IMPLEMENTATION COMPLETION AND RESULTS REPORT  
(IBRD-47090) 

ON A 

LOAN 

IN THE AMOUNT OF USD 195.13 MILLION 

TO 

UKRAINE 

FOR A 

RURAL LAND TITLING AND CADASTRE DEVELOPMENT PROJECT 

October 29, 2013 

Sustainable Development Department 
Ukraine, Belarus and Moldova Country Unit 
Europe and Central Asia Region
CURRENCY EQUIVALENTS (Exchange Rate Effective 10/15/2013)

Currency Unit = Ukrainian Hrivnya (UAH)

1.00 UAH = US$ 0.12  US $ 1.00 = 8.19 UAH

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

CAS  Country Assistance Strategy
CY  Calendar Year
EA  Environmental Assessment
ECA  Europe and Central Asia Region of the World Bank
EMP  Environmental Management Plan
FDI  Foreign Direct Investment
FY  Fiscal Year
ICR  Implementation Completion and Results Report
ISR  Implementation Status and Results Report
IT  Information Technology
LGAF  Land Governance Assessment Framework
M&E  Monitoring and Evaluation
MOF  Ministry of Finance
MOJ  Ministry of Justice
NCS  National Cadastre System (electronic)
NSDI  National Spatial Data Infrastructure
PAL  Programmatic Adjustment Loan
PIU  Project Implementation Unit
PPF  Project Preparation Facility
QAG  Quality Assurance Group
RLTC  Rural Land Titling and Cadastre Development Project
SALRU  State Agency for Land Resources of Ukraine
SLCC  State Land Cadastre Center
UAH  Ukrainian Hrivyna
UNFAO  United Nations Food and Agriculture Organization
USAID  United States Agency for International Development

Vice President: Laura Tuck
Country Director: Qimiao Fan
Sector Manager: Kulsum Ahmed
Task Team Leader: Malcolm Childress
ICR Author: Kathrine Kelm
UKRAINE RURAL LAND TITLING AND CADASTRE DEVELOPMENT PROJECT
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MAP
UKRAINE RURAL LAND TITLING AND CADASTRE DEVELOPMENT PROJECT
DATA SHEET

A. Basic Information

<table>
<thead>
<tr>
<th>Country:</th>
<th>Ukraine</th>
<th>Project Name: Rural Land Titling &amp; Cadastre Development Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project ID:</td>
<td>PO35777</td>
<td>L/C/TF Number(s): IBRD-47090</td>
</tr>
<tr>
<td>ICR Date:</td>
<td>10/30/2013</td>
<td>ICR Type: Intensive Learning ICR</td>
</tr>
<tr>
<td>Lending Instrument:</td>
<td>SIL</td>
<td>Borrower: UKRAINE</td>
</tr>
<tr>
<td>Original Total Commitment:</td>
<td>USD 195.13M</td>
<td>Disbursed Amount: USD 82.05M</td>
</tr>
<tr>
<td>Revised Amount:</td>
<td>USD 82.05M</td>
<td></td>
</tr>
</tbody>
</table>

Environmental Category: F

Implementing Agencies:
State Committee of Ukraine for Land Resources
State Land Cadastre Center
State Agency for Land Resources of Ukraine

Cofinanciers and Other External Partners:
None

B. Key Dates

<table>
<thead>
<tr>
<th>Process</th>
<th>Date</th>
<th>Process</th>
<th>Original Date</th>
<th>Revised / Actual Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept Review:</td>
<td>02/05/2002</td>
<td>Effectiveness:</td>
<td>07/30/2004</td>
<td>07/30/2004</td>
</tr>
<tr>
<td>Appraisal:</td>
<td>02/10/2003</td>
<td>Restructuring(s):</td>
<td></td>
<td>07/24/2006 06/02/2008 11/27/2008 06/24/2010 05/14/2012</td>
</tr>
<tr>
<td>Closing:</td>
<td></td>
<td></td>
<td>06/30/2012</td>
<td>04/30/2013</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th></th>
<th>Bank Ratings</th>
<th>Borrower</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality at Entry:</td>
<td>Moderately Unsatisfactory</td>
<td>Government:</td>
<td>Moderately Unsatisfactory</td>
</tr>
<tr>
<td>Quality of Supervision:</td>
<td>Moderately Satisfactory</td>
<td>Implementing Agency/Agencies:</td>
<td>Moderately Satisfactory</td>
</tr>
<tr>
<td>Overall Bank Performance:</td>
<td>Moderately Satisfactory</td>
<td>Overall Borrower Performance:</td>
<td>Moderately Satisfactory</td>
</tr>
</tbody>
</table>

C.3 Quality at Entry and Implementation Performance Indicators

<table>
<thead>
<tr>
<th>Implementation Performance</th>
<th>Indicators</th>
<th>QAG Assessments (if any)</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Problem Project at any time (Yes/No):</td>
<td>No</td>
<td>Quality at Entry (QEA): Satisfactory</td>
<td></td>
</tr>
<tr>
<td>Problem Project at any time (Yes/No):</td>
<td>Yes</td>
<td>Quality of Supervision (QSA): None</td>
<td></td>
</tr>
<tr>
<td>DO rating before Closing/Inactive status:</td>
<td>Moderately Satisfactory</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D. Sector and Theme Codes

<table>
<thead>
<tr>
<th>Sector Code (as % of total Bank financing)</th>
<th>Original</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural extension and research</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Central government administration</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>General agriculture, fishing and forestry sector</td>
<td>85</td>
<td>95</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme Code (as % of total Bank financing)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal institutions for a market economy</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Personal and property rights</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Rural markets</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>State-owned enterprise restructuring and privatization</td>
<td>25</td>
<td>25</td>
</tr>
</tbody>
</table>

E. Bank Staff

<table>
<thead>
<tr>
<th>Positions</th>
<th>At ICR</th>
<th>At Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice President:</td>
<td>Laura Tuck</td>
<td>Johannes F. Linn</td>
</tr>
<tr>
<td>Country Director:</td>
<td>Qimiao Fan</td>
<td>Luca Barbone</td>
</tr>
<tr>
<td>Sector Manager:</td>
<td>Kulsum Ahmed</td>
<td>Laura Tuck</td>
</tr>
<tr>
<td>Project Team Leader:</td>
<td>Malcolm D. Childress</td>
<td>Iain G. Shuker</td>
</tr>
<tr>
<td>ICR Team Leader:</td>
<td>Kathrine M. Kelm</td>
<td></td>
</tr>
<tr>
<td>ICR Primary Author:</td>
<td>Kathrine M. Kelm</td>
<td></td>
</tr>
</tbody>
</table>
F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)
PDO from the Loan Agreement (LA) schedule 2, page 19. since the LA is legally binding: It states that the objectives are to assist the borrower in: (i) privatization of the lands of state and communal farm enterprises, agencies and organizations through transfer to the employees of these enterprises, agencies and organizations as well as retirees from among them, designating for each of them a land parcel (share); (ii) allocating land parcels to owners of land parcels (shares) in kind (on site) and issuing state land deeds to them; (iii) encouraging the restructuring of farm enterprises into more efficient units, with due consideration for environmental and social safeguards; and (iv) establishing a cadastre and title registry system where rights to immovable property can be adequately registered.

Revised Project Development Objectives (as approved by original approving authority)
The revised PDO, which were incorporated through a restructure in November 2008, was to assist the Borrower in:
(i) privatization of the lands of state and communal farm enterprises, agencies and organizations through transfer to the employees of these enterprises, agencies and organizations as well as retirees from among them, designating for each of them a land parcel (share);
(ii) allocating land parcels to owners of land parcels (shares) in kind (on site) and issuing state land deeds to them; and
(iii) establishing a land cadastre.

In 2003, the Results Framework (RF) for this project followed the models utilized at that time. In 2006, for the first restructuring, the amendment included a revised RF utilizing the new format, which included much more specific targets, as was utilized for new projects in 2006. The formats and approach for the RF in 2003 and 2006 were different, which makes comparisons in the table below less straightforward.

(a) PDO Indicator(s)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baseline Value</th>
<th>Original Target Values (from approval documents)</th>
<th>Formally Revised Target Values</th>
<th>Actual Value Achieved at Completion or Target Years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indicator 1:</strong> Four million individual state acts for rural land parcels issued.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value quantitative or Qualitative</td>
<td>0</td>
<td>Four million</td>
<td>4 million (800,000 using project funds)</td>
<td>4,001,678 (711,678 issued by the project)</td>
</tr>
<tr>
<td>Date achieved</td>
<td>07/30/2004</td>
<td>07/30/2004</td>
<td>11/27/2008</td>
<td>04/30/2013</td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Target fully achieved: Individual state acts were issued in the project area for all eligible agricultural land parcels subject to farm restructuring, even though the final figure is below the estimate.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| Indicator 2: Recipients of land titles are aware of their property rights and responsibilities | Moved to Intermediate |</p>
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baseline Value</th>
<th>Original Target Values (from approval documents)</th>
<th>Formally Revised Target Values</th>
<th>Actual Value Achieved at Completion or Target Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator 1:</td>
<td>Departments equipped and functioning as centers for land management.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Qualitative):**

<table>
<thead>
<tr>
<th>Date achieved</th>
<th>Comments (incl. % achievement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/27/2008</td>
<td></td>
</tr>
</tbody>
</table>

**Indicator 3:** Recipients feel more secure with state acts than with land certificates

<table>
<thead>
<tr>
<th>Value quantitative or Qualitative</th>
<th>Moved to Intermediate Indicator number 3 at Level 1 restructuring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date achieved</td>
<td>Comments (incl. % achievement)</td>
</tr>
<tr>
<td>11/27/2008</td>
<td></td>
</tr>
</tbody>
</table>

**Indicator 4:** All state acts for land issued are recorded in a safe and secure recording system, and the public perceive this information to be secure

<table>
<thead>
<tr>
<th>Value quantitative or Qualitative</th>
<th>All</th>
<th>90% (3.6 million)</th>
<th>180% (16.77 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date achieved</td>
<td>Comments (incl. % achievement)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07/30/2004</td>
<td>Target exceeded. Recording system operational and upgraded to electronic system in Jan 2013. Over 16 million titles for agricultural and other lands ie urban parcels registered. New system publicly accessible online and received positive user feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07/30/2004</td>
<td>11/27/2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>04/30/2013</td>
<td>11/27/2008</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Indicator 5:** Average economic efficiency (total factor productivity) of farms that have voluntarily restructured are more efficient than those that have not

<table>
<thead>
<tr>
<th>Value quantitative or Qualitative</th>
<th>Dropped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date achieved</td>
<td>Comments (incl. % achievement)</td>
</tr>
<tr>
<td>11/27/2008</td>
<td>Indicator dropped after Component F was dropped. However, farm production in Ukraine has improved vastly between 2003 and 2013, and Ukraine can become the second largest exporter of wheat, corn, and barley (Kyiv Post; October 3, 2013)</td>
</tr>
</tbody>
</table>

(b) Intermediate Outcome Indicator(s)
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator 2:</td>
<td>Legal and regulatory framework improved.</td>
</tr>
<tr>
<td>Indicator 3:</td>
<td>Knowledge of target audience increases after information campaign and recipients feel more secure with state acts</td>
</tr>
<tr>
<td>Indicator 4:</td>
<td>Refresher training provided to university teachers and lecturers</td>
</tr>
<tr>
<td>Indicator 5:</td>
<td>Farm and land advisory services established and are operating in each oblast and customers are satisfied with their services</td>
</tr>
<tr>
<td>Indicator 6:</td>
<td>Developed unified cadastre system is created</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value (quantitative or Qualitative)</th>
<th>Date achieved</th>
<th>Comments (incl. % achievement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target fully achieved, with every office re-equipped and fully functioning.</td>
<td>07/30/2004</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>07/30/2004</td>
<td>New legal/regulatory framework is in place for secure property rights and full functioning of the cadastre system, including the link to the legal register under the Ministry of Justice.</td>
</tr>
<tr>
<td>0</td>
<td>07/30/2004</td>
<td>New legal/regulatory framework is in place for secure property rights and full functioning of the cadastre system, including the link to the legal register under the Ministry of Justice.</td>
</tr>
<tr>
<td>0</td>
<td>07/30/2004</td>
<td>High level of awareness achieved through wide publicity and education campaigns with results measured through 3 surveys conducted at regular intervals. A 2011 survey reported 100% coverage</td>
</tr>
<tr>
<td>Not stated but implied</td>
<td>07/30/2004</td>
<td>Target achieved and exceeded by ten percent. All existing and new university teachers and lecturers trained on new cadastre principles.</td>
</tr>
<tr>
<td>Cadastre centers in 25 oblasts</td>
<td>11/27/2008</td>
<td>25 oblasts (+ cities of Kiev and Sevastopol)</td>
</tr>
<tr>
<td>Date achieved</td>
<td>07/30/2004</td>
<td>11/27/2008</td>
</tr>
<tr>
<td>----------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Target achieved. New IT system for the cadastre is operational in all local offices, including in urban areas, and includes over 16 million individual titles. It replaces the paper based system.</td>
<td></td>
</tr>
<tr>
<td><strong>Indicator 7</strong>: The aerial survey of the territory of all oblasts is completed</td>
<td></td>
<td>600 thousand sq kms</td>
</tr>
<tr>
<td>Date achieved</td>
<td></td>
<td>11/27/2008</td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Target fully achieved with entire territory of the country covered.</td>
<td></td>
</tr>
<tr>
<td><strong>Indicator 8</strong>: SCLR staff retrained</td>
<td>SCLR staff receive training</td>
<td>2,850 people trained</td>
</tr>
<tr>
<td>Date achieved</td>
<td>07/30/2004</td>
<td>11/27/2008</td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Target achieved and exceeded by 14 percent. All existing SCLR staff trained in the new law, new business processes and standardized procedures.</td>
<td></td>
</tr>
<tr>
<td><strong>Indicator 9</strong>: Prepare orthophotomaps</td>
<td></td>
<td>600 thousand sq kms</td>
</tr>
<tr>
<td>Date achieved</td>
<td></td>
<td>11/27/2008</td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Target fully achieved with digital maps prepared for the entire country.</td>
<td></td>
</tr>
<tr>
<td><strong>Indicator 10</strong>: Index cadastre map completed</td>
<td></td>
<td>25 oblasts</td>
</tr>
<tr>
<td>Date achieved</td>
<td></td>
<td>11/27/2008</td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Target fully achieved with maps prepared that cover all oblasts.</td>
<td></td>
</tr>
<tr>
<td><strong>Indicator 11</strong>: Universities equipped and providing training in the sphere of land cadastre and land survey</td>
<td></td>
<td>4 (from PAD text)</td>
</tr>
<tr>
<td>Date achieved</td>
<td>07/30/2004</td>
<td>07/30/2004</td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Target achieved, with nine universities benefiting from investment and producing graduates with necessary skills in modern land surveying and associated fields.</td>
<td></td>
</tr>
</tbody>
</table>
### Indicator 12:
The Project is completed according to schedule

