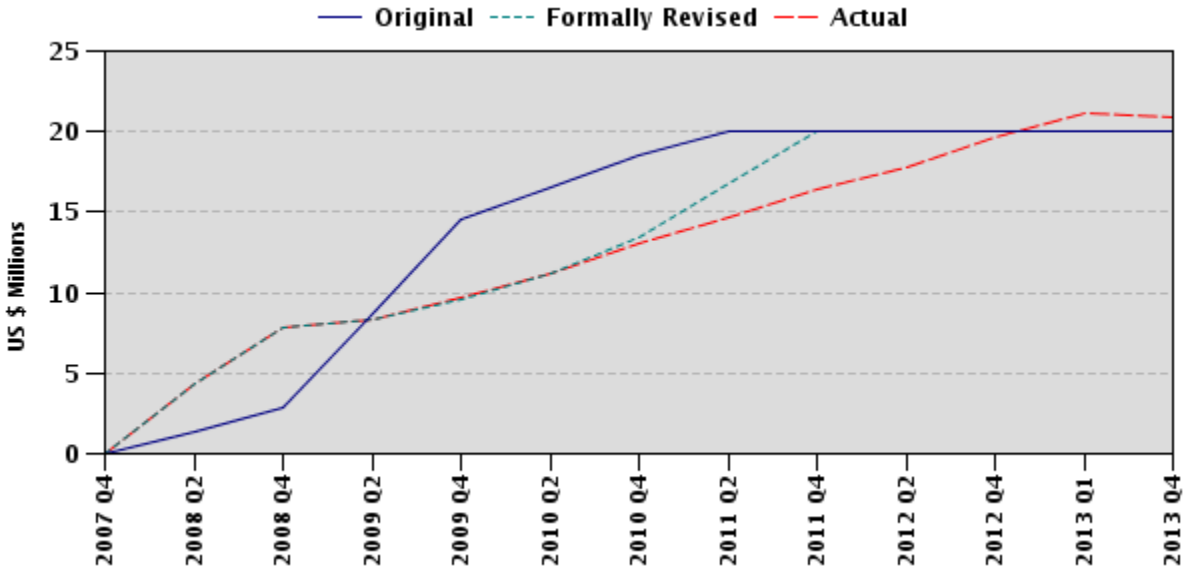
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	11/09/2007	Satisfactory	Moderately Satisfactory	0.00
2	06/25/2008	Satisfactory	Satisfactory	7.88
3	12/15/2008	Moderately Satisfactory	Moderately Satisfactory	8.32
4	08/13/2009	Moderately Satisfactory	Moderately Satisfactory	9.65
5	03/25/2010	Satisfactory	Moderately Satisfactory	12.70
6	06/30/2010	Satisfactory	Moderately Satisfactory	13.11
7	04/30/2011	Satisfactory	Moderately Satisfactory	16.42
8	12/10/2011	Satisfactory	Moderately Satisfactory	17.79
9	06/27/2012	Moderately Satisfactory	Moderately Unsatisfactory	19.63
10	12/29/2012	Moderately Satisfactory	Moderately Satisfactory	21.08

H. Restructuring (if any)

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
03/08/2010	N	MS	MS	12.22	Increase of Loan financing percentage to 100% as consequence of the global financial crisis
01/10/2011	N	S	MS	14.68	Closing date extension and small adjustments to project activities and result framework.

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

1. **Country Context**. The Former Yugoslav Republic of Macedonia (FYR Macedonia) became an independent country in 1991, after the collapse of the Socialist Federal Republic of Yugoslavia. From a protected and static market of some 23 million people, the newly independent country had to face the new reality of a small, open economy of 2 million people neighboring the European Union (EU), the largest food exporter and importer in the world, competing in a global context of volatile food prices, greater demands on food quality and increasingly visible climate change impacts. Adjusting to this new context represented a significant challenge and required building new institutions.

2. Accession to the EU became an important element of the strategy. The FYR Macedonia became an official candidate for European Union (EU) accession in December 2005. The prospect of EU membership brought vast political and economic opportunities, but it also was a challenge in itself. EU accession required a long set of legal and regulatory reforms to comply with the "*Acquis Communautaire*" (the body of EU legislations) and the development of new institutions, in particular for the agricultural sector, animal health, and food safety.

3. The agriculture sector played an important role in the economy through its contributions to GDP – agriculture accounted for 12 percent of GDP and agro-processing an additional 4 percent – as well as employment and the welfare of rural areas, where almost half the country's population resided. The country's comparative advantage in agriculture lies in abundant labor, fertile soils, a range of moderate continental and Mediterranean micro-climates in the south (though with water deficiencies and occasional droughts in parts of the country) and natural upland pastures. The main agricultural exports are tobacco, wine, vegetables, and lamb meat.

4. EU accession was particularly attractive for the agricultural sector. In addition to securing access to a large market, it would also allow benefits from the Common Agriculture Policy (CAP) which includes significant incentives and subsidies paid by the European Commission in the form of grants. However, the EU required compliance with specific requirements, such as: (i) a minimal institutional capacity to control management of funds, which had to be verified through a process called "Accreditation of the Paying Agency" to confirm the existence of a system to control that subsidies and other incentives are distributed only to legitimate beneficiaries; (ii) a food safety system with emphasis on animal health to reduce the risk that food and livestock imported from a new member country may pose a safety hazard; and (iii) environmental requirements related to the management of natural resources such as water. The Water Framework Directive and the Nitrate Directive were linked to irrigation and the use of fertilizers in agriculture.

5. The overall EU context at the time of project preparation was an important factor in the project's evolution. In 2004, one of the largest single EU expansions took place with the accession of seven new countries: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia, the latter having been part of the former Yugoslavia like FYR Macedonia. Bulgaria and Romania joined the EU in 2007, the same year the project was taken to the Board. These events generated significant expectations that FYR Macedonia would quickly join the EU.

6. Prior to independence, the agriculture sector had benefitted from World Bank support to the Socialist Federal Republic of Yugoslavia. After independence, the World Bank financed two projects in the sector: (i) a US$5.0 million project to support private farmers implemented during 1996-2002; and (ii) a US$12.5 million irrigation rehabilitation project which was implemented during 1997-2006. The project rehabilitated three irrigation schemes and restructured Water Management Organizations (WMOs) to enhance the sustainability and efficiency of management. The project was assessed as satisfactory, but left uncompleted the liquidation of nine Water Management Organizations (WMOs).

7. **Rationale for Bank involvement**. The Government of FYR Macedonia requested World Bank support to develop the institutions and systems required for EU accession in agriculture and food safety/veterinary services. The main rationale for Bank involvement was to fill the gaps that EU pre-accession assistance did not cover. In particular, EU pre-accession funds focused on Technical Assistance (TA), thus leaving the necessary investments in hardware (infrastructure, equipment, etc.) unfunded. Complementing the EU-funded TA with Bank financing for infrastructure and equipment to improve institutional capacity to deliver public support to the sector was a strong justification for World Bank involvement because it would leverage the impact of EU-funded support to the sector.

1.2 Original Project Development Objectives (PDO) and Key Indicators *(as approved)*

8. The Project Development Objective was to improve the delivery of government assistance to the agriculture sector in a manner consistent with the European Union's pre-accession requirements.

9. Key indicators:
   (a) improved Ministry of Agriculture, Forestry, and Water Economy (MAFWE) ability to disburse and track the use of rural development funds and to evaluate their impact on the agri-food sector;
   (b) EU IPARD funds paid to farmers in an EU-compliant manner;
   (c) timely delivery of improved veterinary services to producers and agro-processors;
   (d) establishment of participatory, “demand driven” irrigation management; and
   (e) divesting the state of financial responsibility for the irrigation sector.

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

10. The PDO has not been revised during project implementation.

1.4 Main Beneficiaries

11. Direct beneficiaries were expected to be institutions which deliver services to farmers. These were the MAFWE, the Water Economy Directorate (WED), the Water Economies (WE), the Veterinary Directorate (VD), and the Paying Agency (PA). Farmers and users of veterinary or irrigations/drainage services were indirect/secondary beneficiaries of the project. Also, farmers and agro-processors who received IPARD support were direct beneficiaries. Livestock herders were also to benefit from the improved animal health. Farmers who used irrigation were also to improve from an improved management of water supply. Finally, those farmers who received government subsidies were to benefit from the improved targeting of the program.

1.5 Original Components *(as approved)*

12. **Component 1: Strengthening MAFWE's Administrative and Management Capacity in Accordance with EU Accession Requirements** (EUR 8.5 million). This component had the objective of improving the management, administration, information technology, staffing and institutional structure of the MAFWE. The component had the institutional objective to improve transparency and governance in MAFWE and move MAFWE structures and systems towards full compliance with the requirements for EU accession. It included the following subcomponents: (a) initiation of an Integrated Administration and Control System (IACS); (b) establishment of an Agriculture Information System (AIS); (c) strengthening the Agricultural Inspection Services; and (d) establishing adequate institutional capacity in MAFWE.

13. The component financed the building of a new headquarters of MAFWE (around EUR 4.8 million including construction and furniture), equipment (vehicles for inspections, computers and other IT equipment), aerial photography, and technical assistance and training for the development of software required for various information systems.

14. **Component 2: Supporting MAFWE's Ability to Deliver EU Rural Development Funds** (EUR 2.9 million). This component had the objective to help establish the Paying Agency (PA) that would acquire accreditation to administer IPARD funds on behalf of the EU before accession, and CAP funds after accession; and improve the capacity of potential beneficiaries to make successful applications for IPARD grants. Subcomponents include: (a) supporting establishment of the IPARD Paying Agency (PA); (b) supporting PA capacity building; (c) supporting an IPARD-tailored capacity building program for rural advisory services providers; and (d) supporting capacity building in the Rural Development Department.

15. The component financed refurbishing of the building of the paying agency, some equipment (vehicles for inspection, computers and other IT equipment), and technical assistance and training for the development of software required for various information systems.

16. **Component 3: Developing Effective Veterinary Capacity** (EUR 2.8 million). This component had the objective to develop effective veterinary capacity as part of the creation of a functioning integrated food quality system which is consistent with EU requirements. This included: promoting safer products of animal origin and prevention and decrease of animal diseases; helping producers meet cross-compliance requirements to receive IPARD funds; and enabling Macedonian producers and agri-processors to export their products to the more stable and higher value market of the EU. It included the following subcomponents: (a) strengthening the Veterinary Directorate (VD) in accordance with the 2007-2013 VD draft strategy and business plan and (b) strengthening the Veterinary Laboratory (VL) and the Food Institute Laboratory (FIL).

17. The component financed laboratory equipment, computers and other IT equipment as GPS navigators, and technical assistance and training to increase the capacity to monitor and control animal diseases.

18. **Component 4: Completing Reform of Irrigation Sector** (EUR 3.2 million). This component had the objective to support the government in completion of reform of the irrigation sector that started in 2003 under the Irrigation Rehabilitation and Restructuring Project. It included the following subcomponents: (a) liquidation of Water Management Organizations (WMOs); (b) establishing new Water Economies (WEs); and (c) strengthening capacity of the Water Economy Directorate (WED).

19. The component financed auditing of Water Management Organizations under liquidation, severance payments to redundant staff of the Water Economies of Ohrid, Radovis, Strumica, Gevgelia, technical assistance, training, and a limited amount of irrigation equipment.

1.6 Revised Components

20. The components were not revised.

1.7 Other significant changes

21. **Project extension**. The project closing date was extended from the original September 30, 2011 to December 31, 2012.

22. In March 2010, the Loan Agreement was amended to finance 100 percent of the disbursement categories. This was a request for all projects in the country as a consequence of the 2009 financial crisis. The Government continued to finance in parallel two activities, namely the building of the MAFWE headquarters and the refurbishment of the Paying Agency building.

23. In January 2011, a restructuring reallocated EUR410,000 (or 3% of the Loan) from Component 3 to Component 2. This was due to dropping the purchase of equipment for the safe disposal of animal by-products under Component 3 and to reallocate funds for refurbishing the Paying Agency under Component 2. The restructuring also changed one indicator and its target to make it consistent with the intermediate and outcome indicators and its target. In particular, the target of recovery of operation costs of Water Economies was reduced because the original target was deemed overly ambitious (the target of 90% of recovery of WEs' operation costs was reduced from 90 to 60 percent, see PDO Indicator 4, Reduced financial burden to government from irrigation management). Finally, the indicator “increased investigations in BSE fallen stocks” was dropped because with no or limited beef exports, BSE is not considered a major issue in FYR Macedonia. While the collection of samples from dead animals and treatment of by-products proved to be more challenging than initially expected.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

24. **Soundness of background analysis**. The project was prepared by an experienced and multidisciplinary team of experts, including with support from FAO specialists. There were, however, some moderate shortcomings in terms of clarity of objectives, indicators, and the assessment of local capacity to achieve the objectives.

25. The ASAP project was identified on the basis of sound analysis carried out with a previous Economic and Sector Work: Agriculture and EU Accession - Achieving FYR Macedonia’s Agricultural Potential (P097173) completed in 2006. Its principal findings were reflected in the project design, including the identification of the following needs: (i) improved management of public expenditures; (ii) a timely preparation of the paying agency; (iii) mechanisms to assist potential IPARD beneficiaries; (iv) an effective and efficient food safety system; and (v) reform of irrigation.

26. The project benefitted from being prepared shortly after a similar project in Croatia (the Agricultural Aquis Cohesion and Agricultural Pollution Control Project, approved February 16,

2006) and in parallel with similar projects in Bosnia and Herzegovina, and Serbia (respectively, Agriculture and Rural Development Project, approved June 19, 2007, and Transitional Agriculture Reform Project, approved June 20, 2007). Some team members worked in parallel in these similar projects. However, none of these parallel projects had been implemented yet, so the challenges of implementation remained unknown.

27. Thanks to the above preparatory work, and additional work carried out by EU-funded consultants, the project was prepared in an extremely short period of time and with limited resources: the project concept was reviewed at the end of November 2006 and the project was approved about 6 months thereafter on June 12, 2007 and with a lower than average Bank preparation budget of US$326,000.

28. The above positive assessment is balanced by some moderate shortcomings in terms of clarity of indicators, and the assessment of local capacity to achieve the objectives. The objective of attracting a large share of the IPARD funds allocated by the EU was not clearly spelled in project documents. The intermediate indicator 5 "*Potential IPARD beneficiaries apply using correct procedures,*" had an ambitious target: "*95% of the planned IPARD funds for the calendar year committed, 80% of previous year commitments disbursed*". It is not clear why this indicator was considered "intermediate", since other PDO indicators are prerequisite to attract IPARD funding (such as Paying Agency accreditation and Land Parcel Identification). Still it is possible to infer that this was an important objective from several sections of the Project Appraisal Document (PAD):

- The PDO was to "*improve the delivery of government assistance to the agriculture sector in a manner consistent with the European Union's pre-accession requirements*" not just to develop institutions;
- The economic analysis of Component 2 was calculated on assumptions about the uptake of IPARD funds with and without the project. Still, actual uptake/absorption of IPARD funds did not come out clearly as an objective;
- Component 2 Activity c: *Supporting an IPARD-tailored capacity-building program for rural advisory services providers in order to make specific IPARD advisory services available to the potential beneficiaries*. This activity was necessary for improving demand. However implementation proved that capacity was not sufficient to achieve the target; and
- The following risks and mitigation measures listed in the PAD show that the project also had the objective of attracting IPARD funding:

RISK	***RISK RATING***	***MITIGATION***	**Comments in retrospect**
External developments could slow the EU accession process, reducing return on project investments.	*Moderate*	*Key commitments of IPARD funds have been made. Thereafter project investments will benefit the agricultural sector independent of the EU accession process.*	The 2010 Eurozone crisis delayed the EU accession process and caused an economic downturn in the country, affecting market demand
Insufficient demand and/ or absorption capacity among private beneficiaries for IPARD grants.	*Low*	*MAFWE will conduct outreach to create awareness of IPARD grant opportunities and assist beneficiaries to apply for IPARD grants.*	Demand for IPARD was good in terms of quantity (95% of allocation), but only 25% of demand was contracted

Beneficiaries are unable to access sufficient sources of co-financing or pre-financing for IPARD funds.	*Substantial*	*Availability of credit in rural areas is improving, and structural constraints to rural credit e.g. land are being addressed by the government. Other donors are conducting rural credit projects, e.g. IFAD.*	The financial crisis which started in 2009 reduced credit availability and caused an economic downturn in the country, and affected market demand.

29. The above sections indicate that attracting a significant share of IPARD allocation represented an ambitious and risky objective. Its achievement depended on several preconditions, including: (i) IPARD requirements, which are developed by the EU, and thus outside of project and even Borrower control; (ii) demand from potential beneficiaries, which is affected by many factors (e.g. capacity to prepare proposals in the proper form, economic conditions and market prospects, etc.); and (iii) availability of credit to pre-finance the investment (since farmers only receive the grant after the investment is completed). Using the intermediate indicator 5 to measure PDO achievement would have helped both design and supervision to better address the need to strengthen farmer capacity to prepare good proposals.

30. However, the project design underestimated the need for farmer support to prepare good proposals and the degree to which external factors could also affect IPARD absorption. The above moderate design shortcomings may be a consequence of the short preparation period. This, in turn, may have been due to pressure stemming from the Government's desire to be ready for EU accession, since membership was considered imminent at the time (see para. 4 above).

31. **Risk assessment**. The overall project risk was rated as high, which in retrospect continues to look like a balanced assessment. The risk that "*External developments could slow the EU accession process*" was rated as moderate. However, this risk did materialize and in retrospect this rating has proven to be an underestimation. The financial crisis contributed to an overall economic slowdown, credit market tightening and market uncertainty that adversely affected farmer incentive and capacity to invest, thus affecting absorption of IPARD grants. While at project preparation all stakeholders expected a fast EU accession process, during implementation that process became more challenging than initially anticipated as a consequence of the 2009 global fiscal crisis and the 2010 Eurozone crisis, which significantly curtailed EU desire for enlargement. Indeed, the FYR of Macedonia has not yet joined the EU nor has a definitive date been set yet. These external factors were unrelated to the project and impossible to predict.

32. **Social aspects**. No major controversial issues associated with potential social impact were anticipated, and a rapid social assessment was conducted during preparation. No social safeguard issue was identified. However social aspects beyond the mere compliance with social safeguards may have been overlooked: the capacity of potential IPARD beneficiaries to present financeable proposals was lower than expected, and private sector consultants were not able to fill this gap as expected at project design (see paragraphs 29, 30, and 52). This contributed to a lower than expected attraction of IPARD funding.

33. The role of the main beneficiary in project preparation, MAFWE, has been more active than in average World Bank-supported projects. The Government was strongly committed to the project objectives, and the MAFWE took a leading role in designing project components and activities.

2.2 Implementation

34. Most project activities were properly implemented according to original plans. However, delays in the construction of the building for the new headquarters of MAFWE required extending the closing date. The initial four-year project implementation period was extended by 15 months. This extension was essential to allow completion of the building construction and achievement of the PDO. The delays were caused by the severe weather in the winter of 2010 and the termination of the contract in the middle of the construction of the new building because the contractor did not comply with its contractual obligations. This required a long re-tendering process which caused a delay of more than one year. At preparation, the Government had asked for a three-year implementation period, in line with its expectations about the EU accession process. The Bank team suggested a longer (4 years) implementation period, despite which the project required additional two closing date extensions.

35. The project has not been fundamentally changed. It has been considered at risk only for a short period of time in 2012 when implementation was rated Moderately Unsatisfactory due to the liquidity problems mentioned below (see paragraph 44). It was restructured in March 2010 to increase the Loan financing percentage to 100% to help the Project better weather the global financial crisis. It was also amended in January 2011 to extend the closing date and make minor adjustments to project activities and result framework.

36. There was a mid-term review mission in December 2009. The mid-term review mission was well staffed, including fiduciary and safeguard specialists. The mission focused on the project's overall progress in meeting its original objectives but did not review the result framework.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

37. M&E was properly designed, implemented and utilized. Still there were some moderate weaknesses listed below.

38. **Results framework and indicators**. The PDO is susceptible to different interpretations and the indicators selected did not clarify this ambiguity (see paragraph 52). Some indicators are repeated and used both as PDO and intermediate indicators. For instance:

- PDO Indicator 1 combines the development of 5 systems: (a) Policy Analysis and Agriculture Information System Department (PAAISD), (b) Farm Registry, (c) Land Parcel Identification System (LPIS), (d) Market Information System (MIS) and (e) Farm Accountancy Data Network (FADN). Then Intermediate Indicator 3 repeated the Market Information System (MIS) and Farm Accountancy Data Network (FADN).
- Intermediate Indicator 5 ("*Potential IPARD beneficiaries apply using correct procedures*") uses a target which is not fully consistent with the indicator: "*95% of the planned IPARD funds for the calendar year committed, 80% of previous year commitments disbursed*". The wording of the indicator refers to the quality of procedures, which is already captured under PDO indicator 2 "*EU IPARD funds are paid to farmers in an EU-compliant manner*". However the target relates to the amounts committed and disbursed, which depend on a set of factors, including absorption capacity. It is also not clear why this indicator was considered "intermediate", since other PDO indicators are prerequisite to attract

IPARD funding (see paragraph 28). This created some confusion about the actual objective.

39. **Frequency of monitoring report**. At design, production of only annual M&E reports was envisaged. However, during implementation it became evident that this reporting frequency was inadequate to allow effective monitoring. The project would have benefitted from more frequent updates.

40. **Implementation**. During project implementation the Project Team prepared regular and useful monitoring reports, which were reviewed, discussed, and improved by the Bank team. However, after closing the Borrower did not prepare the Borrower's final project evaluation.

2.4 Safeguard and Fiduciary Compliance

41. **Procurement**. The Project Unit management of procurement processes is assessed as satisfactory. The team of the Project Unit, comprising a Project Coordinator, Procurement Specialist, Financial Management Specialist and a Project Assistant, was based in the MAFWE. The unit was responsible for overall coordination and management of the project, including all the activities of the procurement plan.

42. Procurement was carried out in line with the applicable Procurement and Consultant Guidelines, in a diligent, professional and timely manner. There were no deviations from the agreed provisions during the process. Procurement filing was also good. All documentation related to each procurement procedure was duly filed and readily available. Most of the contracts were implemented on time. The project team and the Procurement Specialist properly managed the procurement process and contract implementation, as well as the recording of processes and file maintenance. There were two serious or extraordinary contract implementation issues:

- Implementation of the civil works contract for the construction of the new headquarters of MAFWE took much longer than planned. The delays were caused by the termination of the contract in the middle of the construction of the new building because the contractor did not comply with its contractual obligations. The implementing agency did apply the performance guarantee, thus limiting the financial losses. Still, the procurement process had to be repeated, leading to a delay of more than one year. This was the main cause for extending the project closing date; and

- Availability of funds for contracts procured and signed under the project was spotty. Although most contracts were paid on time and within the prescribed timeline, some were paid with delays. There was one period when several contracts were not signed due to lack of liquidity. This issue was systemic, affecting the entire FYR Macedonia portfolio, and was caused in part by the financial crisis which started in 2009. Towards the end of the project the issue was addressed and implementation improved.

43. **Financial Management**. The financial management arrangements of the project in terms of budgeting, accounting, flow of funds, internal controls, financial reporting and external audits are assessed as satisfactory. Acceptable software was used for project accounting and financial reporting. The flow of funds was channeled via a Designated Account (DA) opened in Euros at the National Bank of FYR Macedonia and a transit account in Macedonian Denars opened in the Treasury for local currency payments. Quarterly Interim un-audited Financial Reports (IFRs) were submitted timely to the Bank in format and substance agreed and they were assessed to be reliable. The project financial statements were audited by eligible auditors from the World Bank

list of approved audit firms and the reports were submitted to the Bank according to agreed deadlines. The auditors issued a clean (unmodified) opinion in all audits of annual project financial statements. The last audit report for the project is expected to cover 2012 (plus any payments in the grace period that ended April 30, 2013) and be submitted to the Bank by June 30, 2013. The World Bank team carried out field reviews annually throughout project implementation and confirmed that the internal controls and procedures instituted for the project were adequate.