<table>
<thead>
<tr>
<th>Value (quantitative or Qualitative)</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date achieved</td>
<td>07/30/2004</td>
<td>11/27/2008</td>
<td>04/30/2013</td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Project was completed after a ten-month extension to finalize the nation-wide IT system rollout and population of the system with data.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Indicator 13:
Universities equipped and providing training in the sphere of land cadastre and land survey

<table>
<thead>
<tr>
<th>Value (quantitative or Qualitative)</th>
<th>0</th>
<th>4 (from PAD text)</th>
<th>9</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date achieved</td>
<td>07/30/2004</td>
<td>07/30/2004</td>
<td>11/27/2008</td>
<td>04/04/2013</td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Target achieved, with nine universities benefiting from investment and producing graduates with necessary skills in modern land surveying and associated fields.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Indicator 14:
The Project is completed according to schedule

<table>
<thead>
<tr>
<th>Value (quantitative or Qualitative)</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date achieved</td>
<td>07/30/2004</td>
<td>11/27/2008</td>
<td>04/30/2013</td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Project was completed after a ten-month extension to finalize the nation-wide IT system rollout and population of the system with data.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Indicator 15:
Universities equipped and providing training in the sphere of land cadastre and land survey

<table>
<thead>
<tr>
<th>Value (quantitative or Qualitative)</th>
<th>0</th>
<th>4 (from PAD text)</th>
<th>9</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date achieved</td>
<td>06/24/2003</td>
<td>11/27/2008</td>
<td>04/04/2013</td>
<td></td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Target achieved, with nine universities benefiting from investment and producing graduates with necessary skills in modern land surveying and associated fields.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Indicator 16:
The Project is completed according to schedule

<table>
<thead>
<tr>
<th>Value (quantitative or Qualitative)</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date achieved</td>
<td>11/27/2008</td>
<td>04/30/2013</td>
<td></td>
</tr>
<tr>
<td>Comments (incl. % achievement)</td>
<td>Project was completed after a ten-month extension to finalize the nation-wide IT system rollout and population of the system with data.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### G. Ratings of Project Performance in ISRs

<table>
<thead>
<tr>
<th>No.</th>
<th>Date ISR Archived</th>
<th>DO</th>
<th>IP</th>
<th>Actual Disbursements (USD millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10/16/2003</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>01/15/2004</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
<td>0.00</td>
</tr>
<tr>
<td>3</td>
<td>04/01/2004</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
<td>0.00</td>
</tr>
<tr>
<td>4</td>
<td>11/02/2004</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
<td>2.49</td>
</tr>
<tr>
<td>5</td>
<td>05/11/2005</td>
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<td>6</td>
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<td>Moderately Unsatisfactory</td>
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</tr>
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</tr>
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<td>15.46</td>
</tr>
<tr>
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<td>Unsatisfactory</td>
<td>19.25</td>
</tr>
<tr>
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<td>Satisfactory</td>
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</tr>
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### H. Restructuring (if any)

<table>
<thead>
<tr>
<th>Restructuring Date(s)</th>
<th>Board Approved PDO Change</th>
<th>ISR Ratings at Restructuring</th>
<th>Amount Disbursed at Restructuring in USD millions</th>
<th>Reason for Restructuring &amp; Key Changes Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/24/2006</td>
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<td>U</td>
<td>6.93</td>
<td>Level 2 Restructuring: Partial cancelation of funds from savings</td>
</tr>
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<td>06/02/2008</td>
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<td>U</td>
<td>15.46</td>
<td>Level 2 Restructuring: Partial cancelation of funds from savings</td>
</tr>
<tr>
<td>11/27/2008</td>
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<td>U</td>
<td>19.66</td>
<td>Level 1 Restructuring</td>
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<td>Restructuring Date(s)</td>
<td>Board Approved PDO Change</td>
<td>ISR Ratings at Restructuring</td>
<td>Amount Disbursed at Restructuring in USD millions</td>
<td>Reason for Restructuring &amp; Key Changes Made</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------</td>
<td>-----------------------------</td>
<td>-------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>06/24/2010</td>
<td>N</td>
<td>MS MS</td>
<td>29.78</td>
<td>Level 2 Restructuring: Cancellation of loan proceeds</td>
</tr>
<tr>
<td>05/14/2012</td>
<td></td>
<td>MS MS</td>
<td>60.90</td>
<td>Level 2 Restructuring: Extension of Project closing date to April 30, 2013</td>
</tr>
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</table>

If PDO and/or Key Outcome Targets were formally revised (approved by the original approving body) enter ratings below:

<table>
<thead>
<tr>
<th>Against Original PDO/Targets</th>
<th>Outcome Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsatisfactory</td>
<td></td>
</tr>
<tr>
<td>Satisfactory</td>
<td></td>
</tr>
<tr>
<td>Moderately Satisfactory</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Against Formally Revised PDO/Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfactory</td>
</tr>
<tr>
<td>Moderately Satisfactory</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall (weighted) rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderately Satisfactory</td>
</tr>
</tbody>
</table>

I. Disbursement Profile

![Disbursement Profile Graph](image)
1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

In the decade following Ukraine’s independence in 1991, the agriculture sector experienced a contraction due to low demand, poor management, lack of robust property rights and structural problems at the farm level. By the early 2000s, a number of factors contributed to an improved environment for agriculture, although problems with property rights and credit remained. One initiative that sought to overcome some of the remaining problems was the government’s land reform program, which aimed to transform the nature of rural agriculture from a Soviet era collectivized system to a market oriented system based on clearly defined rights. The first stage of that program – to transfer ownership of collectives to their members in undivided shares – was mostly completed by 1998, and the second stage – to issue land share certificates for an undemarcated parcel – was completed soon after. The third stage was to issue state deeds for demarcated parcels, which would build on the government’s reforms facilitating renting of agricultural land, to improve access to land for entrepreneurs and thereby increase efficiency of production, plus improve access to low cost credit and provide rental income to owners. In parallel, revisions to the legal framework relating to property rights were slowly progressing.

The Rural Land Titling and Cadastre Development Project (the project) sought to build on these initiatives, and in doing so support achievement of the Country Assistance Strategy (CAS) objectives of poverty reduction and job creation. This project reflected a typical post-Soviet land privatization/administration program that required international expertise in land policy, institutional change and technical advice. Land reform is often a complex process where land should be allocated as equitably as possible, which requires a clear legal/regulatory framework, significant technical field work (surveying and mapping), issuing of legal documents, awareness raising for beneficiaries, and a cadre of professionals to complete the work. Once land has been allocated, the rights should be recorded in a secure register that is accessible to interested parties. Post-Soviet land reform in Ukraine required substantial changes to all of these elements. Bank involvement was regarded as critical in order to: (i) introduce international best practice into the design and implementation of a modern land administration system; (ii) ensure appropriate technical standards; and (iii) strengthen implementation capacity of relevant government institutions. While the land allocation process was already underway at the time of project design, with two million state deeds issued, the government requested funds to help complete the process for all eligible rural citizens (approximately 6.5 million state deeds in total). The project would also support completion of the legal/regulatory framework and technical work (aerial photographs, digital orthophotos and cadastral maps) and development of a new registration system for the whole country, which would benefit both rural and urban land owners.

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

The wording of the Project Development Objective (PDO) is different in the Project Appraisal Document (PAD) page 2, in the PAD Annex 1, and in the Loan Agreement (LA) schedule 2,

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1 The PDO as stated on Page 2 of the PAD is to: “establish a national cadastre and title registration system, allocate land parcels to individuals in rural areas on an equitable basis, establish their property rights by issuing state deeds
page 19. In essence the three PDOs are the same and differ only in terms of language and detail. The version from the LA will be used for this report because it is legally binding and it is more detailed, and hence more appropriate, given the scope of the project. It states the PDO is:

“(i) privatization of the lands of state and communal farm enterprises, agencies and organizations as well as retirees from among them, designating for each of them a land parcel (share); (ii) allocating land parcels to owners of land parcels (shares) in kind (on site) and issuing state deeds to them; (iii) encouraging the restructuring of farm enterprises into more efficient units, with due consideration for environmental and social safeguards; and (iv) establishing a cadastral and title registry system where rights to immovable property can be adequately registered.

Key outcome and intermediate indicators, as listed in Annex 1 to the PAD, are detailed on the chart in section 1.3 below:

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

The revised PDO, which was adopted as part of the Level 1 restructuring in November 2008, was to assist the Borrower in: (i) privatization of the lands of state and communal farm enterprises, agencies and organizations through transfer to the employees of these enterprises, agencies and organizations as well as retirees from among them, designating for each of them a land parcel (share); (ii) allocating land parcels to owners of land parcels (shares) in kind (on site) and issuing state deeds to them; and (iii) establishing a land cadastre.

There were a variety of changes to the PDO. First, the revised PDO language was aligned more closely to the description of the project appearing in the LA. Second, the word “land” was inserted before the word “cadastre” in point iii, while reference to a “title registry system” was deleted. Third, the words “encourage the restructuring of farm enterprises into more efficient units, with due consideration for environmental and social safeguards” were deleted. The PDO and intermediate indicators before and after restructuring are outlined in the table below:

<table>
<thead>
<tr>
<th>Original (from the PAD)</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDO Level Indicators</td>
<td></td>
</tr>
<tr>
<td>Four million individual state acts for rural land parcels issued.</td>
<td>No change to overall target although it was clarified that the project would be responsible for issuing 800,000 state deeds.</td>
</tr>
<tr>
<td>Recipients of land titles are aware of their property rights and responsibilities</td>
<td>Changed to an intermediate level indicator</td>
</tr>
<tr>
<td>Recipients feel more secure with state acts than with land certificates</td>
<td>Changed to an intermediate level indicator</td>
</tr>
</tbody>
</table>

for land, and encourage the restructuring of farms into more efficient units, with due consideration for environmental and social safeguards.”

2 The PDO as stated in Annex 1 of the PAD is to: “[establish a title registration and cadastral system, allocate rural land parcels to individuals, establish their property rights, and encourage the restructuring of farms into more efficient units.”
All state deeds for land issued are recorded in a safe and secure recording system, and the public perceive this information to be secure | No change although a more specific target of 90% was assigned
---|---
Average economic efficiency (total factor productivity) of farms that have voluntarily restructured are more efficient than those that have not | Dropped

**Intermediate Level Indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departments equipped and functioning as centers for land management.</td>
<td>No change but a more specific target of 692 offices was assigned</td>
</tr>
<tr>
<td>Legal and regulatory framework improved.</td>
<td>No change but a more specific target of 31 draft laws and amendments assigned</td>
</tr>
<tr>
<td>Knowledge of target audience increases after information campaign and recipients feel more secure with state acts</td>
<td>Changed from PDO indicator to intermediate level indicator and a more specific target of 70% was assigned</td>
</tr>
<tr>
<td>SCLR staff retrained</td>
<td>No change but a more specific target of 2,850 people was assigned</td>
</tr>
<tr>
<td>Universities equipped and providing training in the sphere of land cadastre and land survey</td>
<td>Target revised from 4 universities (in PAD text) to 9 universities</td>
</tr>
<tr>
<td>Farm and land advisory services established and are operating in each oblast and customers are satisfied with their services</td>
<td>Dropped</td>
</tr>
</tbody>
</table>

Percent of Cadastre Centers that have adopted the standardized title registration and cadastral recording system. Percent of with 100 percent capture of existing parcel information; | New indicator and target: the aerial survey of the territory of all oblasts is completed (600,000 sq. km.) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New indicator and target: Prepare orthophotomaps for entire country (600,000 sq. km)</td>
<td>New indicator and target: Index cadastre map completed (25 oblasts)</td>
</tr>
<tr>
<td>New indicator and target: Refresher training provided to university teachers and lecturers (500 people)</td>
<td></td>
</tr>
</tbody>
</table>

The Project is completed according to schedule | No change

The revisions were necessary for various reasons. First, the wording from the LA schedule 2 was included for the sake of consistency. Second, the national target for issuing state deeds\(^3\) would remain at 4 million but it was clarified that the project would fund 800,000 since alternative funds would be used for the other 3.2 million. While the specific project target of 800,000 titles

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\(^3\) Throughout project documentation the terms ‘state deeds’, ‘state acts’, and ‘titles’ are used interchangeably and refer to the legal document allocated to individuals for land that was used for the basis of registration. The Ukrainian term is Gos\(\text{dkt}\). For the sake of consistency this report will use the term ‘state deed’ except in cases that specifically quote the PDO or indicators from the PAD, Legal Agreement restructuring paper etc.
was made in 2006 as part of the initial discussions for restructuring\(^4\), it was formalized as part of the 2008 Level 1 restructuring. Third, the changes to the unified cadastre and title registration system were necessary because legal and institutional obstacles prevented the State Agency for Land Resources of Ukraine (SALRU) and its subsidiary the State Land Cadastre Center (SLCC) from initiating the system as mandated by the 2004 Law on State Registration of Proprietary Rights. The Ministry of Justice (MOJ) refused to approve the necessary by-laws to implement that law because it was operating a separate legal registry of its own and did not wish to have its system replaced by a new system under the authority of the SALRU/SLCC.\(^5\) Thus, the revised PDO speaks only of a land cadastre.