44. However, as outlined above, there was a systemic issue that affected implementation. All projects in the portfolio of the country faced significant liquidity constraints (that became particularly acute during the first part of 2012), causing delays in payments to suppliers. Even when 100 percent of the expenditures were financed from IBRD Loans, the majority of World Bank-funded projects in FYR Macedonia registered liquidity cuts because of ceilings imposed in the State Budget due to tight fiscal targets. The situation was remedied in September 2012 when the government provided additional project financing and overdue payments (including for the construction of the new Ministry building) were completed.

45. **Environmental safeguards**. The Project is rated Category B. In accordance with the Bank's Operational Policy, this required a partial Environmental Analysis, but not a full-scale Environmental Assessment. A report prepared during project design identified two areas of risk: the construction of buildings, such as the headquarters of the MAFWE, and equipment for veterinary and food laboratories and particularly in the handling of wastes generated by these two activities. Supervision missions were carried out regularly and confirmed that adequate mitigation measures were implemented.

46. The project produced additional environmental benefits. It provided training for laboratory personnel and thus contributed to increase environmental safety of existing laboratories. Also, as result of building modernization, there were some energy savings, however these were not quantified. The project could have applied for an energy rating of the new building, which would have contributed to creating further awareness about energy efficiency and savings.

47. **Social safeguards**. Social safeguards were not triggered. The building of headquarters of the MAFWE did not cause any involuntary resettlement because the project reconstructed an existing building and thus it did not entail land acquisition.

2.5 Post-completion Operation/Next Phase

48. The operation and maintenance arrangements, sustaining reforms, and institutional capacity are all assessed positively. The Bank's policy dialogue, conducted in parallel with its support of the project, did contribute to significantly increase attention to the agricultural sector. The government has now taken a lead position in supporting the sector, in most cases adopting EU-compliant approaches.

49. No follow-up project has been envisaged nor is one considered necessary for the operation and maintenance of investments carried out under the project. EU accession remains an important policy objective of the Borrower, and it is expected to continue maintaining independently a long term dialogue with EU institutions on the EU accession process.

50. Conversely, the challenges of the agricultural sector in FYR Macedonia are far from being solved, and a new operation to support the sector could be useful. Further, a recent World Bank regional study has identified climate change as another important challenge for Macedonian

agriculture. The upcoming CPS will provide a useful framework to discuss with the Government the modalities of Bank support, to help the country address these challenges.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

51. The objective is fully consistent with the country's priorities and the Bank Partnership Strategy. To improve the delivery of government assistance to the agriculture sector in a manner consistent with the EU pre-accession requirements was – and still remains – an extremely important Government objective. This objective is also fully in line with the FY2007-11 World Bank Partnership Strategy for the FYR of Macedonia.

52. There were, however, some weaknesses in design. The selected indicators did not sufficiently clarify the PDO objective to "improve the delivery of government assistance". "Improvement" can be interpreted in two different ways: (i) improvement in terms of quality of government assistance such as improved targeting, transparency, efficiency, and capacity to track public expenditures, and/or (ii) improvement of capacity to attract EU funding for the sector in quantitative terms. While most indicators track the "improved delivery" of IPARD funding in terms of quality (through the adoption of systems which increase efficiency, targeting, etc.), indicator 5 sets an ambitious amount of EU funding for the sector. As a consequence of this lack of clarity, project design did not sufficiently address all the gaps that hindered the capacity to attract the ambitious amount of EU funding. In particular, the project did not sufficiently strengthen farmers' capacity to prepare proposals which comply with all EU requirements. This proved to be a weakness which contributed to the shortcoming in achieving the quantitative target of attracting IPARD funds.

3.2 Achievement of Project Development Objectives

53. The achievement of the PDO as spelled out in the project documents is assessed as moderately satisfactory. Project activities directly contributed to improving the delivery of government assistance to the agriculture sector in a manner consistent with the EU pre-accession requirements. There were, however, some moderate shortcomings in terms of achieving the targets of attracting IPARD funding and water user fee collection, which triggered the moderately satisfactory rating.

54. The ICR team met with EU staff in the Delegation Office in Skopje, who confirmed that the project helped FYR Macedonia to meet several prerequisites for EU negotiations and accession. The EU accession documentation also attests to the country's progress in this area. The most recent EU report[1] on the status of EU accession negotiations positively assessed progress on Agriculture and Rural Development, Food safety, and Veterinary and Phytosanitary Policy.

55. The project achievements in helping the country establish an EU-compliant IACS system for managing IPARD funds had a significant spillover effect on the management of the

[1] Communication from the Commission on The Former Yugoslav Republic of Macedonia 2012 Progress Report (http://ec.europa.eu/enlargement/pdf/key_documents/2012/package/mk_rapport_2012_en.pdf)

agricultural subsidies that are funded by the national budget. Over the life of the project the disbursements under the national budget for direct payments to agriculture producers and the National Rural Development Fund grew from US$57 million in 2008 to US$132 million in 2011 (see Figure 1 below). The World Bank advised that the Paying Agency not to confine its responsibility to IPARD payments only, but also channel the national support program. This was a useful advice which allowed the control systems developed under the project to increase the quality and efficiency of public assistance to the sector. The project investments in the IACS system enabled the Paying Agency to administer these transfers in a more transparent manner, thus reducing waste and decreasing the risk of fraud. The automated IT-based administrative controls and the associated risk assessment modules were particularly helpful for ensuring transparency of these substantial public funds transfers. The project investments in vehicles, equipment, and systems of agriculture inspection were instrumental in improving the on-the-spot controls of the subsidy program. The increased institutional capacity directly contributed to increase effective governance in line with EU best practices.

56. The project financing of the headquarters building of MAFWE – which absorbed almost a third of project financing – generated important institutional, efficiency, and environmental benefits. Before the project, the staff of the Ministry were scattered in several locations in the capital city of Skopje, and had to travel from office to office to work together. Thanks to the project they are now located in a central, safe, and efficient new building. This led to significant savings in terms of rent, energy savings, reduced fuel waste for moving across various locations, and computer servers that are safely hosting various IT databases.

57. The project supported the Borrower's efforts to streamline its Food Safety and Veterinary institutional setup in accordance with the best EU practices. It helped establish the Food Safety and Veterinary Agency by merging the relevant departments of the MAFWE (Veterinary) and Ministry of Health (Sanitary Inspection). This was a major regulatory and enforcement capacity advancement that many new member States are struggling to accomplish even at a more advanced accession stage. This institutional reform brought together the country's Food Safety and Animal Health Authorities and by doing so, streamlined and improved consumer protection as well as the inspection services it provides to the export/import industry. The project also supported the new Food Agency by strengthening its inspection service capacity as well as by equipment upgrades of the key laboratories. The increased capacity to monitor animal diseases contributed to reducing the incidence of animal diseases such as brucellosis and tuberculosis, with human health benefits and economic benefits in terms of livestock productivity.

58. The project financed the restructuring of WMOs into WEs by financing the severance payments of employees who were not considered useful to the restructured and streamlined organization. This downsizing generated savings which are quantified in the economic analysis below and helped irrigation management to become more sustainable. The management of the new WEs is more demand-driven compared to the previous WMOs, and this allowed for increasing operating cost recovery, even if the target was only partly achieved. The initial target of 90% operating cost recovery was reduced to 60% of invoiced irrigation user fees in 2011. According to the final report, 54% of invoiced fees were collected in 2011, down from 70% in 2010. While this shortfall has been assessed as minor, compared to a baseline of 10%, nonetheless the drop from 2010 to 2011 suggests that the WEs are not yet sustainably recovering their costs.

59. The majority of targets spelled out in the results framework were achieved, and there is a clear causal linkage between project activities, intermediate outcomes, and results. One indicator was only partially achieved: intermediate indicator 5 stated "Potential IPARD beneficiaries apply

using correct procedures," and had the target of "95% of the planned IPARD funds for the calendar year committed, 80% of previous year commitments disbursed". This target was only partially achieved. Demand for IPARD funds was initially good, with fund applications totaling about 95% of the EU allocation. However, only 27% of these applications were contracted. In terms of funds, this represented a 33% achievement of the target. Disbursements, at 20% of contacted amount, missed the target: only 8 percent of the target was achieved. Although these results did not fully achieve the targets, they represent an important achievement when compared with other accession countries such as Serbia and Turkey. Rather, the targets were overly ambitious, in particular the disbursement target.

60. The IPARD program is designed to be demand driven, and several factors played a major role in its low absorption, many of which were outside the scope of the project. These included: (i) weaknesses in the land administration system--applicants are required to provide land ownership titles to be eligible for IPARD. But many farmers had outdated titles[2] and the current owners are not recorded in the cadaster records; (ii) many farm structures (buildings, machinery, greenhouses, etc,) are not recorded in the cadaster records. Submitting ownership titles for these to obtain IPARD funds is costly and time consuming; (iii) weak credit market—commercial banks were reluctant to lend to agriculture, in part due to the poorly functioning land market. This was further exacerbated by the financial and Eurozone crisis. This limited farmer access to the required co-financing for and pre-financing of IPARD projects; (iv) significant documentary requirements such as proofs of good financial condition, including evidences that he/she does not carry arrears related to tax, pension and health insurance dues[3]; (v) inadequate advisory services to assist the farmers in putting together the IPARD applications and implement the activities; and (vi) inadequate complementary public infrastructure--the completion of numerous IPARD investments have been postponed due to the delayed construction of access roads, potable water, and electricity connections.

59. In addition to the limited capacity of applications to achieve the minimal requirements to get contracted, there were two external factors that significantly increased the challenge of attracting IPARD funding. The 2009 global financial crisis, whose impact is not yet over, did reduce the incentive to invest while reducing the borrowing capacity of potential beneficiaries. This curbed demand and some applications were rejected because the applicants could not confirm availability of financial resources. Under the IPARD program, farmers have to pre-finance the approved investment and the grant is awarded only after the investment is completed. Thus availability of funds up-front is critical, and this became challenging when the credit crunch occurred due to the financial crisis. In addition, the global financial crisis contributed to the 2010 Eurozone crisis, which in turn reduced EU appetite for enlargement while increasing rigidity in the application of IPARD requirements. Neither of these factors could have been predicted at appraisal.

60. Even though the IPARD target was not fully achieved, the project was still able to attract EUR 3.0 million in IPARD grants paid to beneficiaries. EUR 15.4 million have been contracted with beneficiaries, out of a total allocation of EUR 66.5 million for the 2007-2012 period (see

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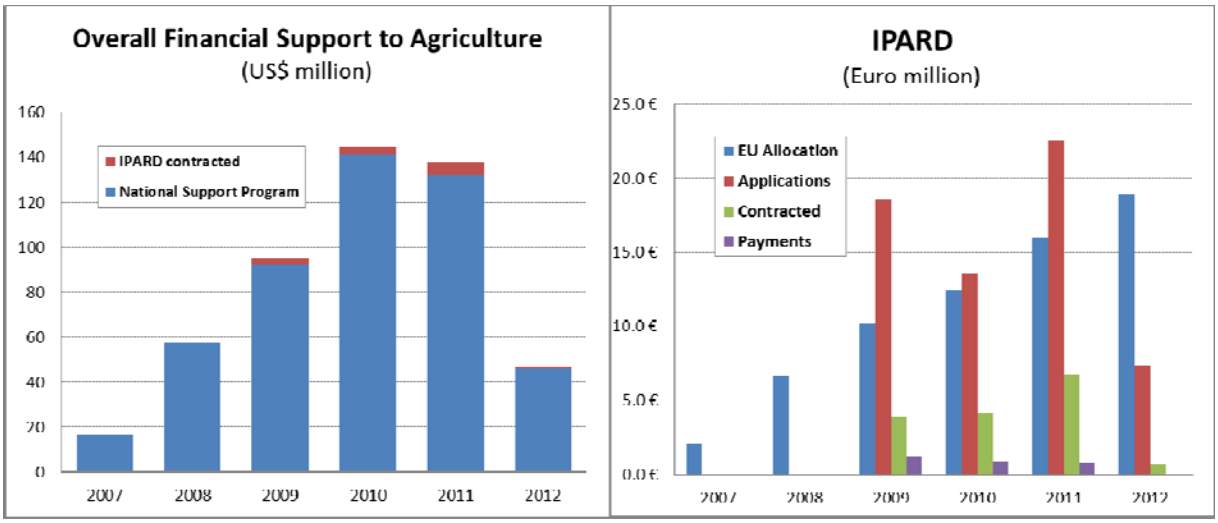
[2] This was mainly due to the unfinished inheritance proceedings where the heirs of a deceased landowner have not completed the required court proceedings. Thus these ownership changes are not reflected in cadaster records.

[3] The IPARD program has been amended four times since its inception to simplify the application procedure/requirements.

Figure 1 below). It is expected that a large share of these contracted funds will soon be disbursed. Thus the activity was still able to produce significant benefits, even during a harsh financial crisis such as the one that started in 2009. This shortcoming has been assessed as moderate. Notably, the low absorption of the IPARD was recognized by the government and was compensated to some extent by an increase in support for rural investments through the national budget.

Figure 1 – FYR Macedonia. Public Support to Agriculture[4]



61. In summary, the project was successful in setting up a Paying Agency which is processing not only IPARD payments but also much larger national government transfers to agriculture in a way compatible with EU requirements. A functioning agency of this kind is useful regardless of EU membership, and therefore satisfactory outcome rating is robust. At the same time, the following design factor did not allow the project to be fully satisfactory. Because the team needed to unite the three disparate parts under one operation, the scope was a bit ambiguous and some results indicators fell outside the project's scope. In this respect, improved absorption of IPARD was an overambitious objective given project design focused mostly on the supply side, that is only a part of the IPARD absorption story, while important constraints to absorption lie on the demand side.

3.3 Efficiency

62. Project efficiency in economic terms is evaluated as satisfactory. An ex-ante economic and financial analysis was carried out at project appraisal, and an ex-post analysis compared the actual project results and performance with the baseline situation applying the same analytical approaches and methods.

63. As shown in Table 1 below, the Economic Rate of Return (ERR) of Component 1 was not quantified at appraisal, while the ex-post analysis quantified it only for the headquarters building. The ERR of Component 2 was lower than estimated at appraisal because of the limited achievement in terms of attracting IPARD funds. The ERR was slightly lower than at appraisal

[4] The second IPARD call for 2012 is not included because it is still under review.

for Component 3. The analysis at appraisal did not quantify the overall ERR, which the ex-post analysis estimated at 23.8 percent, and a net present value of EUR 8.2 million.

Table 1. Economic Returns: Ex-Ante and Ex-Post Economic Analyses

	Investments, EUR million	ERR	
		Ex-Ante	Ex-Post
Component 1. Strengthening MAFWE's administrative and management capacity in accordance with EU accession requirements	8.7, of which 4.8 for MAFWE headquarters	N/A	12.2% for MAFWE headquarters alone
Component 2. Supporting MAFWE's ability to deliver EU rural development funds	2.3	48%	30.2%
Component 3. Developing effective veterinary capacity	2.6	80%	69.4%
Component 4. Completing reform of irrigation sector	3.9	N/A	36.8%
Total Project	**18.7**	**N/A**	**23.8%**

64. **Sensitivity Analysis**. An analysis to test the sensitivity of the economic results to various scenarios was carried out for this report. In a hypothetical scenario, under which the country did not attract any IPARD funds, the project ERR would have dropped to 16.5%, which is low, but still significantly above the 12% discount rate. Conversely, if the country had attracted IPARD funds as per initial target, the project ERR would have increased to 41.8%.

3.4 Justification of Overall Outcome Rating

Rating: Moderately satisfactory

65. The overall ratings are justified on the basis of the important and clear project contribution to achieving the PDO of improving the delivery of government assistance to the agriculture sector in a manner consistent with EU pre-accession requirements. This objective was and remains relevant to the country, even if the initial prospects for rapid EU accession were not realized. Project efficiency is assessed as satisfactory given the good ex-post rate of return of the project. All indicators were achieved except for the IPARD and irrigation water fee collection target. The above considerations led to the moderately satisfactory rating.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

66. The project contributed to alleviate poverty by increasing quality and efficiency of Government assistance to the agricultural sector, in particular in terms of improved subsidy program, reduction of zoonoses (diseases which affect both animals and humans), and restructuring of irrigation. Agriculture has traditionally been important as a social buffer, absorbing rural unemployment, alleviating poverty by supplementing incomes and food in rural areas, where poverty is concentrated. Indeed the Government maintains that support to agriculture responds to important social development objectives.

67. Gender aspects were not envisaged at project design. IPARD has the objective to promote gender equality, and to achieve this, women applicants get some advantages. However there is no information available to prove that any gender objective was achieved.

68. **(b) Institutional Change/Strengthening**

The project achieved important institutional strengthening objectives. It significantly contributed to strengthen the capacity of the MAFWE and the PA to implement agricultural policies and attract EU funding. The capacity of MAFWE to monitor public support programs increased significantly. This reduced waste and frauds and increased efficiency, targeting, and capacity to track public expenditures. It also increased the capacity to monitor and control zoonoses. The reduced incidence of brucellosis and tuberculosis, both in animals and humans, generated benefits for the human population and in terms of animal productivity. Improved veterinary and food safety services also helped to access profitable EU markets, where the borrower is exporting. Finally, the project helped restructuring local irrigation institutions thus improving their sustainability, even if this task is not yet fully completed.

(c) Other Unintended Outcomes and Impacts (positive or negative)

69. There were no unintended outcomes and impacts, except for the positive impacts which are related to the improved governance of the Government support program to the sector (see paragraph 55 above) and those related to increase efficiency thanks to the new building of the MAFWE (paragraph 56 above).

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

70. There was no beneficiary survey.

4. Assessment of Risk to Development Outcome

Rating: Moderate

71. The institutional changes supported by the project fit into the broader framework necessary for EU accession. The mechanisms developed under the project will continue to help adjust the national agricultural policy and eventually, upon accession, inform the Common Agricultural Policy. The institutions which were supported under the project will in the future need to report to supra-national bodies, such as the European Food Safety Agency. The Government will therefore need to continue to deliver its government assistance to the agriculture sector in a manner consistent with the European Union's principles. Even if the EU accession process were to falter, the Borrower is expected to continue to use the mechanisms developed under the project to support its agricultural sector, and to continue to address food safety both for its own domestic market and to access the EU market. The relationships with the EU are expected to remain strong with or without accession. For these reasons, the risk assessment for this component is assessed as low.

72. The amount of own funds that the Government has allocated to support the sector (outside of the project, see paragraph 55) is a strong evidence of the relevance of the agricultural sector for the Borrower. Further, the instruments developed by the project can continue to be used to improve governance of the public support system. The risks that the institutional systems developed by the project to improve efficiency, transparency, targeting, and capacity to track public support to the sector are therefore negligible.

73. Food safety will remain a key factor both for the domestic and the EU market, so the risk that emphasis on these activities will be reduced is assessed as low.

74. The risk for the fourth component - Completing Irrigation Sector Reform - is higher. Even though the project supported important steps to improve sustainability of the Water Economies, their sustainability remains challenging, and the Government will need to continue

making efforts to further improve and reform the irrigation sector. If it was not for this component, the overall risk rating would have been rated as Negligible to Low.

75. The overall risk rating for the project was assessed as moderate taking into account the different risk profiles for each component.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: Moderately Satisfactory

76. The World Bank team prepared a good project in record time and with a minimal budget, responding to the Borrower's request for rapid support. However project design suffered some moderate shortcomings in terms of clarity of the objective to attract IPARD funding and addressing the gaps to achieve this objective.

77. The team was experienced and knowledgeable, applied lessons learned in similar countries, such as stressing the importance of developing systems required to get EU accreditation. Design built on previous experience of investment operations and technical assistance, including technical assistance funded by the EU. The World Bank team added value, complementing the Borrower's effort, by improving some important design features, such as having the paying agency be responsible for all payments to the sector, not just those related to EU funded activities. This institutional strengthening increased significantly the benefits produced by the project.

78. The lack of clarity in PDO and indicators contributed to lower than planned attraction of IPARD funds despite strong demand. Gaps in capacity to produce acceptable IPARD applications were overlooked. A clearer statement of the indicators at the outset would have helped to better focus supervision. The impact of this shortcoming was exacerbated by the expectation at project design, which proved overly optimistic in retrospect, that the country would quickly join the EU, passing from IPARD to the easier-to-implement CAP. The financial crisis which started in 2009, also contributed to exacerbate these shortcomings. Since the financial crisis could not be predicted, these shortcomings are assessed as moderate, warranting overall a moderately satisfactory rating.

(b) Quality of Supervision

Rating: Moderately Satisfactory

79. The World Bank team carried out regular supervision missions producing good quality and useful aide-memoires and supervision reports. However the Bank supervision team also did not pay sufficient attention to the target of attracting IPARD funding.

80. A mid-term supervision mission was carried out at an appropriate time and with an adequate mix of specialists. The World Bank showed flexibility when accommodating the Borrower's reduction in financing after the 2009 financial crisis. These elements significantly contributed to overcome implementation difficulties and thus contributed to project success. However supervision could have been more pro-active once it became evident that EU accession was not happening as fast as initially envisaged. The supervision team could have restructured the project to adapt to this new situation. Restructuring could have helped address the bottlenecks

that were limiting the uptake of IPARD funds, and would likely have led to a scaling down of the excessively optimistic target for Intermediate Indicator 5.

(c) Justification of Rating for Overall Bank Performance
Rating: Moderately Satisfactory

81. The Bank's contribution was important to the project's achievements, yet greater attention to IPARD related activities during both the design and supervision phases might have allowed for timely identification and remediation of key factors affecting full achievement of the PDO.

5.2 Borrower Performance
(a) Government Performance
Rating: Moderately Satisfactory

82. The Government demonstrated commitment throughout design and implementation of the project. While lack of liquidity caused some implementation shortcomings, and considerable time elapsed before the issue was addressed, the root cause was the exogenous shock of the Eurozone crisis. The use of systems developed under the project to implement and monitor the Government support program to the sector, thus improving governance, efficiency, targeting, and capacity to track the Government funded agricultural support program. This is a good indication of a forward-looking and progressive approach.

83. Without these implementation shortcomings, the implementing agency and the World Bank team could have better focused on more important issues, such as the limited ability to effectively access IPARD funds.

(b) Implementing Agency or Agencies Performance
Rating: Satisfactory

84. The MAFWE played a key role in project design and implementation. This generated positive coordination between international organizations, in particular EU and World Bank. The Project Team was small yet staffed with qualified and energetic consultants who overcame most implementation obstacles. Project activities were implemented by regular staff of the Ministry and all component coordinators were staff from within the regular units. The project team focused on following World Bank procurement and procedures, which helped strengthen the capacity of the line Ministry, including Veterinary Services and Water Economies Directorate, and the Paying Agency.

85. However, the implementing agency did not produce a final project evaluation. Project benefits could have been better presented and quantified if the implementing agency had prepared a comprehensive and robust final evaluation.

(c) Justification of Rating for Overall Borrower Performance
Rating: Moderately Satisfactory.

86. The Borrower designed and implemented a successful project, yet some adjustments would likely have allowed for greater progress towards the PDO. The overall Borrower performance is in line with the Overall Outcome Rating.