Also, deletion of references to the SLCC was required because the SLCC would not be receiving income from registration work as the administrator of the unified cadastre and title registration and, therefore, the SLCC management was unwilling to fulfill the requirements for the planned reform such as sharing financial information on accounts or developing a Business Plan acceptable to the Bank.\(^6\) Consequently, it was agreed to cancel component E (Cadastre System Development) but some of the project funds originally assigned to the SLCC were reallocated to the SALRU under component D2 (Cadastral Information System) to develop the land cadastre system. Technical cooperation and coordination continued with the SLCC, as the subsidiary of the SALRU.

Finally, the farm restructuring process did not result in the expected shift to small-scale farming, with most owners deciding to rent out their properties rather than farm the lands themselves. In addition, there never was real commitment from the borrowers to implement the activities even though during project design the idea was heavily endorsed by Bank management. Thus, the project activities relating to the establishment of farm advisory services and the monitoring of improved economic efficiency of the farms were removed.

### 1.4 Main Beneficiaries

The target population was holders of property rights to agricultural land, whether rural or urban dwellers, with a particular focus on the poorer and less powerful property right holders, through a program of providing greater security for their rights, improving the transferability of rights, and consequently the ability to use the rights to secure mortgage loans. Benefits were to arise due to a clearer legal structure, improved means of establishing and recording property rights, increased protection of rights and ease of using enforcement measures, plus greater access to lower cost credit. Further, through restructuring of collective farms and issuing state deeds to individuals, right holders were to benefit through direct control over their property, with increases in productivity or income through rents. More broadly, as a result of these developments, it was envisaged that there would be benefits to the country’s economy, and thus the entire population. Following the November 2008 restructuring, rural citizens would no longer

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\(^4\) Aide Memoire for mission from February 17-24, 2006, paragraph 4.

\(^5\) The aim of the unified title and cadastre registration system was to link the information traditionally maintained by the cadastre (mainly technical mapping information for land parcels) with the information in the deeds registry (legal rights). This linkage is fundamental for the development of a modern land administration system.

\(^6\) The SLCC and its local offices were created as self-financing legal entities wholly owned by the Government, under the authority of the SALRU.
benefit from farm advisory services but they would continue to benefit from other project activities.

1.5 Original Components (as approved)

There were seven components to the Specific Investment Lending (SIL) that were to support progress in reaching the PDO. These were:

A. Institutional Development and Legal Reform, which was to reform the SALRU and its subsidiary the SLCC from a Soviet-style land use planning organization to one more suited to a market economy, with improved zoning regulation and environmental advisory services for the public, plus an improved legal framework for property rights.

B. Public Awareness, which was to increase the public’s understanding about the nature of private property rights, the program of systematic titling of their rights, their entitlements and obligations as right holders, including rights to lease out property, and farm management matters.

C. Training, which was to develop the capacity of the large numbers of staff needed to carry out the restructuring and registration work. Long-term, university based training was to ensure that new graduates would be familiar with market based economic principles and a system of private property rights.

D. Land Survey Works, the second largest component by value, which was to systematically divide land of former collective farms so that deeds to individual parcels could be issued to each right holder.

E. Cadastre System Development, the largest component by value, which was to support institutional reform for the SLCC and the development of a national cadastre system that would have various functions, including the basis for a unified title registration system which records rights and transactions. In the longer term, the system was to form a basis for land taxes, planning and geospatial information systems. The design was to be implemented in three phases: (1) interim system development, (2) cadastre system development and rural office network, and (3) registry module upgrade and urban office network. The ideal scenario was identified where the unified title/cadastre law would be adopted at the early stages of the project, but the PAD also noted a ‘second best’ solution with additional flexibility to allow alternative institutional arrangements until the legal basis for the unified system was put in place.

F. Farm Restructuring Services, which was to provide advisory services to new or potential land owners on such matters as legal rights and obligations of land owners, renting of land, dispute resolution options, and planning for land used in common with other owners. Advice was also to be provided to former collectives to deal with property and financial issues arising from the shift to a system of private property rights.

G. Project Implementation, which was to ensure that the project was efficiently and effectively implemented with support from a project implementation unit (PIU).
1.6 Revised Components

Following the November 2008 restructuring, component F (Farm Restructuring Services) was cancelled. Component E (Cadastre System Development) was also cancelled: the activities related to the institutional reform of the SLCC were cancelled while the original unified cadastre and title registration system development was narrowed to focus only on the land cadastre and funds were moved to component D2 under the authority of the SALRU in order to complete development of the land cadastre system and provide the secure registration of state deeds that were being issued. Component G (Project Implementation) was modified to reflect the narrower focus of the project. The other components were not changed.

1.7 Other significant changes

In addition to the Level 1 restructuring in November, 2008 (Section 1.3 above), there were four level 2 restructurings and some other changes during the course of the project that are summarized below:

- A PPF was established which allowed the PIU to be set up and some initial work was done although no funds were disbursed before the project became effective and they were absorbed into the main project budget;
- Component E of the project was suspended on February 21, 2006 because of the inability of the SLCC to implement the unified title and cadastre registry system. This meant that the SLCC funds allocated for running the registration system could not be utilized and the SLCC business plan would not be required until the suspension was lifted. Attempts to solve the impasse between the MOJ and SALRU regarding the unified system and to restructure the project continued without success. Component E remained suspended until it was cancelled during the 2008 Level 1 restructuring.
- Level 2 restructuring: cancellation of $74 million by letter dated July 24, 2006. The sum of $54 million was cancelled because much of the work for issuing state deeds under component D had been completed using other sources of fund and, therefore, cost savings from the loan could be made. The sum of $24 million was cancelled because the SLCC had not utilized funds under component E to cover operating costs in 2004, 2005 and half of 2006;
- Level 2 restructuring: cancellation of $19.6 million by letter dated June 2, 2008 for funds related to support for the SLCC (under component E) since direct support to the SLCC was dropped from the project;
- Level 2 restructuring: cancellation of $11.85 million by letter June 24, 2010 of which $10.05 million related to some works under component D that could not be completed within the timeframe of the project and $1.8 million for further cost savings for registration of state deeds that were paid for through other means;
- Under a Programmatic Adjustment Loan (PAL), which was prepared in parallel with the project and coordinated with it, the government was obliged to adopt the legal basis for implementing a unified title registry. Although the government failed to do so, the funds under the PAL were nonetheless released to the government; and
- Extension of the project closing date by 10 months to provide sufficient time to finalize the nation-wide rollout of the IT system and to populate the system with data.
2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

Soundness of the background analysis: The PAD and aides memoire from the preparation missions demonstrate a thorough planning process, utilizing a full range of professional expertise to investigate circumstances, advise on options, draw on lessons learned both in Ukraine and the region, and develop a project with their counterparts. Relevant reports were reviewed, project alternatives were outlined and a review of lessons learned was included.

Assessment of the design/Quality at Entry: The project had numerous components and sub-components. With the exception of component F which was under the control of the Ministry of Agrarian Reform, they were all under the control of the SALRU (or its subsidiary, the SLCC). The lengthy project period (nine years) was consciously chosen so that there would be adequate time to complete the work of such a large scope in a country as big as Ukraine. The components and activities were relevant for the post-Soviet context at that time and attempted to address the full complement of policy, institutional and legal/regulatory aspects for rural land privatization, development of a modern land administration system, and provision of farm advisory services. However, the Bank overestimated the ability of the government to manage the complex activities or to deliver on the reforms promised during project design. Subsequent institutional rivalry and political factors would adversely impact project implementation. Later, a 2009 Quality Assessment Group (QAG) Learning Review of ECA Disbursements found that the project was “over-designed and beyond the capacity of the government agencies to manage”, with 5 major components, including one with little government ownership – component F, Farm Restructuring Services. In addition to delaying implementation, Component F diverted attention from main project themes. These issues were addressed in the Level 1 restructuring when the project focus was reduced and targeted to the land cadastre.

Adequacy of government’s commitment: There was strong commitment from the government between its request for a project in 2000 and Board approval in mid-2003. As the PAD noted, the President and Parliament had developed the legislative framework to support private ownership of agricultural land, and the SALRU had actively issued over 2 million state deeds. The government sought the project to expedite the completion of its existing national program and to complete the complimentary activities such as development of the registration system. However, substantial changes within the government resulted in a period of inertia from late 2003 to 2008 and numerous changes within the management of the implementing agency further delayed progress. It was not until the last years of the project that the political and institutional issues were settled, a stable management structure within the implementing agency was established, and there was more commitment and focus on completing project activities.

Assessment of risks: The PAD lists a set of potential problems that are consistent with the type of project, objectives, institutional situation and broader legislative, economic and political context.

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7 A QAG report issued on 07/29/2003 rated the project Quality at Entry (QAE) rating of ‘satisfactory’. The report acknowledges the difficulty of addressing land issues in Ukraine and the Bank team’s persistence in addressing the overall goal and steps in the land reform process. The report did note some weaknesses in the monitoring and evaluation framework and imprecision in the outputs and outcomes.
of Ukraine in the early 2000s. They are the types of risks encountered in other land projects and most risks were rated as substantial. The PAD mentions the specific problems with institutional rivalry and that the Ministry of Justice had a competing interest for the legal registry. The preparation team was aware of the risks that ultimately affected the project and used the DPL/PAL to increase leverage with the government. Nevertheless, while the risks were identified and mitigation measures put in place, those measures were neither fully executed nor sufficient to result in the planned reforms.

2.2 Implementation

Implementation saw the full range of possibilities arise: from the straightforward and successful to the highly problematic and unsuccessful. Components A (Institutional Development and Legal Reform), B (Public Awareness), C (Training) and G (Project Implementation) progressed with few problems. Component D gave rise to routine problems that are commonly associated with large contracts, such as the aerial photography/land survey contracts and the IT system development contract. Procuring and managing such large contracts were new to the government and PIU and it took time to ‘learn by doing’. At the other end of the spectrum, most of the activities in component E and F were ultimately unsuccessful and resulted in suspension, cancellations of funds and restructuring. The details of progress of each of the components are considered in more detail in Annex 2.

The project had three Washington based task team leaders (TTLs) over the life of the project although the second TTL had been part of the initial design team and provided continuity through much of the project lifespan. The last TTL spoke Russian which greatly facilitated direct communication with counterparts and helped to strengthen the relationship between the supervision team and the SALRU/SLCC. An initial mid-term assessment recognized the need for substantial changes and the Level 1 restructuring and the 2009 Mid-Term Review was used for further project assessment.

The project faced many challenges, particularly at the beginning, including:

- institutional problems between the SALRU and the MOJ regarding the SALRU’s mandate to create a unified cadaster and title registry, with the MOJ refusing to issue the necessary regulations that would relinquish its control over the legal register, even though the MOJ had been part of the project negotiation team and had not objected to the proposed unified system at that time;
- related to the institutional problems, administrative problems within the government and Parliament in terms of dealing with matters promptly. For example, the Level 1 restructuring took almost 2 years to complete due to a lack of decision making or sense of urgency within the government;
- poor capacity and lack of willingness of the SLCCs to implement reforms, the secretive nature of the SLCC’s operations, and a lack of willingness by the SLCC to open its operational activities to public scrutiny, which ultimately resulted in cancellation of funds for related activities;
- payment delays to contractors, linked to the Ministry of Finance (MOF) processes, adversely affected the mapping contractors’ ability to perform and deliver;
contractual disputes regarding aerial photography/land survey and development of the IT system slowed progress and diverted resources away from other activities. The contract dispute for one aerial photography contract remained unresolved at project closing, although the work was retendered and completed prior to project closure. The contract for the IT system was cancelled upon mutual agreement of the contractor and the SALRU, and the alternative in-house development was completed and the system installed in all cadastral offices prior to the end of the project;

- as the QAG Learning Review of ECA Disbursements notes, government financial management (FM) and procurement procedures were perceived as complex and dealt with partly through stringent and complex requirements in the Loan Agreement. These complex requirements resulted in subsequent implementation delays; and

- also noted in the QAG Learning Review of ECA Disbursements, the failure of the Bank to hold the government to its commitment under a PAL had a negative impact on implementation. Under the PAL, the government had agreed to undertake certain legal reforms, including implementing regulations to establish the joint cadastre and title registry system. Although the SLCC was ready at the beginning of 2005 to operate a unified registration system (software was ready, staff trained and local offices prepared), the MOJ’s failure to issue the necessary regulations prevented the SLCC from commencing. Important leverage for the project was lost when the Bank did not hold the government to its undertaking in this regard and the funds were dispersed anyway.8

The problems noted above had an impact on the efficiency of implementation support and supervision. Due to the unresolved institutional and political issues at the beginning of the project, the Bank team and management had to spend significant time working with the government to discuss options and then restructure the project accordingly, a process which took over two years to complete. However, once the institutional question was resolved, the new law approved, and the project restructured to reflect the changes, progress improved and the project ended successfully. The factors that gave rise to the positive outcomes were:

- in the final two years of the project, strong political support from the President of Ukraine and a professional management team with technical expertise at the implementing agency provided the necessary leadership to complete all project activities;

- perseverance of the Bank team to work through problems with the borrower in an open and constructive manner, including detailed discussions on the institutional issues that arose when the MOJ refused to issue the necessary regulations for the unified cadastre and title registration, which ultimately resulted in new legislation clarifying the institutional structure;

- flexibility to adopt the ‘second best’ option outlined in the PAD for the unified cadastre and title registration, which was narrowed to focus on finalizing the land cadastre system under the SALRU while ensuring interoperability that can support any institutional

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8 The QAG ECA Disbursement Learning Review states: “DPO link was ineffective, and disruptive. Bank credibility was reduced when the complementary PAL legal reforms were not achieved, but the PAL disbursed anyway, and this loss of credibility seems to have affected the Bank's credibility more broadly, including on this project.” (QAG Report, page 3 Section b point 2: Panel Assessments and Recommendations)
arrangement and has ultimately resulted in a system that now has automatic links to the MOJ legal registry;

- acceptance of changed circumstances and realistic responses in reallocating funds or cancelling components, such as the lack of demand for farm restructuring advice or lack of progress on meeting the Bank’s requirements with regard to the finances and management of the SLCC;

- Bank management agreed to extend the project by ten months to complete the nationwide IT system rollout and upload data even though there was reasonable concern about the risks. The Bank supervision team helped to develop a detailed work plan that was followed up with monthly and weekly videoconferences to ensure implementation; and

- UNFAO’s technical assistance to the project, and their instrumental role in implementation support and supervision through the World Bank/FAO Cooperative Program.