6. Lessons Learned

- **Leveraging funds from other institutions, as in the case IPARD funds from the EU, is a complex process which requires strong coordination and partnership.** Partnering with the EU proved to be highly beneficial to the project which was built on a set of analysis carried out by EU consultants. This ensured aid coordination across a common objective to help the Borrower meet the EU accession agenda in the agricultural sector and satisfied the necessary institutional arrangements. But this coordination effort is also costly in terms of time and funding since it requires frequent meetings, trainings, and travel. In view of the number of stakeholders, it would be important in the future to plan for additional meetings, trainings, and travel;

- **Institutional development does take time**, and in fact the original implementation period was not sufficient. Even to complete the construction of the headquarters building during the four years of implementation period was challenging. Given the institutional development focus of the project, the balance between infrastructure, equipment, and technical assistance is often difficult to reach. The Government was eager to use existing TA funded under the EU, but coordination and proper sequencing is not always easy to achieve;

- The **institutional setting** where project activities were coordinated by long-term staff of the relevant units of MAFWE. This contributed to project sustainability in the long run, but it also created implementation delays in the short run. Given the long term institutional objectives of the project, this is to be considered as a useful arrangement; and

- **Institutional development of irrigation management** is a long and continuous process. The period since the previous centralized socialist irrigation institutions started to reform has not yet been sufficient to complete the decentralization process to make them fully demand-driven and financially sustainable. In climatic conditions where irrigation is supplemental (i.e., where irrigation supplements natural precipitation, such as in the FYR Macedonia), this process is going to take even longer, since in some years irrigation may be of limited benefit. Because of this, a continued Government commitment is imperative.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies

87. The Borrower had no comments.

(b) Cofinanciers

88. Not applicable

(c) Other partners and stakeholders

89. None.

Annex 1. Project Costs and Financing

(a) Project Cost by Component

Components	Appraisal Estimate (EUR million)	Actual/Latest Estimate (EUR million)	Percentage of Appraisal
Strengthening MAFWE's administrative and management capacity in accordance with EU accession requirements	8.68	8.48	98%
Supporting MAFWE's ability to deliver EU rural development funds	2.31	2.88	125%
Developing effective veterinary capacity	2.61	2.85	109%
Completing reform of irrigation sector	3.92	3.16	81%
Total Baseline Cost	**17.52**	**17.37**	**101%**
Physical Contingencies	0.37		
Price Contingencies	0.79		
Total Project Costs	**18.68**	**17.37**	**93%**
Front-end fee PPF	0	0	
Front-end fee IBRD	0	0	
Total Financing Required	**18.68**	**17.37**	**93%**

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower		6.12	3.51	57%
International Bank for Reconstruction and Development		20.00	20.93	105%

Annex 2. Outputs by Component

Component 1: Strengthening MAFWE's administrative and management capacity in accordance with EU accession requirements

90. The component established the administrative structures required to handle EU funds and ensure compliance. This included an Integrated Administration and Control System (IACS), which includes a computerized database to record aid applications and payments, a Farm Register, a Land Parcel Identification System (LPIS), and an Animal Registration and Identification System. In addition, a standardized Agricultural Information System (AIS) was developed. It comprises a Farm Accountancy Data Network (FADN), Agricultural Statistics (AS) including Economic Accounts for Agriculture (EAA), and a Market Information System (MIS).

1 (a) Initiation of an Integrated Administration and Control System (IACS)

91. Before the project, MAFWE already had some elements of the structures required for the IACS, but the system was not fully computerized and few farmers were registered. The databases were not integrated and the institutional and technical management systems were still at an early stage. The Government had an Animal Identification and Registration System operated by the Veterinary Department and nearly all cattle had been registered, with ear tags, and an effective reporting and database system is in place. The Land Parcel Register based on aerial surveys was available for some regions. The MAFWE has been implementing a pilot vineyard cadaster project supported by an EU-funded project that covered about one-third of the area under vineyards. In this case, parcel information along with ownership characteristics are transferred into digitalized form based on aerial survey maps.

92. The project supported the development of an integrated Farm Register, with information characteristics that describe agricultural holdings in terms of farm ownership, physical production structure and support scheme claims. The system is required for policy formulation and administration of support policies in the agricultural sector. The Farm Register was integrated with databases and registers already existing, including the Animal Identification and Registration System and the Vineyard Cadaster System. The Farm Register Unit is responsible for management of the Farm Register. The project provided appropriate IT (hardware and software), based on a common IT platform with proven consistency through operational procedures and methodology for data flow and data management. Along with the design of the technical infrastructure, the project also provided training of dedicated MAFWE personnel from the Policy Analysis and AIS Department, and provided financial support for establishing the system and technical assistance as required.

93. The project supported the development of a Land Parcel Identification System (LPIS), which together with the Farm Register forms the backbone of an efficient system for the administration and control of national policies and programs for direct support in the agriculture sector. Information on agricultural land parcels and ownership characteristics is maintained and continuously updated on the register by the Land Register Unit of the Land Policy Department in MAFWE. Being part of the IACS, the LPIS is linked with the integrated Farm Register managed by the Policy Analysis and AIS Department. The project also helped furnish regional offices, and provided training and technical assistance as required.

1 (b) Establishment of Agriculture Information System (AIS)

94. MAFWE, as the state institution responsible for agriculture and agricultural information, needs to set up a standardized agriculture information system (AIS). AIS can differ among countries, but particularly in the EU and in the candidate countries the minimum components required for EU harmonization include: Farm Accountancy Data Network (FADN), Agricultural Statistics (AS) including Economic Accounts for Agriculture (EAA) and Market Information System (MIS).

95. The Farm Accountancy Data Network (FADN) is an important component of the AIS, being the basic tool used in the creation of the CAP. MAFWE had established some elements of the FADN, but there was no overall system to monitor the economic standing of agricultural holdings and therefore it did not comply with the EU standards. The Farm Monitoring System (FMS), which is operated by the National Extension Agency (NEA) based in Bitola, provided data from individual farms and was the only financial and technical survey on farm economics in the country. The system had been in place since 2001, with a computer network installed throughout the regional offices, and was updated in order to comply with the quality of collection and processing of data to the standards needed for introduction of the national network for monitoring and collection of accounting data of the farms. However, the system included only a small number (less than 450) of surveyed farms, and budgetary limitations have restricted the collection of data over recent months. The project provided the necessary know-how and financial support for sustained implementation of the FADN. The project provided technical assistance, training of staff and financial support for operating the FMS to a satisfactory level, including regular visits to participating farmers and with a sufficient sample size. The FADN was developed by the NEA and the Liaison Agency under oversight of MAFWE staff in the Policy Analysis and AIS Department.

96. The Agricultural Market Information System (AMIS) is an important and useful service for small farmers in re-orienting their commercial production, through facilitating arbitrage and price convergence across regions and greatly increasing the efficiency of markets. The AMIS is able to continuously provide the Government with relevant information on prices and quantities traded internally and externally, which are of key for business and policy formulation. The development of a sustainable AMIS, especially for some important agricultural sub-sectors, is also required for the process of establishment of the Common Market Organization under the CAP. Before the project, the Agricultural Unit of the State Statistical Office (SSO) collected prices on a weekly basis and published reports on a monthly basis. Prices are collected at wholesale, livestock and at green markets in different locations. They include the highest price, the lowest price and the most frequent one, but averages were not calculated. There was limited analysis of the data. The integrated system developed within MAFWE for policy formulation and monitoring as well as for reporting purposes to the EU at the time of accession. Different stakeholders were associated in establishing the system, such as groups of producers and SSO, but MAFWE will be responsible for organizing the integrated system needed for policy formulation and monitoring as well as for EU reporting purposes. The project provided the necessary IT equipment; training of staff; financial support for market data collection and dissemination and other proposed market-related activities; and technical assistance as required. The SSO will continue to be a source of data for the AMIS along with other sources.

1 (c) Strengthening the State Agricultural Inspectorate

97. It is expected that EU accession will place additional burden on the State Agricultural Inspectorate (SAI). Inspections play an important role in the different aid schemes financed by pre-accession and later on CAP funds, by controlling and verifying the facts on which payments are made. The integrated control system as a part of the overall IACS consisted of administrative

checks on aid applications including a verification of the eligible area and the corresponding payment entitlements, supplemented by a system of on-the-spot checks to verify eligibility for aid.

98. At the beginning of the project, fewer than 30 agricultural inspectors were in charge of controlling and monitoring the implementation of around 20 legal acts under the competence of MAFWE. The agricultural inspectors performed tasks based on the former Yugoslav legal framework and their linkages with other relevant inspection services were weak or non-existent. Their organization, human capacity and technical equipping did not seem able to respond to existing responsibilities, let alone future responsibilities.

99. The project improved the ability of the agriculture inspection services to carry out their duties within the context of harmonization with the EU acquis communautaire by improving the control procedures, technical skills, and operational efficiency of the SAI. The project supported the improvement and streamlining of:

- The organization of the Agriculture Inspection Services and their role in MAFWE, including cooperation with other MAFWE organizational units, governmental bodies, and coordination/unification with other inspection services.
- The internal organizational structure of the Agriculture Inspection Services.
- The working procedures and methodologies, including timing of checks, number of checks performed, work plans and reporting, size of control samples, sample-taking methodology, and financial consequences of non-compliance.
- The technical, communication and transportation resources available to the Agricultural Inspection Service.
- The human resources of the inspection services and training of inspectors.
- The internal supervision and quality control of the inspection work, to ensure transparency, fairness, etc.

1 (d) Establishing adequate institutional capacity in MAFWE

100. The establishment and further functioning of the IACS, AIS and Agriculture Inspection Services required adequate administrative capacity. MAFWE was reorganized and established a more functional structure by putting in place new organizational units, transforming the existing units and strengthening the internal procedures for increasing efficiency. Units established and/or strengthened include the Policy Analysis and AIS Department, the Project Cycle Management Unit, the Human Resources Development Unit, the Budget Planning Unit, and the MAFWE regional offices. The project supported capacity-building needs in the Rural Development Department under Component 2. Under Component 1, the project established or strengthened the capacity of the following administrative departments or units of MAFWE:

- Policy Analysis and AIS Department: This department developed appropriate human and technical capacity, including training on quantitative techniques for impact assessment of policy and regulatory changes, especially those related to approximation with the EU acquis, and to support reforms during the EU accession process. The department established and operated the integrated farm register, and it is providing suitable inter-institutional cooperation and/or managing the process of contracting different institutions in the FADN and MIS system, including providers of extension services, agricultural research, education and statistics etc. The project provided support for training of staff in

the department as well as IT equipment described for the registers and databases; and incremental operating costs.

- Project Cycle Management Unit: The project built capacity for a Project Cycle Management Unit. The project provided support for training of at least four new employees (PCM specialists) to ensure the Unit's operational effectiveness.
- Human Resources (HR) Development Unit: The project provided technical assistance, training, and other resources for the strengthening of the HR Development Unit that became able to perform training needs assessments that form the basis for the preparation of an annual training program for MAFWE employees, as well as to undertake the following regular HR activities: HR planning and analysis; equal employment opportunity; staffing; HR development; compensation and benefits; health, safety, and security; and employee and labor/management Relations.

101. A large share of the funds for this component went to finance the re-building of the MAFWE headquarters. The new building is much larger than the previous one and can accommodate most staff of the ministry in one location. The new building is safer and more energy efficient, more elegant and orderly, and was designed to host computer servers and other IT equipment for the safe storage of data.

Component 2: Supporting MAFWE's ability to deliver EU rural development funds

2 (a) Supporting establishment of the IPARD Paying Agency (PA)

102. This component supported the government's efforts to overhaul its agriculture policy implementation capacity by establishing an EU-compliant IPARD Paying Agency (PA) and by strengthening MAFWE's Rural Development Department. This investment advances MAFWE's capacity to administer the dedicated national (CAP pillar 1 aligned) and EU (CAP pillar 2 modeled IPARD program) funds in a more transparent and equitable manner over the pre-accession period. Thanks to this component, the PA was accredited by the EU in 2009 and the Borrower was able to attract EU IPARD funds, even if the quantity of fund attracted did not achieve the target (see table below).

Table 2 - IPARD Achievements (Euros million)

Year	EU Allocation	Applications	Contracted	Payments	Contracted versus applications	Payments versus previous year commitments
2007	2.1					
2008	6.7					
2009	10.2	18.6	3.9	1.2	21%	
2010	12.5	13.6	4.1	0.9	30%	54%
2011	16.0	22.6	6.7	0.9	30%	37%
2012*	19.0	7.4	0.6	0.1		
2007-11 TOTAL	**47.5**	**54.7**	**14.7**	**2.9**	**27%**	**20%**
End of Project Targets[5]			45.1	36.1	95%	80%

[5] The targets of intermediate indicator 5 were "*95% of the planned IPARD funds for the calendar year committed, 80% of previous year commitments disbursed*". Absolute amounts were calculated ex-post on the basis of these percentages.

* 2012 data are partial since the review of the second call is still ongoing, thus they have not been included in totals

2 (b) Supporting PA capacity building needs

103. The project supported the PA's capacity building needs for: (a) taking over the responsibility for the administration of the national direct agriculture payments; and (b) administering the newly accredited measures under the IPARD program. The project introduced a system of checks and controls for the payments of the national subsidies in the context of setting up an IACS. It helped adopt the Farm Registry, whose development was supported by Component 1. The Farm Registry enabled the PA to implement the administrative and control functions for the direct agriculture payments.

104. The project supports the PA in its efforts to: (a) establish beneficiary entitlement registry; (b) develop farmer claims procedures and manuals; (c) determine risk analysis principles including cross checks and on-the-spot checks; (d) design a cross-compliance control system; (e) digitize authorization, payment, accountancy and control systems; and (f) draft manuals defining IACS procedures.

105. Since 2007, these systems administered US$487 million of various national programs to support the agricultural sector.

2 (c) Supporting an IPARD-tailored capacity-building program for rural advisory services

106. The project helped farmers and beneficiaries to apply for IPARD funding. It helped preparing the IPARD applications, proofs of eligibility for funding in the form of various official documents to prove that the individual or the business is not overly indebted, has been involved in farming and/or processing business for a number of years, does not have tax or social payments arrears, owns the land and/or business premises, has obtained the necessary permits if any civil works are to be funded, the investments comply with the national and/or EU environmental protection requirements, and others.

107. An important and forward-looking feature of the IPARD program is that often a portion of the grant is earmarked for purchasing advisory services. The share of these dedicated funds increases with the complexity of the investments that are supported by a particular measure. Thus, the IPARD program increased the demand for competent consultants. In this regard, the project provided technical assistance to support MAFWE introducing quality assurance for the IPARD-specific advisory services, both publicly and privately provided. It also supported the PA in coordination with MAFWE to develop IPARD specific training modules that were advertised nationwide which were open to all interested parties at no charge However, shortcomings of this activity may have contributed to the high share of IPARD applications rejected.

2 (d) Supporting capacity-building in the Rural Development Department

108. The Rural Development Department in MAFWE was restructured due to the separation of its previous implementation function from the newly-established Paying Agency. The project upgraded MAFWE's capacity as the managing authority for programming, monitoring and evaluation of rural development programs through training of employees, and support for a working group of experts established to prepare multi-annual IPARD plans and carry out ex-ante evaluations.

Component 3: Developing effective veterinary services

109. Due to legislative gaps, institutional weaknesses and insufficient control mechanisms, the Borrower's food safety capacity was assessed as weak at appraisal. The project contributed to increase testing and certification practices to meet standards in agricultural export markets. In the area of food safety, the main legal development had been the transposition of the EU regulation 178/2002 into the national Food Law in 2002, aligning national food safety standards with some, but not all of the principles of the EU regulation.

110. Before the project, institutional responsibilities in relation to the enforcement of national food safety standards were dispersed over different directorates and agencies within different Ministries. The Food Directorate of the Ministry of Health is responsible for inspection of food safety in general, whereas MAFWE's Veterinary Directorate (VD) and Directorate for Plant Protection (DPP) were responsible for controlling livestock and plant health. The project helped establish the unified Food Safety and Veterinary Agency by merging the relevant departments of the MAFWE (Veterinary) and Ministry of Health (Sanitary Inspection). This institutional reform brought together the country's Food Safety and Animal Health Authorities and by doing so, streamlined and improved consumer protection as well as the inspection services it provides to the export/import industry.

3 (a) Strengthening the Veterinary Directorate (VD)

111. The VD plays a critical role in modernizing the livestock and meat processing sector, as well as improving compliance with relevant legislation that will come into force as part of the adoption of the EU acquis. The project supported the implementation of the VD business plan and the consequent strengthening of the veterinary services through the following investments:

- Training and study tours to upgrade specialized knowledge and exchange implementation experience with existing EU member countries.
- Information technology to develop the Veterinary Information System (VIS)
- Testing equipment for veterinary inspectors to collect samples.
- Vehicles for veterinary inspectors.
- Equipment such as containers, mass culling, gas applicators, and pumps for disinfection for contingency plan implementation to combat disease such as FMD, swine fever, and avian flu.
- Equipment, including ear tags, a GIS system and GPS devices, PDA readers (portable barcode readers) to complete Animal Identification and Registration activity, focusing on small ruminants (sheep and goats).
- A feasibility study for options regarding collection, transport, disposal of contaminated animal by-products (regional landfills in combination with incinerators, or other solutions), an environmental impact assessment for the option that is selected, and resources for financing selected option.
- Public awareness campaign directed to producers (slaughterhouses, dairies, food processing SMEs, especially those exporting to the EU) informing them of design and construction criteria for farms and processing units, requirements to production and marketing of safe foods (GMP. HACCP etc.), including for export markets.

3 (b) Strengthening the Veterinary Laboratory (VL) and the Food Institute Laboratory (FIL)

112. The laboratory provides services to the VD on a contractual basis. The project supported their ISO 17025 certification and national accreditation and international accreditation for a range of important tests. A total of 7 health and 68 food hygiene tests were accredited. The project supported upgrading the VL and the FIL through investments in equipment.

Component 4: Completing reform of irrigation sector

4 (a) Liquidation of WMOs

113. The project supported the completion of the liquidation of 5 WMOs with liquidation procedures already initiated (WMO "Vodostopanstvo-Kumanovo" in Kumanovo; WMO "Vodostopanstvo-Pelagonija" in Bitola; WMO "Sterna" in Prilep; WMO "Malesevsko Pole" in Berovo; and WMO Vodostopanstvo "Vardar" in Skopje) and 4 WMOs still under operation (WMO "Ohridsko Ezero" in Ohrid; WMO "Mantovo" in Radovis; WMO "Strumi~ki sliv" in Strumica; and WMO "Gevgelisko-Valandovsko Pole").

114. Severance payments: The size of the severance packages was established by the Court, and amounted to €2 million, net of pension payments and social contributions already settled by the government.

115. The Bank loan financed 100% of the severance package costs associated with these four WMOs, i.e. expenditures for severance payments, limited compensations for arrears (salaries and allowance) towards retrenched staff, and pension and social contributions for about 1,100 staff. In addition, the project financed the cost of audit of the 4 WMOs to be liquidated and the cost of a local expert to assist with the overall liquidation process. Payments for the severance package were made against the staff listed in the auditor's report.

4 (b) Establishing new Water Economies (WEs)

116. The project supported the establishment of 6 WEs, namely WE Kumanovo, WE Strumica-Radovis, WE Pelagonia, WE Prilepsko-Pole, WE Skopsko-Pole, and WE Ju'novardarska Dolino. The project provided the newly established WEs with some initial financial support to carry out their new functions. This support included some initial basic equipment and technical expertise to assist with the overall process. Thanks to the project effort, water fee payments by members of the eater economies increased from 10% to 70% in 2011 and 54% in 2012. Annual variability can be consequence of the need for water (irrigation is supplemental in FYR Macedonia) or exogenous factors such as the financial crisis.

4 (c) Strengthening the Water Economy Directorate

117. The project supported the Water Management Directorate (WMD) to improve its capacity to oversee the establishment of new Irrigation Water Communities (IWCs) and WEs and monitor their performance as well as to carry out improved planning of water resources in the country. Activities supported under the project include:

- Implementation of the already adopted systematization plan for the WMD, including the filling of 12 new permanent positions.
- Development and installation of a full GIS system for water and land management, surface water, and registry of water users with adequate licensing, using remote sensing data to monitor and evaluate performance of irrigation and drainage system performance.
- Development and capacity building for an IWC/WE support unit to help establish new IWCs/WEs, monitor their performance, and provide technical assistance and support to water users. This will include: provision of legal and technical advice for formation and

establishment of new IWCs/WEs; publicity, communication and awareness campaigns about establishment of IWCs/WEs including study tours to already established IWCs/WEs; training and capacity building programs on financial management, technical management (system operations and maintenance), proper water management for multiple and sometimes competing stakeholders; baseline and periodic surveys to gauge the effectiveness and efficiency of services delivered by IWCs/WEs; and crop budget surveys to assess agriculture performance.

Annex 3. Economic and Financial Analysis

(including assumptions in the analysis)

Economic rate of return: 23.8%
NPV: EUR 8.2 million

118. An ex-ante economic and financial analysis of the project was carried out at the project appraisal. Therefore the current ex-post analysis is comparing the actual project results and performance with the baseline situation applying the same analytical approaches and methods that were used at appraisal.

119. Primary data and information were collected from the project implementation reports. Some data were also collected by a local short-term consultant recruited by the World Bank. A conservative approach was applied to the presented analysis.

Table 3. Economic Returns of Ex-Ante and Ex-Post Economic Analyses

	Investments, EUR million	Economic rate of return	
		Ex-Ante	Ex-Post
Component 1. Strengthening MAFWE's administrative and management capacity in accordance with EU accession requirements	8.7 out of which 4.8 for MAFWE headquarters	N/A	12.2% for MAFWE headquarters alone
Component 2. Supporting MAFWE's ability to deliver EU rural development funds	2.3	48%	30.2%
Component 3. Developing effective veterinary capacity	2.6	80%	69.4%
Component 4. Completing reform of irrigation sector	3.9	N/A	36.8%
Total Project	**18.7**	**N/A**	**23.8%**

Component 1. Strengthening MAFWE's administrative and management capacity in accordance with EU accession requirements.

120. Since quantifying the impact of institutional strengthening is extremely difficult, a qualitative analysis was carried out at project appraisal to assess the benefits deriving from the component's activities. The component aimed to improve policy design and analysis, impact monitoring and budget management within MAFWE.

121. According to the PAD the Ministry's annual budget is significantly increased reaching € 34 million in 2007. Increases were most dramatic for the first pillar of MAFWE policy, the Agricultural Development Program (ADP), which mainly provides agricultural subsidies. It was expected that to prepare capturing the benefits from pillar one of the EU Common Agricultural Policy, agricultural subsidies would increase from € 8.0 in 2005 to € 20 million in 2010, and funding of the MAFWE's second pillar, the National Rural Development Program (NRDP), would increase from € 2.2 million in 2007 to € 3.3 million in 2010.

122. In fact, the MAFWE's annual budget after the peak growth in 2007 decreased to € 24.9 million in 2011 and € 23.4 million in 2012. While the annual allocation of the ADP continued to

grow and reached € 87.3 million in 2010 and € 113.6 million in 2012 (see table 2 below). Financing the NRDP is also significantly increased and reached € 5.4 million in 2010 and € 11.5 million in 2012.

Table 4. MAFWE's Annual Budget and Cost of the Ag. Development Program
(2006-2012, EUR million)

	2006	2007	2008	2009	2010	2011	2012
Annual Budget of MAFWE	23.8	32.8	25.0	25.3	27.5	24.9	23.4
Annual cost of the Agricultural Development Program of FYR Macedonia	16.8	20.3	41.6	64.3	87.3	102.2	113.6
Annual cost of the National Rural Development Program of FYR Macedonia in 2006-2012	0.1	0.7	2.5	6.9	5.4	10.8	11.5

Source: MAFWE

123. According to the PAD, the Ministry had significant shortcomings in its designing, planning and implementation of the subsidies, which compromised the effectiveness of the subsidy program. Support to agriculture in the form of subsidies was highly variable and unstable, creating unnecessary risk and uncertainty for farmers. Subsidies were distributed largely on an ad-hoc and political basis rather than a systematic examination of the specific merits of each type of measure, and the Ministry lacked a clear statement of the purpose and expected impact of its various subsidy measures. It also lacked the information and means to forecast uptake and report and analyze subsidy expenditures, and thereby calculate efficiency and impact of subsidies. There was also poor targeting, monitoring and verification of subsidies. It was expected that by improving the way that agricultural subsidies were managed the project would considerably increase the effectiveness of the subsidy program and its impact on agricultural growth.

124. It cannot be claimed that the significant increase in funding of the Ministry's programs is fully attributable to the impact of the project activities. However, it can be argued that such project activities as the establishment of an Integrated Administration and Control System (IACS) and an Agriculture Information System (AIS), strengthening the Agricultural Inspection Services and establishing adequate institutional capacity in MAFWE in general, contributed significantly to the strengthening of the Ministry's institutional capacity and made possible a significant increase in funding the Ministry's programs.