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

**M&E design:** Annex 1 to the PAD contains a set of monitoring indicators that match the elements of the PDO and activities under each component. The indicators are a mix of quantitative and qualitative measures, and they provide the essential basis for assessing progress in meeting the PDO. The results framework (RF) indicated that the data would be collected, through reports, social assessments, customer surveys, and tests of knowledge. The M&E design benefited from a social assessment through which land allocation was examined, with particular focus on rural inhabitants’ perceptions of asset allocation and knowledge of their rights. Furthermore, the project applied lessons learned from previous successful projects by incorporating indicators such as training.

Nevertheless, a few shortcomings have been noted. First, the 2003 RF was output-based rather than outcome-oriented as was the common Bank practice for projects at that time. Even though outcomes were implied in the PAD text (e.g. training, public awareness), they were not explicitly stated in the Annex 1 RF. Baseline information was not included and some indicators did not have an end target value. The RF was revised in 2006 to reflect a more concrete set of activities with targets and was later incorporated into the 2008 Level 1 restructuring. Second, data for the core indicator of female ownership rights resulting from the project was introduced by the Bank for all land projects in 2012. However, these data were never collected because the indicator was introduced towards the end of the project. Finally, some inconsistencies between the restructured PDOs and indicators were identified and had to be revised in order to measure progress more adequately.

**M&E implementation:** Based on the PAD, a set of indicators was developed at the beginning of the project and data were routinely collected, reported and evaluated. The M&E results covered both quantitative data gathered directly from SLCC offices and qualitative data, derived primarily from the surveys that were conducted on a regular basis throughout the project. The PIU had an M&E specialist and the Bank team provided support and guidance on collection and review of data for each indicator. Two independent surveys were done in 2004 and 2005 to examine the impact of land titling and to assess the level of public awareness and attitudes to land reform. Another independent sociological survey was conducted in 2010 to evaluate the
status of land reform in Ukraine. One weakness noted is that the results of the social surveys are not clearly captured in the RF reporting. For example, for Component B, reporting on whether owners feel more secure with state acts as opposed to the earlier share certificates included information only as to the extent and coverage of the public awareness campaigns. Thus, output rather than outcome oriented. Finally, the beneficiary and stakeholder surveys done at the end of the project were used to assess user satisfaction with the new cadastre system. (see Annex 5 for further details).

**M&E utilization:** The results of the M&E were closely considered and used by the Bank team, PIU and SALRU/SLCC in relation to project activities to confirm the success of certain activities and to adjust others in which the results indicated that a change of direction was required. It appears that the SALRU has not utilized the data beyond the project and, with the closure of the project and loss of the PIU M&E officer, M&E activities promoted under the project appear to have ceased. However, the SLCC continues to closely and regularly monitor the activities that are within its core functions, especially the performance of the new IT system.

### 2.4 Safeguard and Fiduciary Compliance

**Safeguards:** The environmental safeguards specialist carried out regular review and the project rating was consistently satisfactory. As a result, the overall rating of safeguard compliance for the project is *satisfactory*. The project triggered one safeguard policy—environmental assessment—and was a Category F project. A rather extensive assessment of the risks involved under the project found that the division of land into individual parcels, as part of the titling process, had the potential to cause negative environmental impacts. There is no explanation in the PAD of how parcelization could have this impact, as only existing farmland would be subdivided. Nonetheless, mitigation measures were included in the procedure manual for land subdivision, staff were trained in appropriate procedures, and an environmental assessment was to be conducted on each farm before its division. The issue of environmental protection was not raised at any time during implementation as being problematic.

**Procurement:** The overall rating for procurement during the project cycle is *moderately satisfactory*. Procurement plans for project implementation were developed and revised as the PDOs and project components changed. The overall project risk for procurement was rated Medium to High, considering the lack of Bank procurement experience in the PIU and the procurement environment in Ukraine at the time. Procurement staffing at the PIU was adequate and the staff became more knowledgeable and efficient as the project progressed. However, projects related to the large mapping and IT contracts were delayed as a result of the failure to meet major deadlines in the agreed procurement plans. It should be noted that the two major contract disputes were the result of implementation issues, not procurement related problems.

**Financial Management:** Overall, Financial Management (FM) for the project components is rated *moderately satisfactory*. This includes project accounting and reporting arrangements, staffing, internal control procedures, planning and budgeting, counterpart funding, and financial manual and external audits. The project was generally in compliance with the financial management requirements of the Loan Agreement, which were very complex, as well as with the Interim Financial Reports (IFRs) and audit reports. The FM staff within the PIU performed
capably and all audits had a clear opinion. There were some issues related to the processes and
timeliness of the MOF to release funds which caused delays with contract payments and had the
follow on effect of delaying contract implementation as the delay caused a cash flow problem for
some contractors. In addition, the SLCC did not cooperate in financial matters, and therefore that
aspect of reporting, disbursement and procurement was poor prior to the suspension and then
cancellation of funds for component E.

2.5 Post-completion Operation/Next Phase

In the final months of the project, the new IT system allowing the public to access the cadastre
data for land became operational and data for all registered parcels were loaded into the system.
Under the new law the SLCC provides cadastre information to the MOJ and these data populate
the MOJ legal registry database, thereby creating the crucial link between the cadastre and legal
data. This is a long-term activity, but initial cooperation has proceeded successfully. Continued
cooperation between the SALRU/SLCC and MOJ will increase the number of beneficiaries of
improved land administration services. Thus, while the country did not adopt a unified title
registration system under a single agency as envisioned in the ideal scenario for Component E,
accepting the ‘second best’ option has resulted in the country moving closer to a streamlined
process where cadastre and registration data are shared and accessed using interoperable IT
systems.9

Nevertheless, it is important to note that the while the roll out of the new IT system is a
substantial step, additional work remains. First, further development and stabilization of the
system and its link to the MOJ registry need to be part of a long term strategy. Maintenance and
sustainability of the vital spatial data assets produced under the project (i.e. the digital orthophoto
maps and the cadastral index maps) should be planned and supported with adequate human and
financial resources. As of the end of September, 2013, the SLCC confirms that the strategy has
been approved and that a tender is underway to procure equipment to continue production and
updating of the spatial data. The training of IT staff continues and there has been no system
interruption during the first 9 months of operation.

Second, the current cadastral index maps only reflect the parcels of land which have been
registered under the project and others that were available in digital form. Thus, the records are
incomplete and a plan is needed to include all private and public land parcels in the country, as
well as registration of buildings. This is also a long term activity but initial steps have been made
to inventory all land and a pilot project for building cadastral registration has been completed. In
addition, registrations continue on a daily basis from land owners.

Third, further institutional cooperation between the MOJ and SALRU/SLCC is needed to
facilitate the completion of a linked cadastre-legal registration system and ultimately introduce a
one-stop-shop for clients. The current law sets the framework for data sharing between the
institutions and a technical working group is working on simplifying procedures, planning the

9 There is no single, best approach for linking cadastre and legal data. Some countries in the ECA region have
chosen to adopt the single agency approach (United Kingdom, the Netherlands, Sweden, Albania, Georgia, Kyrgyz
Republic) while others maintain separate institutions and link the data through interoperable IT systems (Germany,
Austria, Bulgaria, Croatia, Slovenia).
introduction of digitally signed extracts, and enhancing the notary module to allow clients to conduct all business without having to visit a cadastre office.

With regard to policy, the Bank and USAID sponsored an assessment under the Bank’s Land Governance Assessment Framework (LGAF) in 2011. The purpose of the LGAF is to assess a country’s land governance position and develop policy and other responses to improve that position. The Ukraine LGAF report, produced in 2012, pointed to numerous areas for further reform across six thematic categories that could form the basis for policy, legislative and administrative change. Important policy issues of a broader nature remain outstanding, particularly the continued moratorium on the sale of agricultural holdings. The project has contributed to the resolution of this outstanding issue by completing the technical mapping work that is considered by the government as a prerequisite for opening up an agricultural land market. It is interesting to note that interviews with the rural population actually identified a large portion of the population who are against lifting the moratorium due to fears over losing their rights or being subject to outside pressures.

The government has expressed interest in another project to assist the SALRU to continue developing its system and the Bank is currently engaged in providing technical assistance (TA) for the sector and is developing an Institutional Development Fund proposal on ‘evidenced based policy making for agricultural land’.

Overall, Ukraine is in a much better position to advance its cadastre system now than at any time during the project in terms of institutional mandates and capacity. Most of the institutional issues have been resolved and capacity has been greatly expanded. In addition, the mapping work and new IT system produced under the project serve as the foundations for development of a National Spatial Data Infrastructure (NSDI) that is a key priority for land agencies and governments around the world.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

Objectives: the project’s objectives to provide people with robust land rights and to establish a system of publicly recorded property rights, together with an informed body of property owners, remain highly relevant today. As Ukraine continues its move to a market economy, real property rights and an economically and legally literate community have supported the process, and they will form a strong foundation for future development and economic growth. The President of Ukraine’s Program of Economic Reforms 2010-14 included the goal of efficient operation of the land market and makes reference to the completion of issuing state deeds and the electronic land cadastre system. The view of the relevance of the project’s objectives can also be seen from the same broad objectives being adopted through numerous other Bank sponsored projects in the ECA region where the countries have sought to establish and develop market economies.

Design: The main goals of the project, to convert vague land shares to formally registered state deeds to specific land parcels and to create an efficient registration system, remain fundamental and highly relevant. However, the project appears to have been too large and ambitious in both
scope and funding, although this conclusion is based more on the capacity of the government to deliver than on the relevance or the needs of the country. Further, it does not appear that there was any real support or interest by the government for Component F (Farm Restructuring Services). However, the education and training components were appropriate and ensured that the human element was adequately addressed and the legal/regulatory component supported development of a functioning framework, once the political and institutional decisions were made. Changes were made to the project’s design as events evolved, and it therefore remained relevant to the time.

Implementation: the approach adopted during implementation, which was flexible within the confines of the overall project design, was relevant to the needs of Ukraine over time. Due to close and continuous supervision, developments and problems could be monitored as they arose, and suitable responses formulated and implemented. Bureaucracy within the Bank and the Ukraine government sometimes slowed the process, but overall, those implementing the project were able to modify or develop activities so that the results remained relevant to the country. As an illustration, at restructuring the ‘second best’ option for the IT system was adopted and implemented. Further, where changed circumstances required it, such as with components E and F, all parties responded in a pragmatic way by cancelling funds and activities.

3.2 Achievement of Project Development Objectives

Overall, the project has made a positive impact on securing property rights, developing a modern land administration system and supporting the introduction of a land market in Ukraine. At the beginning of the project, work was already underway to allocate land but the government sought Bank support to increase the number of state deeds issued to eligible owners, to assist in developing a sound legal/regulatory framework, to educate the rural population, to strengthen the capacity of cadastre office staff and other land professionals, to complete the technical mapping work, and to develop a national system to record rights. The project provided much of the necessary technical assistance and other support to achieve these results and Ukraine now stands as a leader in the region with regard to its modern cadastre system, with national coverage, supported by digital records and on-line access. A few of the smaller countries in the region (such as the Netherlands, Lithuania and Macedonia) have equally comprehensive cadastre systems and on-line services, but it is rare for larger countries to achieve this level of complete coverage or sophistication. Germany and Spain do have such coverage and on-line services, but France, for example, does not. The positive impact is reflected in the stakeholder workshops and survey that were conducted as part of this intensive learning ICR (see Annex 5).

A more detailed review of the PDO before and after the Level 1 restructuring result in the following assessment: Under the original PDO and design, as stated in section 1.2, the project is rated as unsatisfactory. The original PDO reflects an overly ambitious project design that included the creation of a unified cadastre and title registration system under the SALRU that had to be abandoned due to institutional rivalry, and the support to farm restructuring component for which there was little government interest or commitment. Thus, these two objectives could not be achieved and resulted in project suspension, cancellations of funds and restructuring. Although it can be argued that all other project objectives were achieved and the ‘second best’ solution for the cadastre system was adopted, ultimately creating a fully automated cadastre with
links to the legal register, and $54 million in cancellations due to savings because other funding was found for issuing state deeds, there were nevertheless significant other cancellations and problems that lead to this initial unsatisfactory rating. However, following the 2008 restructuring, the PDO was changed (see section 1.2) and achievement of those objectives should be considered satisfactory. All objectives were met or exceeded, and the outcomes include the following:

Privatization of rural land is complete and citizens have secure land rights: The project contributed to completion of the rural land titling process. Although the project supported issuing a more limited number of titles than envisioned during the design phase because other sources of funds were used, the project nevertheless impacted the process through development of the regulatory framework, the manuals for completing the work, the production of orthophoto maps and cadastral index maps for the entire country, the field survey work (albeit with a reduced amount to that originally planned), development of the national cadastre system, and the registration of the titles into that system. All titles issued for rural land plus an additional 10+ million titles for other types of land are securely recorded in the system. Thus, the project contributed to the equitable allocation of rural land, secure recording of land rights for all types of land, and the on-going development of a land market.

The national cadastre system is complete: The project produced aerial photographs, digital orthophoto maps, and cadastral index maps for the entire country, and assisted the government on how to transform the 1000+ local systems into a single national coordinate system that is compliant with European standards. These spatial data serve as the basis for further development of a National Spatial Data Infrastructure (NSDI) and are being combined with other existing data sets, such as soil quality maps, using best practice principles endorsed by the project for technical standards, collection, use, and sharing.

More informed land owners and increasing confidence: The extensive public awareness campaign conducted under the project helped to ensure equitable distribution of land by informing people of their rights and choices. It has also resulted in more knowledgeable land owners, thereby increasing their understanding and power when deciding how to use or allocate their land, and the new system allows them to access cadastral information online. While public disclosure of some data is currently restricted by law, the public can access all of the cadastre maps online and locate their properties. This is an important first step in increasing openness and transparency of property related data, thereby increasing the public’s confidence in the system.

Lowering Transaction Costs: The new IT system has brought about a dramatic decrease in transaction costs. The cost of obtaining a land parcel registration was reduced by two-thirds, and the cost of obtaining a cadastral extract was reduced by half. (see annex 3 for details).