125. As an illustrative example of the component's activities, a cost-benefit analysis of a new building of the MAFWE was carried out. According to the Ministry's estimates, the construction of this building resulted in a significant cost saving of about € 0.5 million per year. A cost-benefit analysis of this construction shows a good investment return: the economic rate of return is 12.2%.

Table 5. Rate of return of the new MAFWE building
(EUR million)

	2007 (PY1)	**2008** (PY2)	**2009 (PY3)**	**2010 (PY4)**	**2011 (PY5)**	**2012**	**2013**	**2014**	**2015/ 2021**
Cost savings (economic)	-	-	-	-	-	0.5	0.5	0.5	0.5
Cost of construction (economic)	-	-	-	1.2	1.4	1.1	-	-	-
Net incremental benefits	-	-	-	- 1.2	- 1.4	- 0.6	0.5	0.5	0.5
E-IRR	12.2%								

Component 2. Supporting MAFWE's ability to deliver EU rural development funds

126. The component facilitated the government's access to the EU IPARD funds. It was expected that the total amount of the EU IPARD funds would be €31.3 million, distributed over four years as follows: € 2.1 million in 2007, € 6.7 million in 2008, € 10 million in 2009 and € 12.5 million in 2010.

127. As it was mentioned in the project PAD, the funds were made available to candidate countries under the predecessor to the IPARD program, the Special Accession Programme for Agriculture and Rural Development (SAPARD). Several countries that implemented the SAPARD program were not able to access all of the SAPARD funding potentially available to them because they did not have the necessary institutional mechanisms in place, and because beneficiaries had difficulty in applying for funds.

128. Countries also experienced dead-weight losses in the SAPARD program as funds were taken up by wealthier farmers better able to negotiate complicated application procedures and provide pre-financing, but who could have accessed other sources of capital for financing investments in their enterprises. It was expected, that this component would help the country avoid these problems by putting the institutional structures in place in a timely manner and promoting equitable access to IPARD funds among potential beneficiaries.

129. The ex-ante economic analysis calculated for this component was based on the assumptions of the uptake of IPARD funds in "with project" (WP) and "without project" (WOP) scenarios. It was assumed, that since the project investments would finance essential building blocks of the IPARD PA, the costs in the WP scenario would be the same as those WOP, but the investments would be made earlier.

130. As the investments would be made earlier, the benefits of a functioning paying agency would also derive earlier. Based on these assumptions on uptake and the IPARD funds available, it was estimated that in the WOP scenario a total of € 9.5 million of IPARD funds would not be accessed in the period 2007-2010. However, in the WP scenario, this figure would decrease to € 4.4 million. It was estimated that over the project period the IRR for this component would be 48%.

131. Due to the fact that the actual situation with the uptake of IPARD funds developed during the project implementation was different from that planned at the project appraisal, some changes were made in WOP scenario of the presented ex-post economic analysis. For example, the actual uptake of the IPARD funds started in 2009, i.e. two years later than planned and the total amount

of contracted IPARD funds over four years (2009-2012) was only € 7.8 million, while the actual reimbursement over the indicated period of time was even lesser – only € 3.0 million. It is clear that the assumptions for the IPARD funds uptakes made under at appraisal were too optimistic. Moreover, the WOP scenario should have been envisaged not only the delay in time, but the fact that the IPARD funds would not be allocated.

132. Therefore, based on the assumption the IPARD funds uptake in WOP scenario would be close to zero, the economic IRR is 30.2% based on the analysis of six-year period from 2007 to 2012 with applying the benefit phasing for 3 years and 80% success factor (see Table 4 below). This investment return is less than that planned at appraisal (48%), however, as it is mentioned earlier, this is due to overoptimistic WOP assumptions made in PAD.

Table 6. Cost-benefit analysis of the increased IPARD financing
(EUR million)

	2007 (PY1)	**2008 (PY2)**	**2009 (PY3)**	**2010 (PY4)**	**2011 (PY5)**	**2012**	**2013**	**2014**
With project (contracted)	-	-	1.97	2.08	3.40	0.32		
Without project	-	-	-	-	-	-	-	
Incremental benefits	-	-	1.97	2.08	3.40	0.32		
Phasing of deriving of the incremental benefits:								
of 1st PY			50%	30%	20%			
of 2nd PY				50%	30%	20%		
of 3rd PY					50%	30%	20%	
of 4th PY						50%	30%	20%
Success factor			80%	80%	80%	80%	80%	80%
Deriving of incremental benefits (with phasing):								
of 1st PY			0.99	0.59	0.39			
of 2nd PY				1.04	0.63	0.42		
of 3rd PY					1.70	1.02	0.68	
of 4th PY						0.16	0.10	0.06
Subtotal			0.99	1.63	2.72	1.60	0.78	0.06
Total benefits (with success factor)			0.79	1.31	2.18	1.28	0.62	0.05
Cost of Component 2 (economic)	0.98	1.20	0.67	-				
Net incremental benefits	- 0.98	- 1.20	0.12	1.31	2.18	1.28	0.62	0.05
E-IRR	30.2%							

Component 3. Developing effective veterinary capacity

133. The component's activities aimed to strengthen the overall capacity of the Veterinary Directorate to undertake effective controls in the animal and public health sectors, in line with the current and relevant EU veterinary practices, that in turn reduced the incidence of animal and human diseases. The ex-ante economic and financial analysis for this component was based on

expectation of the reduced incidence of key indicative animal diseases: ovine/caprine brucellosis, bovine brucellosis and tuberculosis and other zoonoses.

134. The reduced incidence predictions, and cost assumptions incurred dealing with the diseases, provides the basis for calculations of the savings resulting from reductions in slaughter and compensation costs for diseased animals, destruction of milk from infected animals, and reductions in human cases that require treatment. Savings were also calculated from introduction of improved laboratory diagnostic capacity that allows for switching from expensive and time consuming CFT tests for brucellosis to the cheaper and faster ELISA method.

135. The present ex-post analysis was based on the actual data. For example, the actual number of the sheep and goats was 943,988 in 2007 and it decreased to 839,409 sheep and goats in 2011; the actual number of cattle was 253,766 in 2007 and it reached 265,299 heads in 2011 (while it was only 750,000 sheep and goats and 200,000 heads of cattle taken into account in the ex-ante analysis).

136. Besides, due to the fact that the impact of the component and its benefits will continue deriving after the project completion, a 15-year period was applied in the analysis to identify the value of future benefits.

137. The actual reduction in incidence of human and animal diseases in 2007-2012 and its forecast estimates up to 2021 are presented in the Table 5 below:

Table 7. Reduction in incidence of human and animal diseases

	Unit	2007 (PY1)	2008 (PY2)	2009 (PY3)	2010 (PY4)	2011 (PY5)	2012-2021
Number of sheep and goats	head	943,988	949,621	849,374	854,112	839,409	822,621
Growth/Contraction rate	%		0.6%	-10.6%	0.6%	-1.7%	-2%
Number of cattle	head	253,766	253,473	252,521	259,887	265,299	267,952
Growth/Contraction rate	%		-0.1%	-0.4%	2.9%	2.1%	1%
Number of animals tested for brucellosis	head	100,000	100,000	150,000	150,000	150,000	150,000
WOP							
Ovine/caprine brucellosis in animals	%	2%	2%	2%	2%	2%	2%
Ovine/caprine brucellosis in animals (number of cases)	head	18,880	18,992	16,987	17,082	16,788	16,452
Bovine brucellosis and tuberculosis	%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Bovine brucellosis and tuberculosis (number of cases)	head	1,269	1,267	1,263	1,299	1,326	1,340
Ovine/caprine brucellosis in humans	cases	350	350	350	350	350	350
Salmonella in humans	cases	500	500	500	500	500	500
WP							
Ovine/caprine brucellosis in animals	%	2%	1.7%	1.3%	0.3%	0.2%	0.01%

Ovine/caprine brucellosis in animals (number of cases)	head	18,978	16,052	11,256	2,865	1,312	112
Bovine brucellosis and tuberculosis	%	0.5%	0.4%	0.3%	0.2%	0.2%	0.2%
Bovine brucellosis and tuberculosis (number of cases)	head	1,282	1,109	790	1,056	432	656
Ovine/caprine brucellosis in humans	cases	381	490	287	163	96	82
Salmonella in humans	cases	281	395	159	184	281	245
Reduction of incidence:							
Ovine/caprine brucellosis in animals	head	-	2,940	5,731	14,217	15,476	16,340
Bovine brucellosis and tuberculosis	head	-	158	473	243	894	684
Ovine/caprine brucellosis in humans	cases	0	0	93	217	284	298
Salmonella in humans	cases	219	105	341	316	219	255

138. The actual costs of some human and animal diseases control and treatments that were used in the ex-post analysis are presented below[6]:

Table 8. Actual costs of disease control and treatment

Saving Costs	Unit	Amount
Re Ovine/caprine brucellosis		
Destruction and compensation of infected animal	EUR/head	61.5
Destruction of milk from infected animal	EUR/head	9.2
Hospitalization and treatment of human case	EUR/case	707.7
Difference in price between old and new testing methodology	EUR/head	1.5
Re Bovine brucellosis and brucellosis		
Destruction and compensation of infected animal	EUR/head	123.1
Destruction of milk from infected animal	EUR/head	166.2
Re Salmonella		
Hospitalization and treatment of human case	EUR/case	184.6

139. The cost-benefit analysis based on the actual data and assumptions in presented Tables 5 and 6 above indicates that the E-IRR for Component 3 is 69.4%. This result is below the return that was estimated at the project appraisal (80%), however it is still acceptable. It should be also noted that the ex-post analysis is based on 15-year period from the beginning of the project (2007- 2021), while the ex-ante analysis was based only on a four-year project period.

[6] All these costs were not funded by the project, but were borne by the individuals or health services.

Table 9. Cost-benefit analysis of reduction in incidence of human & animal diseases
(EUR)

	2007 (PY1)	2008 (PY2)	2009 (PY3)	2010 (PY4)	2011 (PY5)	2012 - 2021
Incremental Benefit Streams:						
Ovine/caprine brucellosis						
Destruction and compensation of infected animal	-	180,949	352,706	874,907	952,380	1,005,564
Destruction of milk from infected animal	-	27,142	52,906	131,236	142,857	150,835
Hospitalization and treatment of human case	-	-	65,815	153,569	200,985	210,892
Difference in price between old and new testing methodology		147,692	221,538	221,538	221,538	221,538
Bovine brucellosis and brucellosis						
Destruction and compensation of infected animal	-1,621	19,491	58,167	29,961	110,092	84,155
Destruction of milk from infected animal	- 122	1,462	4,363	2,247	8,257	6,312
Salmonella						
Hospitalization and treatment of human case	40,431	19,385	62,954	58,338	40,431	47,077
Total Incremental Benefit streams	38,688	396,121	818,449	1,471,798	1,676,540	1,726,373
Cost of Component 3 (economic)	20,049	1,411,355	973,252	419,382	300,000	300,000
Net Incremental benefits	18,640	-1,015,234	-154,803	1,052,415	1,376,540	1,426,373
E-IRR	**69.4%**					

Component 4. Completing reform of irrigation sector

140. The ex-ante economic analysis of the liquidation of Water Management Organizations (WMOs), of which the retrenchment program of WMOs staff was an integral part, was mainly based on expectation of labor costs savings. It was envisaged that the liquidation of the four WMOs that was financed by IBRD resources would contribute significantly to the successful reform of the irrigation sector country-wide. For example it was expected that the water users would save about €0.5 million annually in salaries associated with the reduction of redundancies from 292 permanent staff to about seventy permanent staff and about thirty seasonal staff.

141. It was planned that the wage bill savings including pension payments and social contributions would overtake the financial costs of retrenchment estimated in about 4 years. Furthermore, the reduction in the number of staff involved in water management would result in a drastic reduction in the operation and maintenance costs of irrigation services, as those experienced under the Irrigation Reform and Restructuring Project - from about US$200 per

hectare (when WMOs were responsible for delivery of irrigations services) to US$100 per hectare (after the establishment of IWCs and WEs).