Improved Service Delivery: Cadastre offices are now able to offer more efficient and effective services to citizens due to the project: business processes have been reengineered, spatial data exists for the entire country, the cadastre system is uniform throughout the country, and the new IT system is based on modern principles and technology that is accessible via the web on the SLCC’s geoportal. Under the new law, the critical link to the MOJ State Registration Service has been made and cadastral information is now automatically sent to the legal registry. In the first 9 months of 2013 more than 900,000 new parcels have been registered and there have been 2.5
million hits on the *geoportal*. The average time for those registrations was 21 minutes (from application acceptance in the system to issuance of the registration certificate) and required only one visit to the cadastre office, which is a substantial improvement over the former process that often required several visits and days or weeks to complete. The beneficiary survey results (See Annex 5) show that users gave the highest level of satisfaction to working with the new IT system.

**Increasing the number of land professionals:** The project contributed directly to building a cadre of land professionals who can provide the necessary services to support private ownership and the emerging land market. All existing and new cadastre office staff received training and 9 universities were equipped, lecturers were trained and they are now providing courses in land cadastral and land survey.

In summary, although the project experienced many setbacks and difficulties it ultimately met, and in some cases exceeded, the revised objectives and targets and has had a lasting impact on the land sector in the country. Achievement of the revised PDOs should, therefore, be considered *satisfactory*.

3.3 Efficiency

One of the main goals of the project was to establish a national land cadastre system where all local offices use the same system and follow standard procedures. In particular, it helped develop a new IT system to improve the efficiency of transactions by reducing transaction time as well as transaction cost.

*Reduction in Time to Process Transactions*

The process to register a land plot has been reduced from several days to 21 minutes. This is the nationwide average of the time between accepting documents from the people and issuing a certificate after successful registration in the cadastre. Since initial registration was completed for more than 16 million parcels under the project, these land owners no longer have to spend time or money to gather and register their documents and will benefit from faster service for any future transactions.

Moreover, with business processes reengineered and the new system in place people who want to register new parcels need to visit only one office (rayon office) as opposed to two offices (rayon and oblast offices) as was the case previously. This has further reduced the time it takes to register a land plot or subsequent transactions.

*Reduction in Cost of transactions*

A well-functioning property rights system minimizes transaction costs, which in turn should stimulate land markets and facilitate the provision of mortgage loans. Until recently, the legal rights to land and buildings were recorded separately. In fact, there were seven separate registries maintained by different bodies and institutions to record rights concerning immovable property. The consolidation of these registries into a single agency under the MOJ State Registration Service, combined with the work done under the project to improve cadastral data and services, are a significant step towards creating an efficient system for registering property rights. As a
result, the cost of obtaining a land parcel registration was reduced by two-thirds, and the cost of obtaining a cadastral extract was reduced by half. (See Annex 3 for details).

The financial sustainability of the SLCC is important to guarantee that these gains in efficiency are maintained and further improvements are made. Currently, the recurrent costs to SLCC exceed what users are being charged. However, this gap is closing which is a positive development for SLCC’s financial sustainability as it will help secure the long term efficiency of this project. Once SLCC’s revenues exceed its costs, some of those gains can be transferred to the customers through lower cost of service and/or used to add more registration data into the system so more land owners can benefit.

Costs of titling:
With regard to contracting of survey and other registration work, the systematic titling costs under the project, roughly estimated at $ 16 / parcel, indicate a good level of cost effectiveness typical for the region10.

3.4 Justification of Overall Outcome Rating

Rating: Moderately Satisfactory
A rating of moderately satisfactory for the overall project outcome is justified because: (a) all revised PDO and intermediate indicators were achieved and in some cases exceeded, strongly contributing to positive change in a complex sector in such a large country that has experienced significant political change and uncertainty; (b) the project remains highly relevant and has had a positive impact on equitable allocation of land rights, providing secure title to those rights and enhancing the efficiency and transparency of Ukrainian land markets; and (c) the project has resulted in important efficiency gains in terms of a reduction in transaction costs and improved service delivery.

While the project went through several restructurings, the Level 1 restructuring was completed with only 24% of funds disbursed. Applying the methodology from the ICR Guidelines, a weighted rating of 4.28 is calculated and corresponds to an overall rating of moderately satisfactory (see chart below).

<table>
<thead>
<tr>
<th>Against Original PDOs</th>
<th>Against Revised PDOs</th>
<th>Overall</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating</td>
<td>Unsatisfactory</td>
<td>Satisfactory</td>
<td></td>
</tr>
<tr>
<td>Rating Value</td>
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<td>5</td>
<td></td>
</tr>
<tr>
<td>Weight (% disbursed before/after PDO change)</td>
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<td>76.00%</td>
<td>100%</td>
</tr>
<tr>
<td>Weighted Value (2x3)</td>
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<td>3.80</td>
<td>4.28</td>
</tr>
<tr>
<td>Final rating (rounded)</td>
<td></td>
<td>MS</td>
<td>Early restructuring results i MS overall rating</td>
</tr>
</tbody>
</table>

The revised PDO, targets and activities were relevant to the needs of the country during the project period, and as technology and needs evolved, so did certain activities evolve to take advantage of developments, particularly the possibility of an on-line IT system. Over the course of the project the necessary legal/regulatory framework was enacted, aerial photographs and base mapping were produced for the entire country, and the national rural land allocation process was completed with the project funding over 700,000 state deeds. While the number is somewhat below the target of 800,000, the project issued state deeds to all eligible recipients in the project areas. For some activities, the project contributed to exceeded expectations, such as the creation and populating of the new IT system for the cadastre, with on line access, that covers almost 17 million properties, which is 2.6 times higher than the intended target, and important efficiency gains were achieved.

Because many of the key performance indicators in Annex 1 to the PAD are expressed in subjective terms that cannot be easily measured, it is difficult to objectively judge, but reports by participants in training courses and results of customer surveys indicate that the training and public awareness components were successful and have contributed to more knowledgeable land owners that can exercise their rights based on informed decisions. These clients receive improved services from the cadastral offices due to the training programs that were implemented under the project. Further, the development of modern surveying and other courses required for a modern cadastre system, plus the training of lecturers and the provision of equipment, has transformed the tertiary education sector in these fields.

The project undoubtedly experienced difficulties throughout implementation. As noted previously, the original project design had flaws, mainly due to an over-ambitious scope and unrealistic expectations about the political economy. Delays caused by bureaucracy and certain periods of lack of political leadership retarded what should have been prompt progress. The project had unsatisfactory or moderately unsatisfactory ratings during FY05 - FY09 (remedied through the restructuring) and briefly in FY13 (due to concerns about completing the in-house development of the IT system before project closing). Two components comprising over 50 per cent of the original loan funds were cancelled and the PDO was revised. A significant amount of Bank resources for supervision and implementation support were needed to navigate the changing political environment and institutional rivalry.

Despite these challenges and setbacks, both the government and Bank teams addressed the issues and revised the activities accordingly. The project achieved the revised PDO and has made an important contribution to a more complete, equitable, secure and open property rights system in Ukraine. Therefore, the overall rating of moderately satisfactory is justified.

3.5 Overarching Themes, Other Outcomes and Impacts

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

The Project targeted poverty and social development, and although it did not specifically target women, given the high proportion of women owners of agricultural land (approximately 60 per cent, against 40 per cent for male owners), the Project’s positive outcomes have benefited many
women in rural communities and also those in urban areas who had moved from rural areas or inherited property rights.

With respect to poverty, as envisaged in the PAD, the project’s results have benefited people who previously had unclear rights to land and little knowledge, bargaining power or capacity to deal with those who rented their land, particularly managers of former collectives, and who were running agricultural enterprises. Now, the numerous holders of state deeds have been provided with more information about property rights and formal documents testifying to their rights to particular properties. Survey results and responses to the publicity campaigns show that many people became more knowledgeable and that the state deed to a particular property was seen as a more robust form of right than a share of an undivided field. This has given them greater bargaining power, with the expectation that they will receive better rents for their land. For instance, the percentage of landowners that obtained money for renting their land increased from 83.5% in 2010 to 95.2% in 2012. During the same period, the average annual rent per hectare measured in 2012 dollars increased almost 12% from $68 to $76. These figures reflect a major improvement from the situation in 2003 when only 13% of landowners obtained money for renting their land and the average price per hectare was only $22—nearly 2.5 times lower than the figure in 2012. (see details in Annex 3). While the Bank project was not the sole supporter of titling activities, it nevertheless made important contributions to securing property rights through issuing state deeds and supporting the development of the land cadastre and new IT system to map, record and administer those deeds.

In social development terms, there is potential for the more efficient land administration system to facilitate the use of property as collateral, and thus allow significant numbers of citizens to exploit the equity of their land for business purposes. Further, once the moratorium on the sale of agricultural land is lifted many people who no longer have a connection to the land or rural communities will be able to sell their properties and use the funds for other socially or economically productive activities.

(b) Institutional Change/Strengthening

The project was designed to fit within and support the SALRU/SLCC’s existing mandate and operations, so to this extent, the project was primarily intended to strengthen rather than to change it. Through support across laws, building renovations, staff training, creation of maps and a database of properties, the project has strengthened the SALRU/SLCC from an operational viewpoint and as a respected source of reliable data on land parcels. The SALRU/SLCC stand as more professional and more relevant organizations today than at the beginning of the project commencement, and this progress is partly attributed to the project’s contributions.

Further, as the SALRU/SLCC has developed over time, particularly in the last two years, the project has been able to support that process of change. By the project’s close, the SLCC had developed into a more open and customer focused organization, and one that was leading progress in the land management field. Furthermore, a workable relationship with the MOJ is beginning to emerge and will facilitate further linkage of cadastre and legal registry information. The engagement and support of the Bank has also strengthened the SLCC’s position in arguing for change, particularly introduction of international best practices, and Bank experts have
advised and reassured SALRU/SLCC management on appropriate technical directions. This support from the Bank has supported the SALRU/SLCC’s move to a more respected and authoritative organization within the government, among land market professionals and within the broader community.

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

One significant accomplishment of the project was the production of aerial photographs and digital base maps for the entire country. These spatial data products were created for cadastral registration but subsequent events highlighted the multi-purpose use aspect. When the government requested information on nation-wide land use and composition, the SALRU was able to respond quickly and comprehensively with the information. The use of aerial photographs and other spatial data products is an increasing focus of countries in the ECA region, and throughout the world, as they seek to develop a NSDI. The national coverage with recent photographs and maps produced under the project provides a strong basis for Ukraine to develop its NSDI system and the goal of data being available, quickly and cost-effectively, for multiple purposes.

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

Land market stakeholders view the new IT system as an important tool in the Ukrainian market, and the latest survey to assess user satisfaction with the system was very positive. The majority of users rate the system between 8 and 10 on a 10-point scale. In addition, employees of land management agencies said they benefit from the reduction in time in processing customer requests and viewed any map inaccuracies as a temporary drawback. Land owners welcome the opportunity to access information on-line and their feedback shows that they are actively using the system (2.5 million hits in the first 9 months of operation). Although some users were not happy about the fact that maps cannot be accessed without knowing the specific cadastral numbers or by their name, those limitations are due to data privacy legislation. Other technical issues can be resolved as system functions are refined and further services are developed. Overall, the user feedback has been positive and user engagement is high.

4. Assessment of Risk to Development Outcome

Rating: Moderate

The risk that the various development outcomes achieved under the project will not be maintained is moderate, mainly due to political factors rather than the relevance or technical quality of the work done under the project. As noted previously, secure property rights and a solid land administration system are important for the rural sector and land market. Under the project, various aspects of land management and the population’s understanding of their rights and duties have been established and, once created, they should be accepted as the norm and expected to be maintained. Further, as people are more aware of their rights, as agricultural and other property becomes a more important economic factor, and as Ukraine shifts to a more open society and a more market-oriented economy, land market professionals and the public will maintain strong demands for high quality land related information and services. Nevertheless,
political aspects and government commitment to continuing key reforms in the rural areas, especially introduction of a rural land market, remain uncertain.

From the technical side, the main threat would be that the information, records, IT system and staff knowledge are not maintained. This would progressively devalue the information and institutional capacity that has been produced. At the end of the project it was noted that some issues remained for the sustainability and proper maintenance of the system. However, the SLCC has maintained steady improvements and increased its own investments into the system since the project ended. The results and performance of the system have been widely publicized and demand for more information is rising. Since the institutional mandate for the SLCC appears stable for the moment, and the cadastral system put in place with the support of the project reflects a modern, technically advanced structure, the overall risk to the development outcome is moderate.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance
(a) Bank Performance in Ensuring Quality at Entry: Moderately Unsatisfactory

The Bank team was experienced and knowledgeable in their fields and in the region, and they applied a fairly standard model of institutional development and land titling to meet the needs of Ukraine in the early 2000s. The project was technically sound and logically sequenced. Over an extended period, the team worked closely with counterparts to design the project’s activities to achieve the PDO. However, the project team and Bank management underestimated the effect of the political economy and allowed the project to proceed without the necessary legal and institutional framework in place. While the political and institutional risks were identified and mitigation measures such as using the PAL to gain leverage were put in place, the measures proved to be insufficient. Also, the design was later determined to be overly complex and included a component that the government was not really interested in, and these shortcomings had to be remedied through cancellations and restructuring. Thus, a rating of moderately unsatisfactory is applied.

(b) Quality of Supervision: Moderately Satisfactory

Bank supervision of the project was persistent, supporting the project activities that were running well and working through the various problems as they arose in a cooperative fashion with the SALRU. Supervision missions visited regularly and the task team leaders conducted regular video conferences as the need arose. The weekly video conferences that were held in the final year of the project were instrumental in ensuring the completion and nationwide rollout of the IT system. Overall, the advice was generally appropriate and well-targeted, drawing on technical expertise where necessary. Further, appropriate changes to project design and activities were introduced to help achieve the PDO and also meet the needs of both the SALRU/SLCC and the country. The Bank team adjusted to the realities of the situation and addressed the hurdles that arose although, as noted in the QAG Learning Review of ECA Disbursements, the Bank was perhaps too accommodating to the SALRU and the government, giving them additional time to act and providing the government with funds without meeting its obligations under the PAL.
Nevertheless, the dedication of the supervision team to work through the problems contributed significantly to a successful outcome of the project and is therefore rated as *moderately satisfactory*.