142. The computation of the savings in labor costs presented below was based on the actual salary rates. It shows that the annual savings in labor costs is € 770,400. This amount makes a significant contribution in the benefit flow of entire project. The economic IRR of the component is estimated at 36.8% (see Table 8 below).

Table 10. Savings in Labor Costs (Component 4)

	Unit	2007 (PY1)	2008 (PY2)	2009 (PY3)	2010 (PY4)	2011 (PY5)	2012 - 2021
WOP							
Number of permanent staff	person	292	292	292	292	292	292
Annual salary rate	EUR	3,600	3,600	3,600	3,600	3,600	3,600
Total labor cost	EUR	1,051,200	1,051,200	1,051,200	1,051,200	1,051,200	1,051,200
WP							
Number of permanent staff	person	70	70	70	70	70	70
Annual salary rate	EUR	3,600	3,600	3,600	3,600	3,600	3,600
Subtotal labor cost	EUR	252,000	252,000	252,000	252,000	252,000	252,000
Number of permanent staff	person	30	30	30	30	30	30
Annual salary rate (6 months)	EUR	960	960	960	960	960	960
Subtotal labor cost	EUR	28,800	28,800	28,800	28,800	28,800	28,800
Total labor cost	EUR	280,800	280,800	280,800	280,800	280,800	280,800
Savings in labor costs	EUR	770,400	770,400	770,400	770,400	770,400	770,400
Cost of Component 4 (economic)	EUR	556,502	2,893,797	170,090	123,750	94,923	0
Net Incremental benefits	EUR	213,898	-2,123,397	600,310	646,650	675,477	770,400
E-IRR	**36.8%**						

Overall Project Economic Analysis

143. The period of analysis is 15 years to account for the long-term impact of the project interventions. The scenario presented in the economic analysis is conservative. The analysis presents the balance of costs and benefits of the project and it is based on the actual data and results of the project.

144. The analysis identified the quantifiable benefits that relate directly to the activities undertaken following implementation of the project, or that can be attributed to the project's implementation. The incremental quantifiable benefit stream comprises of three main elements:

(i) benefits deriving from the increased IPARD financing, (ii) cost savings from reduction of incidence of human and animal diseases and (iii) savings in labour costs.

145. The cost-benefit models described above were used for the calculation of the overall benefit streams, on the basis of economic prices. All local costs were converted into their approximate economic values using a Standard Conversion Factor (SCF) of 0.8[7]. A Shadow Wage Rate of 0.7 was also introduced into the analysis to identify the opportunity cost of labour in the project's civil work costs. All values are given in constant 2013 prices.

146. Given the above mentioned benefit and cost streams, the Economic Internal Rate of Return (E-IRR) of the project is estimated at 23.8% which is above the minimum level (15%). The Net Present Value (NPV) of the Project's net benefit stream, discounted at 10%, is positive - EUR 8.2 million. The project economic analysis is presented in Table 9 below.

Sensitivity Analysis

147. Actual economic returns were tested against several hypothetic scenarios of the changes in benefits and costs that could have happened during the project implementation. The analysis shows that the E-IRR is equally sensitive to changes in costs and in benefits, these changes could not have a significant impact on the E-IRR, and the economic viability could not have threatened by either a 20% decline in benefits or by a 20% increase in costs. A fall in total project benefits by 20% and an increase in total project costs by the same proportion could have reduced the base E-IRR to about 16.7%-17.9%.

[7] This is to make all economic costs used in the economic analysis net of indirect taxes (VAT, duties, sale taxes, etc.) and indirect subsidies.

Table 11. Project Economic Analysis
(EUR million)

	2007 (PY1)	2008 (PY2)	2009 (PY3)	2010 (PY4)	2011 (PY5)	2012	2013	2014	2015 - 2021
Incremental Benefit Streams									
Benefits of increased IPARD financing	-	-	0.8	1.3	2.2	1.3	0.6	0.1	-
Cost savings from reduction of incidence of human and animal diseases	-	0.4	0.8	1.5	1.7	1.7	1.8	1.8	1.7
Savings in labor costs	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Cost savings of a new building of MAFWE	-	-	-	-	-	0.5	0.5	0.5	0.5
Total Incremental Benefit Streams	0.8	1.2	2.4	3.5	4.6	4.3	3.7	3.1	3.0
Project Costs (economic)	2.6	9.9	3.9	1.6	0.1	-	-	-	-
Net Incremental benefits	- 1.8	- 6.8	- 1.5	1.9	4.5	4.3	3.7	3.1	3.0
E-IRR	23.8%								
NPV @10% (EUR million)	8.2								

148. The project experienced some implementation delays and the analysis shows that it was quite sensitive to any further delays in deriving of the project benefits. For instance, a one-year delay in project benefits could have reduced the E-IRR to 17.9% from the actual 23.8%, while with a two-year delay, it could have fallen to approximately 14.1%.

149. In a hypothetic scenario when the country had not attracted any IPARD funds, the project E-IRR would have dropped to 16.5%, which is close to a borderline, although still acceptable. Conversely, if the country had attracted all IPARD funds as was envisaged in the project PAD, the project E-IRR would have increased up to 41.8%.

150. The summary results of the sensitivity analysis are presented in the following table.

Table 12. Sensitivity Analysis (hypothetical scenarios)

Sensitivity Analysis (15-year period)	Base case	Costs Increase			Increase of Benefits	
		+10%	+20%	+50%	+10%	+20%
E-IRR	**23.8%**	20.6%	17.9%	11.9%	27.3%	31.0%
NPV (EUR million)	**8.2**	6.9	5.5	1.6	10.3	12.4

Sensitivity Analysis (15-year period)	Base case	Decrease of Benefits					Delay of Benefits	
		-10%	-20%	- 30%	Without IPARD benefits	With full benefits of IPARD	1 year	2 years
E-IRR	**23.8%**	20.2%	16.7%	12.8%	16.5%	41.8%	17.9%	14.1%
NPV (EUR million)	**8.2**	6.0	3.9	1.6	4.3	8.9	5.6	3.3

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Julian A. Lampietti	Sector Leader	LCSSD	Design TTL
David G. Lugg	Agriculture Officer	FAO	Agricultural aspects
Bekim Imeri	Social Scientist	ECSSO	Operations officer & social safeguards
Amelia Branczik	Consultant	ECSSD	Ex-ante economic Analysis
Rita Cestti	Sr Rural Development Specialist	OPSOR	
Anna Georgieva	Country Sector Coordinator	ECSSD	
Sarah Leigh Hammill	Senior Program Assistant	ECSSD	
Nikola Ille	Senior Environmental Specialist	ECSEN	Environmental safeguards
Aleksandar Nacev	Consultant	ECSAR	Agricultural aspects
Philip Van der Celen	Consultant	ECSAR	
Carl-Fredrik von Essen	Consultant	ECSSD	Cost tables
Supervision/ICR			
William Sutton	Lead Economist	ECSAR	Initial supervision TTL
Malathi Jayawickrama	Sr. Operations Officer	ECSAR	Final supervision TTL
Asa Giertz	JPO/Consultant	ECSAR	Components 1&2
Daniel P. Gerber	Rural Development Specialist	ECSAR	Irrigation component
Dionisis Panagiotatos	Consultant	ECSAR	Food Safety Expert/ Veterinarian
Bekim Imeri	Social Scientist	ECSSO	Operations officer & social safeguards
David G. Lugg	Agriculture Officer	FAO	Agricultural aspects
Amelia Branczik	Consultant	ECSSD	
Aleksandar Crnomarkovic	Sr Financial Management Specialist	ECSO3	
Anneliese Viorela Voinea	Financial Management Analyst	ECSO3	
Nikola Ille	Senior Environmental Specialist	ECSEN	Environmental safeguards
Arben Maho	Procurement Specialist	ECSO2	Procurement
Antonia Viyachka	Procurement Specialist	ECSO2	Procurement
Maurizio Guadagni	Sr. Rural Development Specialist	ECSAR	ICR main author
Kairat Nazhmidenov	Economist	FAO	Ex-post economic analysis
Valencia M. Copeland	Program Assistance	ECSAR	

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD (including travel and consultant costs)
Lending		
FY07	42.15	242,469
FY08	4.16	12,284
Total:	**46.31**	**254,753**
Supervision/ICR		
FY08	29.12	123,876
FY09	47.86	152,996
FY10	34.88	115,607
FY11	29.25	122,045
FY12	23.09	91,209
FY13	15.94	98,500
Total:	**180.14**	**704,234**

Annex 5. Beneficiary Survey Results

151. There was no beneficiary survey.

152.

Annex 6. Stakeholder Workshop Report and Results
(if any)

153. There was no stakeholder workshop.

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

154. The Borrower had no comments.

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

None

Annex 9. List of Supporting Documents

Communication from the Commission on The Former Yugoslav Republic of Macedonia 2012 Progress Report
(http://ec.europa.eu/enlargement/pdf/key_documents/2012/package/mk_rapport_2012_en.pdf)

FYR Macedonia Agriculture and EU Accession. Achieving Macedonia's Agricultural Potentials, November 2006

Project Appraisal Document on a Proposed Loan of EUR 15.00 million for an Agricultural Strengthening and Accession Project, May 15, 2007

Project Implementation Status and Result Report

Project Aide-Memoires

Restructuring Paper on a Proposed Project Restructuring of the Agriculture Strengthening and Accession Project Loan Number IBRD 48610-MK, March 8, 2010

Restructuring Paper on a Proposed Project Restructuring of the Agriculture Strengthening and Accession Project Loan Number IBRD 48610-MK, January 3, 2011

THE CITY OF SKOPJE
Skopje serves as the Municipality Capital for each of these Municipalities.
SUTO ORIZARI
BUTEL
GJORCE PETROV
GAZI BABA
CHAIR
SARAJ
KARPOSH
SKOPJE
AERODROM
CENTAR
KISELA VODA
KOSOVO
SERBIA
BULGARIA
GREECE
ALBANIA
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21°E
22°E
23°E
42°N
41°N
To Pristina
To Nis
To Pernik
To Blagoevgrad
To Petrich
To Thessaloniki
To Elbasan
To Korçë
To Kozáni
Pelinci
Staro Nagorichane
Rankovce
Kriva Palanka
Kumanovo
Lipkovo
Chucher-Sandevo
Vratnica
Tearce
Jegunovce
Kratovo
Osogovske Mts.
Makedonska Kamenica
Delčevo
Arachinovo
Ilinden
Probištip
Tetovo
Zheino
Bogovinje
Brvenica
Sopiste
Petrovec
Studenichani
Zelenikovo
Vardar
Sveti Nikole
Kočani
Bregalnica
Vinica
Zrnovci
Obleshevo (Cheshinovo)
Karbinci
Lozovo
Pehcevo
Štip
Veles
Maleševske Mts.
Berovo
Radoviš
Chaska
Vrapchishte
Gostivar
Mt. Korab (2,753 m)
Rostusha (Mavrovo & Rostusha)
Zajas
Oslomej
Debar
Kičevo
Makedonski Brod
Gradsko
Rosoman
Negotino
Konche
Vasilevo
Centar Župa
Drugovo
Vraneshtica
Plasnica
Dolneni
Kavadarci
Demir Kapija
Strumica
Bosilovo
Novo Selo
Crni Drim
Kruševo
Prilep
Krivogashtani
Belchishta (Debarca)
Sopotnica
Valandovo
Star Dojran (Dojran)
Lake Dojran
Vevcani
Demir Hisar
Crna
Bogdanci
Struga
Gevgelija
Ohrid
Resen
Mogila
Novaci
Nidže Mtn.
Lake Ohrid
Bitola
Lake Prespa
Medzitlija
0 10 20 30 Kilometers
0 5 10 15 20 Miles
FORMER YUGOSLAV REPUBLIC OF
MACEDONIA
SELECTED CITIES AND TOWNS
MUNICIPALITY CAPITALS*
NATIONAL CAPITAL
THE CITY OF SKOPJE
RIVERS
MAIN ROADS
RAILROADS
MUNICIPAL BOUNDARIES
INTERNATIONAL BOUNDARIES
*In most cases, the names of the municipalities are identical to their capitals. Where they differ, the municipality is shown in green italic.
FYR MACEDONIA
JULY 2009
IBRD 33438R2