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

The Bank’s performance was adequate to the tasks and facilitated the project’s success, as demonstrated by the final results for the outcome and performance indicators. While in hindsight it can be seen that there are issues with the quality at entry, supervision was generally appropriate to ensure that the project was successfully completed and the PDO was reached. The Bank could have been more active in dealing with the institutional, political and bureaucratic hurdles facing project progress, and therefore to have acted more quickly to cut funds or restructure, as well as holding the government to its obligations under the PAL. On balance, therefore, when viewed in context across the entirety of the project and the significant outcomes achieved, these failings are moderate and an overall rating of *moderately satisfactory* can be attributed.

5.2 Borrower Performance

(a) Government Performance: Moderately Unsatisfactory

The first decade of the twenty first century in Ukraine was a difficult time in the country’s political development, and the difficulties were reflected in the government’s performance. While there continued to be strong ownership and commitment to the project’s objectives (as reformulated under the restructure), and the government even stepped up the program for issuing state deeds using a variety of funding, there were routinely problems in the timely resolution of issues and, in the middle of the project, wavering support for the SALRU/SLCC itself. Conversely, towards the end of the project, the government was performing better and provided the necessary support to the agency and project activities.

Across the project period, the government’s performance displayed a number of shortcomings. The main problematic areas were the failure to resolve the institutional problem between the SALRU/SLCC and MOJ regarding the cadastre and legal registry and the failure to promptly process the restructuring. However, the government engaged regularly with the Bank team on the issues and options, and ultimately changed the law to reflect the final policy decision to keep the cadastre and legal registry as separate entities. The other more general problem was a lack of support to the SALRU/SLCC at various times and the numerous changes in senior management that impeded project implementation. Despite strong commitment to the project’s objectives toward the end of the project, the government’s performance must be regarded as *moderately unsatisfactory*.

(b) Implementing Agency or Agencies Performance: Moderately Satisfactory

Across the entire project preparation and implementation period there were numerous changes to management within the SALRU/SLCC and thus approaches varied. During certain periods, it is clear from the Aides Memoire that the SALRU/SLCC did not fully engage with project activities
or respond to issues in a timely manner, while at other times, particularly at the end, SALRU/SLCC management were highly engaged and focused on completing project activities.

In terms, therefore, of commitment, appointment and engagement of some key staff, and prompt resolution of issues, the experience is mixed across the project period. In the early stages of the project the SALRU failed to ensure that the SLCC (which was subordinate to the SALRU) met its obligations under the project and loan agreement, and disbursement levels were low for much of the period. The SALRU itself faced difficulties in meeting its obligations by the cumbersome and bureaucratic systems within the government, the institutional disputes between the SALRU and MOJ, as well as the broader contentious political climate. However, in other areas of performance, such as engagement with stakeholders, fiduciary obligations, M&E arrangements and transition arrangements, the SALRU/SLCC performed without any real failings. At the final stages of the project, the management team was fully engaged and committed to finalizing the cadastre system and was instrumental in achieving project results. Further, at the oblast and local levels, there was continued strong engagement and support for the project’s activities.

On this basis, and when ultimately judged against the SALRU/SLCC’s overall performance, there was generally adequate performance, and the shortcomings that did occur were moderate, thus resulting in a rating of moderately satisfactory.

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

Both government performance and, to a lesser degree, the implementing agency demonstrated moderate shortcomings across the project lifespan. The impact is reflected in the cancellations, restructurings, lengthy periods for approvals, and the slow disbursement profile, although it should be noted that none of these impacts ultimately prevented the project from achieving its goals. As noted above, in the final years of the project, both the government and SALRU/SLCC showed more commitment to the project objectives and the project ended with all targets and outcomes achieved.

Overall, the shortcomings in the middle of the project were such that they cannot significantly offset the strong performance and achievements reached in the final years, and thus an overall assessment of moderately satisfactory is appropriate.

6. Lessons Learned

Overall, the project achieved impressive results, especially considering the problems that were encountered throughout implementation. At the same time, it is important to assess what could have been done differently to address the shortcomings with project design and implementation, and to note the actions that led to the successful completion so that they can be replicated elsewhere. Both types of lessons can help the Bank conduct its business better in Ukraine, in the ECA region, and in other parts of the world. The main lessons learned from this project are:

Perseverance pays off: Land projects tend to be long and complex and require a great deal of patience and preparation. This project was envisioned as a nine-year long project and was completed with a ten-month extension. The Bank needs to take a long term vision of engagement
and work with the client to reach the mutually agreed goals despite the many hardships that emerge. Projects that address land and property rights generally encounter politically, socially, and economically sensitive issues, and often require longer than the general 4-5 year project cycle. These issues surrounding these projects can include vested interests (for change or for inertia), complex legal and technical work, social tensions over allocation and use of land, emotional or historical ties to the land, political platforms, rapidly changing technology, government budget constraints, etc. Teams that design and supervise land projects must balance these many factors and remain engaged and determined even as events change. As experience from this and other land projects shows, perseverance pays off. While this was a frustrating project for many Bank staff, both the Bank team and management were proactive in addressing the problems, cancelling unnecessary funds and restructuring as needed. While land projects often contain high risk, they can likewise produce high rewards. The final project extension in 2012 was viewed as risky but it ultimately paid off with the project outcomes and revised PDO indicators fully achieved or exceeded. The commitment from the supervision team, as evidenced through weekly video conferences and regular communication with the client, greatly facilitated the final successful outcome.

Do not underestimate the political economy: High level political support and direction is essential for any project that seeks to introduce fundamental reforms such as post-Soviet land privatization, and project teams need to make a realistic assessment of the political economy right from the start. A project that reflects a sound technical analysis and needs assessment, and which uses best practise models, can nevertheless be defeated or impeded by political infighting. Component E is a good example of designing a modern, unified title registration system but vested interests and lack of political leadership and decisive decision-making at the initial stages ultimately required a revised approach and focus on a smaller, more targeted goal. In the case of component F there was limited or no support from the government or implementing agency for the activities, but the component was included anyway. While the goal and activities made sense with respect to post-Soviet agricultural sector reform, they were nevertheless not a priority for the government and had to be dropped.

The PAD identified the risks that actually arose. For example, the failure of the legal framework to evolve and the inability to link the cadastre to the legal registry were listed as substantial risks. The PAD recognized the “competing interests” of MOJ as a possible controversial aspect. The failure of the SALRU/SLCC to restructure in line with project proposals envisioned under component E was identified as a high risk. Mitigation measures for these aforementioned risks included making the adoption of the legal framework and the establishment of a single unified registry and cadastre as conditions for the PAL and DPL, as well as a condition for funding under phase 3 of the cadastre system development. In hindsight, it can be argued that the political economy risk was underestimated and the failure of the Bank to follow through on its own risk mitigation measures affected project implementation.

A year into the project, Ukraine had its Orange Revolution and the 2004 constitutional amendment devolved power from the presidential to parliamentary level, creating a Parliamentary-Presidential Republic. This change essentially blurred the reporting lines and transmitted the uncertainty and personal rivalries to Ukraine’s institutions. While the ICR review does not take into account such political factors, there are two important lessons learned. First,
the Bank should not rely on the promise of political reform alone but engage with governments only once their commitment to the reform agenda has been proven. Second, in case the political commitment to reform remains unproven, the Bank should design projects that are flexible and can work around the existing, somewhat unstable, political economy conditions in the country. The fact that the new IT system was designed around the ‘second best’ option shows that a flexible project design can help guide the Bank even when the political situation in client countries becomes unfavourable to project interests.

Need for Clear Project Design and Results Framework: In hindsight one can also see that the project was over-ambitious and the design proved to be inadequate to adjust to the various issues that arose during implementation. Once such issues do arise, the Bank needs to be responsive, make quick decisions and start the restructuring process as soon as the need is identified. The Level 1 restructuring took almost 2 years to complete due to a combination of lengthy discussions with the government and internal debates within the Bank about what would and would not be acceptable revisions to project activities. Following the restructuring, the Bank’s quality of implementation support must be consistently maintained. With regard to the Results Framework (RF) the original design of the project was not adequate to capture project outcomes and relied heavily on subjective criteria. Most of the original indicators focused on outputs rather than outcomes and clear baseline data and targets were missing. While general project outcomes are implied in the PAD, they are not clearly stated in a detailed RF. This lack of clarity and reliance on subjective targets and indicators make it difficult to assess project progress and allows people to rely on the more formulaic institutional indicators that may not fully capture the impact that a project is having.

Bank Teams Should Not Offer Levers that are Not Appropriate: Where difficult policy issues need to be resolved and they are to be resolved in a parallel DPO, every effort should be made to stick to the agreement. In this case the Bank agreed to make an exception in the interest of the overall country portfolio and not hold the government accountable under a PAL conditionality, which had a negative impact on the project. The lesson learned is that the Bank should consider carefully which instruments and mitigation measures are appropriate for a project and balance the risk of using or not using the leverage if it is needed. In terms of promoting legal or institutional reforms in Ukraine, the Bank should look at all its instruments as a set of tools that could be used but requiring that the structure is in place prior to project implementation may be a more reasonable solution.

Challenges with large ICB contracts and the need for a phased approach to IT systems: Over the last two decades, land projects in the ECA region have routinely encountered significant delays, contracting issues, and technical problems with large ICB contracts for mapping and IT systems. Over the course of this project one mapping ICB contract failed and is now the subject of a court case, although project targets for mapping were met because the contract was re-tendered, and the original ICB IT system contract was terminated upon mutual agreement and the SLCC proceeded with in-house development which was ultimately successful.

The reasons for problems with ICBs can be attributed to several factors. First, many implementing agencies and the governments are unfamiliar with Bank procurement rules and require significant capacity building support, especially at the beginning. Second, the technical
specifications for the contracts need to be detailed and clear, and experience has shown that international technical assistance is often needed. Third, bidders tend to underbid to win the contract which subsequently requires careful and consistent quality control, contract monitoring and supervision. Thus, both the project and the Bank teams must have adequate budgets to manage and monitor this complex, technical work. The general trend in ECA to reduce project implementation support budgets over the past 3-4 years has made it difficult for the land team to provide detailed technical support and supervision. In the case of this project, the land team would not have been able to provide the high quality of implementation support without the support of consultants engaged under the joint Bank-UNFAO Technical Cooperation who comprised almost half of the supervision team. In addition, while the Bank has well qualified land surveyors, there is no in-house expertise for land administration IT systems. The ECA land team have relied almost exclusively on the UNFAO expert. This has been adequate to date but is not a permanent solution, especially as land projects in the region are becoming increasingly technology-oriented. Finally, technology is advancing so rapidly that even well-drafted technical specifications for equipment, architecture, platforms, data standards, delivery formats, etc. quickly lose their relevance from the time they are agreed upon to when they need to be executed. This means that contracts may need to have additional flexibility to ensure that the latest technology is being used in the development of IT systems. 11

With regard to IT systems, this project serves as an excellent example that a phased, step-by-step approach to the development of IT systems can prove to be very useful, and this approach should be considered for IT systems in land projects elsewhere. The IT component was well designed in the PAD where development and roll out was done in three phases: (a) development of the interim system, (b) development of cadastre system and establishment of a rural office network, and (c) upgrade of the registry module and establishment of the urban office network. The PAD cleared the “ideal scenario” for part (c), the single agency in case the cadastre and/or title registry law was passed but at the same time outlined the ‘second best’ solution in case the law was not passed. This flexible project design proved to be instrumental in the successful development of the IT system and the establishment of the national land cadastre. New legislation now requires the linkage of the cadastral and legal data, which was one of the main reasons for the initial push to create a single agency cadastre and registry system.

Several projects in the ECA region that involve the rollout of IT systems show that those with a phased approach to IT development using in-house expertise and outside, professional quality control (as experienced in Ukraine, Bosnia and Herzegovina, Albania and Kyrgyz Republic) have a far higher chance of success than IT development done through large ICB contracts (as experienced in Serbia and Croatia).

A phased rollout also ensures that capacity is built over the course of the project and land agencies are prepared to assume new responsibilities, use new technology and provide new services to clients. In the case of Ukraine, the substantial investment in in-house human and system resources proved to be the cornerstone of successful IT system rollout when there was a standoff between the Government and the IT contractor and the international contract was finally

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11 The ECA Land team plans to review all these aspects in greater detail in the forthcoming paper “ECA Land: lessons learned that reflects on the 20 years of Bank experience on land related projects in the region.”
cancelled. Furthermore, introducing independent quality assurance and quality control is a good international practice. The role of the independent quality assurance contractor is important to ensure that the system is fully documented and to encourage the local team to introduce international standards for version control, testing and system maintenance.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners
(a) Borrower/Implementing agencies

There are no comments or issues raised in the client’s final project report. The general feedback was positive and the consistent and constructive engagement between the Bank and implementing agency was noted. A summary of the report is found in Annex 6.

However, SALRU reviewed the draft version of this ICR and, in a letter dated October 4, 2013, disagreed with the overall project rating of moderately satisfactory. In their opinion, the project was successfully completed, its goals were achieved as evidenced by the performance indicators, and its outcome has a “considerable positive impact on the country’s socio-economic development.” SALRU added that they do not think the restructuring should affect the final evaluation of the project as it was a mutual agreement between the Bank and the Borrower. The full letter is found in annex 7.

Response: The author of this ICR acknowledges the impressive results of the project as well as the dedication and commitment of the SALRU and SLCC management and technical teams in the final years of the project to achieve these results. While there is little dispute about the results, the project experienced problems in the early stages which, in taking a holistic view, led to the moderately satisfactory rating.

(b) Cofinanciers

N/A

(c) Other partners and stakeholders

Comments to the draft ICR were provided by UNFAO whose technical assistance and supervision support were instrumental to the project. UNFAO has supported the project through the World Bank-UNFAO Cooperative Program with three experts in land policy, IT systems and cadastral mapping/land survey. The UNFAO noted that phases 1 and 2 of the Component E system development were achieved, and the “second best” option for phase 3 was accepted and then achieved. While component E was dropped from the project and the work was narrowed to focus on the cadastre, the technical design of the system was still developed with the support of the project (under component D). Potential issues with the institutional and legal framework were foreseen in the PAD and, therefore, the ‘second best’ option was included to allow flexibility. Moreover, the results of implementing the ‘second best’ option exceeded expectations in areas like the introduction of reengineered business processes to increase efficiency and minimize opportunities for corruption, e-signatures for greater personal responsibility in the local offices and online access to the cadastral maps.
According to the FAO, the revised objectives following the 2008 restructuring have been achieved or exceeded. For example, registration of over 16 titles far exceeded the plan to register the 6 million rural titles. Under Component D2, the new IT system was launched on January 1, 2013, and it has already achieved impressive results such as the reduction in time to register a parcel from several days to just 21 minutes and the registration of over 900,000 new land parcels. The SALRU is also focusing on data quality improvements and over 2 million errors have already been corrected, many of which were identified by users submitting reference to the errors through the online geoportal. UNFAO noted that system sustainability has been ensured in terms of human capital as well as other resources. The system has been audited by an independent quality assurance contractor and assessed as stable and compliant with relevant standards. Further developments are underway with the launch of new services like the digitalization of soil maps and urban plans, and a 3D model has been developed to use NSDI for climate change monitoring and disaster risk management. They also highlight the political, managerial and technical support that was provided in the final two years of the project. For complete comments see Annex 8.

Response: The author again acknowledges the impressive results of the project as well as the important support to the project provided by FAO experts. Many of the findings and updated system performance figures have been incorporated into this ICR.

For comments from other stakeholders, see results of the client survey and stakeholder consultations in Annexes 5 and 6.
Annex 1. Project Costs and Financing

(a) Project Cost by Component (in USD Million equivalent)

<table>
<thead>
<tr>
<th>Components</th>
<th>Appraisal Estimate (USD millions) Loan Funds</th>
<th>Actual/Latest Estimate (USD millions)</th>
<th>Percentage of Appraisal</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Institutional Development and Legal Reform</td>
<td>5.00</td>
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<tr>
<td>B. Public Awareness</td>
<td>2.83</td>
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<td>67.4%</td>
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<tr>
<td>C. Training</td>
<td>3.14</td>
<td>2.42</td>
<td>77.0%</td>
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<tr>
<td>D. Land Survey Works</td>
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<tr>
<td>E. Cadastre System Development</td>
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<td>F. Farm Restructuring Services</td>
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<td>0.0%</td>
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<tr>
<td>G. Project Implementation</td>
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<td><strong>28.1%</strong></td>
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<td>Price Contingencies</td>
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<tr>
<td><strong>Total Financing Required</strong></td>
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<td><strong>86.38</strong></td>
<td><strong>24.6%</strong></td>
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</table>

(b) Financing

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<thead>
<tr>
<th>Source of Funds</th>
<th>Type of Cofinancing</th>
<th>Appraisal Estimate (USD millions)</th>
<th>Actual/Latest Estimate (USD millions)</th>
<th>Percentage of Appraisal</th>
</tr>
</thead>
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<tr>
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<td>International Bank for Reconstruction and Development</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td>350.51</td>
<td>86.38</td>
<td>24.6%</td>
</tr>
</tbody>
</table>

12 For consistency, this excludes US$ 4000 in commitment fees stated in client report.
13 As stated in Client Report.
14 Total financing of US$86.38M minus client financing of US$2.34M. This number does not tally with the US$81.77M disbursed loans. Need to check if it includes front-end fee or not (US$1.95M) and where the remaining discrepancy comes from.
Annex 2. Outputs by Component

Component A: Institutional Development and Legal Reform

According to the PAD, this component was intended to provide SALRU with resources to transform itself from a “Soviet-style land use planning to land use regulation better suited to a market economy”. Funds were to be used to improve zoning regulation and environmental advisory services provided by SALRU at its network of offices (24 oblast offices, plus the Crimea, Kyiv and Sevastopol), plus city and rayon offices under them. The component was also to support development of the legal framework.

Details of specific activities under this component are not included in the PAD, but during the course of the project, the activities focused on creating appropriate office environments for staff to work and for customers to be served. Project funds were used primarily to supply office furniture and equipment, such as computers and copying machines. In total, some 692 offices were equipped using project funds.

Component A also included activities relating to legal reform. The aim was to develop and draft legislation required to improve land management, including amendments to existing legislation, plus technical regulations to assist implementation. Under several contracts, lawyers established a library of international land laws, examined and reported on international experience, made proposals for reform, and in the final contract, developed a body of draft laws in coordination with SALRU, and presented it to key stakeholders through a series of workshops. Included in this body of draft legislation were 14 laws, ten Cabinet of Ministers’ decrees and 11 executive orders.

Component B: Public Awareness

The public awareness component was intended to focus on small land holders to inform them of their rights to state deeds, and to educate them on their land use rights and obligations. Information was also to be provided on farm management, legal procedures relating to land, and leasing of parcels.

Contractors were engaged to deliver the messages through a variety of means – publication of brochures, production and airing of television segments, publishing articles, educating journalists, and development of a web page. About 150 television and 100 radio programs were broadcast, including the regular television and radio program "My land is my property". There were 475 issues of 25 regional newspapers, five press tours, four training seminars and 120 publications. SALRU produced not only the project website (www.zemreforma.info), but also a web portal to ensure that information is available after the project closed (www.land.gov.ua).

As part of the component, three extensive sociological studies of the public regarding land relations were undertaken, with the results being disseminated at two conferences. The indicators were exceeded.
Component C  Training

The PAD envisaged two forms of training:

- Short-term training, which was required as part of the process of issuing state deeds to equip large numbers of specialists (consultants, lawyers and surveyors) with the necessary knowledge and skills to issue the deeds. Similarly staff of the SALRU and CC would require training to support the project and its activities and objectives; and
- Long-term training, which would equip agrarian universities and assist them to develop their courses and training capacity. In this way, they could produce graduates with appropriate land management and cadastre skills and knowledge to work for SALRU or CC, or in the private sector and support the move to market economy.

A large number of training activities occurred under the project:

- refresher training was conducted for some 3,273 specialists of the land resources agencies, including from 549 rayon offices of SALRU. That figure includes 78 staff who undertook train-the-trainers courses;
- materials, equipment and specialized software were supplied to nine major universities;
- training and methodological approaches were updated in 22 state-owned universities providing courses in land management, including through the development of 9 methodological manuals;
- refreshment training for 557 lecturers involved in land management from 22 state-owned universities;
- establishment of a specialized training center for training and refresher courses for surveyors.

Component D  Land Survey Works

Component D involved the technical work for land survey and cadastre. Under the PAD, this component focused on the systematic subdivision of the land of former collective farms and the issuing of State deeds for Land free-of-charge to individual rural land owners. The process required the preparation of base maps, a substantial amount of preparatory investigation and consultation with the owners of former collective farms, agreeing on farm restructuring and subdivision plans, land survey work, and ultimately the issuing of State deeds for Land as well as developing the national land cadastre database.

For the D.1 mapping component the results include:

- Conversion of share certificates into state deeds: with support from the project 711,678 (includes complete files and “variations”, in which State deeds could not be issued (e.g., due to missing or deceased owners). Also, an additional 3.29 million land share certificates were converted into state deeds (GosActs) with other resources.
- Mapping: More than 600,000 sq.km of modern mapping was delivered thus fully equipping Ukraine with base mapping of uniform quality for the first time after independence: up-to-date aerial photography, an up-to-date digital orthophoto map in
appropriate large scales, as well as a digital Cadastral Index Map (CIM) recording and making visible in their spatial context all the privatized and surveyed land parcels with unique parcel identifiers and field quality control.

- Integration of spatial data in the electronic National Cadastre System (NCS): The titling and mapping products under the Project were successfully loaded nationwide in the NCS and the spatial data have been transformed into the single national coordinate system, fully integrated in the NCS, and stored together with the other (archive and operational) spatial, alpha numeric and image data.
- The short- and mid-term data quality improvement concept and implementation plan was developed and implemented. Batch corrections, mostly of spatially misplaced parcels, were implemented with in-house developed software modules and participatory, formalized feedback from the public. This level of public commitment in data quality improvement corresponds to the best global practices.
- The project mapping activities instigated several parallel projects, which produced valuable by-products with far reaching positive impacts for improved land governance, including:
  - A comprehensive inventory of all existing archive mapping source materials was carried out throughout the country in all the relevant central, oblast and rayon authorities, which held archive mapping and land-related documentation. This inventory and source materials informed the establishment of the cadastre maps, and enabled the planning of archive map digitizing works;
  - A complete redesign, reconfiguration and re-survey of the Geodetic Reference Infrastructure of Ukraine was carried out, digital mapping data produced and uploaded into the NCS, thus launched an efficient and smooth transition to a modern (GNSS) geodetic reference network and coordinate system in all sectors of Ukrainian economy that use spatial data;
  - The integration of mapping data in the unified data base allowed the identification of existing spatial data issues, and the development of spatial data quality improvement concept and implementation plan; and
  - A complete record (database and standard spatial identification) of existing administrative territorial units (state, oblast, autonomous region, cities, rayon, villages, settlement areas, spatial planning zones, etc.) has been established and settlement of territorial boundary disputes between various level jurisdictions has been initiated.

For the D.2 Cadastral Information System sub-component the project would develop a land national cadastre system. Although not originally envisioned as a fully digital, on-line system, the final system that was developed and rolled out in the final year of the project reflects modern land administration principles and allows digital exchange of information with customers, including the legal registry held at MOJ. Main project activities and results include:

- The contract with the international software development company was terminated upon mutual agreement although the company did produce the business processes analyses,

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15 Global Navigation Satellite System
business processes reengineering, proposals for legal changes, and the supply of graphical licenses. Development of the final system (NCS) proceeded in-house.

- The NCS was put into operation nationwide on January 1, 2013 and covers central level (central and reserve data centers), oblast level (all 25 oblasts plus 2 cities with the status of an oblast) and rayon level (all 549 rayons). Several additional sub-systems were also implemented including: online exchange of information with the MOJ/State Registration Service and Notaries, a Geo-portal (Public cadastre map) with an e-service for citizen to report errors, an online application tracking system and a digital archive for both historical and incoming documents.

- For the digital archive a total of 16.8 million State deeds were scanned, indexed, data entered, verified and uploaded into secure central database and all cadastre index maps were vectorised and uploaded into the system.

- For the Geo-portal (Public Cadastre Map): all orthophoto maps, cadastre index maps and soil maps are available to the general public through on-line access in regular web browsers. During the first month, the system recorded 600,000 hits on the Geo-portal, more than 10,000 reports were registered and 7,700 reported technical errors were corrected.

All of these activities result in improved services to users, improved staff and office performance monitoring, faster data quality improvement, and improved transparency and minimized opportunities for corruption.

Component E  Cadastre System Development

This component was cancelled although the activities related to IT system development were transferred to component D2 where phase 1 and 2 were completed as planned and the ‘second best approach’ was adopted and completed for phase 3.

Component F  Farm Restructuring Services

This component was cancelled.

Component G  Project Implementation

The PAD foresaw the difficulty with the implementation of Bank-financed projects in Ukraine, particularly in the agricultural sector, and stated that the risk of implementation failure without a competent PIU was significant. Therefore, a PIU structure of 12 professional staff and 9 or 10 support staff was proposed. Additionally, the PAD proposed the hiring of 3 regional representatives in each of the 24 oblasts. Seven of the key positions including PIU Director, procurement officer, and financial manager had been advertised ahead of the project and funded under the PPF.

Project implementation remained challenging in the initial years of the project due to, especially, the institutional rivalry between the MOJ and SALRU, and little government interest or commitment to the project. As a result, the project was restructured and objectives related to the creation of a unified title and cadastre system and farm restructuring were abandoned. Towards
the later years of the project, the PIU was more involved and committed to implementing agreed project activities, and as a result, PDO achievement was on track for the extended Closing Date of April 30, 2013. Between the final two missions, significant work to launch the electronic cadastre system was completed through additional in-house development of software, data preparation and training with the result that the electronic cadastre system is now fully operational in all 592 local and other offices. This progress essentially resolved the risks that had been noted about the launch of the electronic cadastre system.
Annex 3. Economic and Financial Analysis

The Rural Land Titling and Cadastre Development Project ("the Project") was considered the first in a series of investments that would be needed to improve property rights for immovable properties in Ukraine. The economic analysis in the Project Appraisal Document (PAD) identified indirect economic benefits linked to the broader property rights agenda, which included improvement in investor confidence, increase in financial liquidity, reduction of transaction costs, and protection of the land rights of vulnerable groups. The economic analysis also identified direct economic benefits from the Project, which included improvement in the efficiency of agricultural land use, stimulation of the rental market, and improvement of agricultural productivity. The economic analysis in the PAD did not calculate ex-ante parameters—Net Present Value (NPV) and the Economic Rate of Return (ERR)—for the direct benefits.

In this economic analysis, first, the evolution of the broader property rights agenda in Ukraine is discussed. Second, evidence of direct Project benefits is provided. A cash flow analysis is performed to estimate ex-post parameters for the NPV and ERR based on perceived benefits from the stimulation of the land rental market. These estimates indicate that the Project is a sensible investment. More benefits are expected in the near future as the property rights agenda gets consolidated.

The Development of the Property Rights Agenda in Ukraine, 2003-2013

In the early 2000s, Ukraine was still making a transition from a planned economy to a market economy with full property rights. During project preparation, the system for recording and transacting property rights was still under development. Although land shares had been allocated to farmers, they still needed to be converted to state deeds. The benefits from transitioning to a full market economy were expected to be significant. These benefits included an improvement in investor confidence, an increase in financial liquidity (mortgage market), a reduction of transaction costs, and protection of the land rights of vulnerable groups. The context of land markets is briefly explained before addressing each of these benefits.

During the last decade, land markets have evolved differently in urban and rural areas. There are no major restrictions in the market for urban land. Ownership of apartments has been transferred to the occupants. Although the land under most apartments still remains under state property, this does not restrict the transaction of properties. On the other hand, the agricultural land market is still heavily limited. Virtually the sale of all agricultural land is banned by a temporary moratorium which was instituted in the transitional provisions of the Land Code in 2001. The moratorium has been renewed in several occasions and it is currently set to expire on January 1, 2016. Land sales are only allowed under limited circumstances to Ukrainian citizens; foreign citizens are banned from owning agricultural land. The draft “Land Market Law” is still under discussion and the policy consequences of this new legislation are still unpredictable. The approval of this law is the last condition for lifting the moratorium. Next, the development in each of the identified benefits from the Project is addressed.
Investor Confidence. Investor confidence does not seem to have significantly improved over the last decade for reasons that are outside the Project’s control. In urban land markets, Ukraine was severely affected by the global financial crisis. Ukraine experienced a housing boom between 2004 and 2008, but the market collapsed and property prices have not yet recovered. In March 2013, house prices were still 46.2 percent below the peak price recorded in September 2008. The construction business was severely affected by the crisis as well. In general, the economy is slowly recovering. In this recent period, the economy has been hit by the euro zone debt crisis. In 2012, the GDP grew only by 0.2 percent and it is predicted to grow by 2.5 percent in 2013. In rural land markets, the moratorium on land sales and the uncertainty over the “Land Market Law” have arguably diminished investor confidence. Ukraine has still managed to attract significant investments in the agricultural sector, but they are probably below the country’s potential.

Financial Liquidity. Individuals and companies in Ukraine have a relatively high net worth in terms of fixed assets. During project preparation, it was argued that an underdeveloped property rights system and mortgage banking system hindered the transformation of immovable property into liquid assets. However, the mortgage loan market is still constrained by many factors. It is estimated that more than 75 percent of the population do not qualify for a bank loan; developers also have problems getting access to finance. Many banks also toughen the requirements for issuing mortgage loans during the financial crisis. Presently, the mortgage market is also hampered by the high inflation. For agricultural land plots the moratorium places restrictions on long-term collateralization of land assets. Instead farmers have to take annual loans collateralized by future harvest. Even if the moratorium is lifted, the attitude of the rural population is quite negative with respect to using their agricultural plots as collateral. In a survey of agricultural households conducted by the Project in 2012, only 7.2 percent of respondents said that they would be interested in obtaining a loan using their plot as collateral.

Transaction Costs. A well-functioning property rights system minimizes transaction costs, which in turn should stimulate land markets and facilitate the provision of mortgage loans. Ukraine is still evolving towards the development of an efficient system for the registration of property rights of immovable properties. On January 1, 2013, the new State Registration Service became operational. The State Registration Service will record the legal rights of immovable properties to both land and buildings. Until recently, the legal rights to land and buildings were recorded separately. In fact, there were seven separate registries maintained by different bodies and institutions to record rights concerning immovable properties. The consolidation of all these registries into a single one under the State Registration Service is a significant step towards an efficient system for recording property rights. The State Land Cadastre Center (SLCC) will continue to maintain the cadastre to record information about the location and characteristics of the plots.

During project implementation, the SLCC has already improved efficiency in the registration of land transactions. The SLCC is in charge of three types of registration services: state deeds for the right of ownership, state deeds for the right of permanent use, and lease contracts. Figure 1 shows the number of transactions by type (data for 2007 and 2012 was unavailable). During this period, the registration of state deeds for ownership rights was the transaction with the largest number of requests. The number of requests for this transaction, however, decreased significantly in 2011. The second most important transaction in terms of volume is the registration of lease contracts. During the period of project implementation, there was a notable increase in the number of lease contracts that were registered. The Project had public information campaigns that raised awareness about the importance of registering the lease contracts.

![Figure 1: Number of Transactions at the SLCC 2004-2011](source: SLCC (2013)).

The Project made important contributions to the establishment of a modern cadastre system. In particular, the Project assisted with the development of an IT system to improve efficiency of transactions. As reflected in the IT Systems performance review, some of the benefits include:

- Reduction in the time to process transactions: the process to register a land plot was reduced from several weeks to 21 minutes, and the number of transactions required to obtain a cadastral extract was reduced by half.
- Reduction in cost: The cost of obtaining a land parcel registration was reduced by two-thirds, and the cost of obtaining a cadastral extract was reduced by half.
- Greater access to information: Cadastral map information became available online for free and users can check the status of their applications online.

Furthermore, the cost of service delivery to the clients has improved. Between 2004 and 2012, the nominal average fee increased from US $6.00 to US $ 6.96 dollars. In real terms, the average fee decreased by 52 percent during this same period (see figure 2). The Doing Business data also shows that the cost of registering a property transaction has decreased in recent years (see figure 3). The Doing Business’s methodology consists of recording the cost as a percentage of property value and includes all costs related to the transactions (cadastre, registry, and notaries).
The financial sustainability of the SLCC is important to guarantee that these gains in efficiency are maintained and further improvements are made. However, SLCC’s recurrent costs are still well above the revenue collection from user charges (see figure 4). The cost figures include all expenses incurred by the SLCC (disaggregated data for the cost of supplying cadastral activities was not available). The trend shows that the gap between recurrent costs and user charges has been narrowing. This signals a positive trend. Ensuring the financial sustainability of the SLCC is one of the priorities for the future.

**Rights of Vulnerable Groups.** The Project contributed with the conversion of 0.8 million land certificates out of the 4 million processed by the SLCC during this period. The systematic conversion of these certificates into state deeds ensured an equitable treatment for disadvantaged groups. Now, the owners of these agricultural plots enjoy secure tenure of their immovable property and are less vulnerable to political influences or market forces. In the next section, specific project benefits are quantified in order to calculate economic parameters of efficiency.
Direct Economic Benefits of the Project: A View from the Land Rental Market

The economic analysis in the PAD identified the development of land rental markets and the enforcement of lease contracts as one of the Project’s direct benefits. Under the current restrictions on land sales, the land rental markets play a prominent role in Ukraine’s agricultural sector. Large corporate farms acquire land through leasing, mainly from state farms and land reform beneficiaries. Lease contracts can be annual or multi-annual. Land rentals are a mechanism through which the markets can allocate land to the most efficient user. During project preparation, it was estimated that 80 percent of land share owners rented their plots. Land rental markets have an important effect on economic growth in Ukraine.

Although the role of agriculture has shrunk since Ukraine’s independence from the Soviet Union, this sector still accounts for 8.2 percent of GDP and employed 15 percent of the active population. Ukraine is endowed with fertile black soils that are attractive to agricultural producers and investors. The value of capital assets in the agricultural sector (including land) has actually been increasing in the period 2005-2010 (figure 5). The value of capital assets for this sector was estimated at $14.6 billion in 2010.

![Figure 5: Value of Capital Assets in the Agriculture, Hunting, and Forestry Sector](source: State Statistics Service of Ukraine)

The Project supported the conversion of land share certificates into state deeds as well as a public awareness campaign to provide landowners with information about their rights and obligations. Before the Project, land reform beneficiaries did not have precise information about the physical location of their land shares. The Project carried out the identification and delimitation of the land plots as well as the process of converting the shares into state deeds to complete the privatization of these assets. The Project also sponsored a public awareness campaign that provided information about the legal procedures concerning land ownership and land rental. The public awareness campaign also financed sociological surveys to monitor dynamics in rural land

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markets and the perceptions of the rural population. These surveys were carried out in 2010, 2011, and 2012.

The direct economic benefits of the Project can be estimated by quantifying the effects on the development of the land rental market. The sociological surveys reveal important information about the change in dynamics in the land rental markets. Between 2010 and 2012, the percentage of landowners that obtained money for renting their land increased from 83.5 to 95.2 percent. During the same period, the average annual rent per hectare increased from $68 to $76 (2012). These are major differences compared to the situation in the early 2000s. In 2003, it is estimated that only 13 percent of land share owners received monetary payments and the average payment was only $22 per hectare. The rental rates reported in the sociological surveys are also above the average per hectare of $44 reported in a recent study. The comparison of these results shows that land rental markets are becoming more formal and that the terms of the lease agreements have improved for landowners.

Although causality of these results cannot be solely attributed to the Project, it is likely that the conversion to state deeds and the public awareness campaign played an important role in improving the conditions in the land rental market. The results of the sociological surveys in 2010 and 2012 are used to estimate the economic benefits from the development of land rental markets. These dates are actually appropriate considering that the firms hired to conduct the surveying works completed activities between 2010 and 2012. Nevertheless, project effect would probably have been larger if the land rental markets results from 2003 were available. Next, the data and model are explained.

The Project financed the conversion of 711,678 land certificates into state deeds. These state deeds benefited approximately 574,000 landowners. Considering that landowners received an average of 4 hectares during the land reform, the state deeds are estimated to cover an approximate area of 2.3 million hectares of agricultural land. Based on the assumption in the PAD, it is estimated that 80 percent of the land owners are leasing land. The assumption is that with conversion to state deeds and more information about rental markets, landowners are able to enter into better contractual terms with the leaseholders. In this model, the differences observed in percentage of landowner receiving rent and increase in the rental rate between 2010 and 2012 are attributed to the project. The average land size per landowner is held fixed at 4 hectares (see table 1).

Under these assumptions, the Project contributed to expand rental payments to 209,699 hectares of agricultural land in 2012. Landowners received a total amount of incremental rental income of $28.8 million during this year. This is a significant increase in income for these rural households. Although this income is a money transfer from the leaseholder to the lessor, it is feasible to

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22 According to the 2012 survey, each landowner had on average 1.24 certificates.
assume that the leaseholder is expecting a return on agricultural land that is larger than the rental cost in order to make the farming operation profitable. In fact, a study conducted by the European Commission estimated the return on agricultural land to be $239 in 2012, which is more than three times the value of the rent at $76.\textsuperscript{23} In order to calculate economic parameters for the Project, the increase in rental income is equated to an increase in the return to agricultural land. This is considered to be a minimum expected return to the land.

A cash flow analysis is conducted to assess the project’s net economic benefits. The cash flow has a twenty-year horizon and applies a discount rate of 12 percent. In the analysis, it is assumed that the benefits of increased rental income are a measure of the incremental return on agricultural land. The benefits begin accruing in 2012 and continue until the end of the period. The costs include the project’s investment costs incurred under the World Bank Loan and Government contribution as well as the SLCC’s recurrent costs. Information on recurrent costs is only available for the period between 2007 and 2012. For the initial period between 2004 and 2006, the analysis assumes the same costs as in 2007. For 2013 onward, the analysis assumes the costs in 2012 increased by an annual 2.5 percent.

The cash flow analysis shows that the project is a sensible investment compared to the potential increase in agricultural production. Panel A in table 2 shows a cash flow analysis that only incorporates the costs of Component D for the investment costs. The project has an NPV of $44.3 million and an ERR of 31 percent. Panel B shows the results of the cash flow analysis that incorporates all project expenses. The economic parameters are still positive: the NPV is $33.3 million and the ERR is 22 percent.

The cash flow analysis is repeated with switch values to check the sensibility of these results. In the first scenario, the incremental number of hectares subject to new rental income is reduced by 50 percent. In this scenario, the NPV becomes negative. In the second scenario, the economic return on a hectare is assumed to be $239. Under this scenario, the NPV is $88.7 million and the ERR 33 percent. The third scenario assumes that the number of hectares is reduced in half but the return on a hectare is $239. In this case, the NPV is $23.7 million and the ERR 20 percent. This scenario could be considered the most sensible because it combines a reduction in the target land area and a more realistic estimate of economic returns on land. The results of the third scenario are close to the parameters shown in Panel B, which were calculated using the baseline assumptions.

In sum, Ukraine has made significant progress for improving the property rights system but there are still significant challenges ahead. The development of a mortgage market is dependent on the conditions of the financial market and the liberalization of the rural land market. One of the most important challenges is the development of a rural land market under conditions that promote both equity and economic growth. The approval of the “Land Market Law” and the lifting of the moratorium are the two key actions for the future. The SLCC has shown improvement in the delivery of cadastral services, but more actions are needed to ensure that operations are financially sustainable. The State Registration Services is expected to have a significant effect on the cost and time for registering legal rights. Finally, there is some evidence that the Project was

a sensible investment for the country. The quantification of benefits arising from the development of land rental markets shows that the Project has positive returns.
Table 1: Assumptions for the Economic Analysis

| Certificate converted into state deeds | 711,678 |
| Estimated number of landowners | 574,834 |
| Estimated land area (ha) | 2,299,336 |

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual rent per ha (UAH)</td>
<td>464.30</td>
<td>610.00</td>
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<tr>
<td>Exchange Rate (UAH/USD)</td>
<td>7.95</td>
<td>7.99</td>
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<tr>
<td>Annual rent per ha (current USD)</td>
<td>58.42</td>
<td>76.36</td>
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<tr>
<td>CPI (2005=100)</td>
<td>195.36</td>
<td>227.69</td>
</tr>
<tr>
<td>Annual rent per ha (US$ 2012)</td>
<td>68.09</td>
<td>76.36</td>
</tr>
<tr>
<td>Percentage of landowners leasing</td>
<td>0.80</td>
<td>0.80</td>
</tr>
<tr>
<td>Percentage of landowners receiving rent</td>
<td>0.84</td>
<td>0.95</td>
</tr>
<tr>
<td>Estimated number of landowners receiving rent</td>
<td>385,369</td>
<td>437,794</td>
</tr>
<tr>
<td>Estimated land area under leasing (ha)</td>
<td>1,541,475</td>
<td>1,751,174</td>
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<tr>
<td>Estimated rent revenue</td>
<td>104,954,508</td>
<td>133,719,277</td>
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<tr>
<td>Incremental income to landowners (US$ 2012)</td>
<td>28,764,768</td>
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<tr>
<td>Incremental hectares under rent</td>
<td>209,699</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Cashflow Analysis

Panel A: Cashflow Analysis - Including Only Investment Costs under Component D USD (thousands)

| Investment Cost | 90.79 | 1,180.31 | 1,231.38 | 2,365.78 | 4,791.61 | 5,187.00 | 5,380.87 | 14,902.12 | 22,476.36 | 10,541.65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Recurrent Cost | 263.69 | 263.69 | 263.69 | 263.69 | 209.39 | 170.45 | 170.86 | 170.13 | 179.51 | 183.99 | 188.59 | 193.31 | 198.14 | 203.10 | 208.17 | 213.38 | 218.71 | 224.18 |
| Total Cost | 354.48 | 1,444.00 | 1,495.07 | 2,629.47 | 5,001.00 | 5,357.45 | 5,548.41 | 15,069.41 | 22,443.08 | 10,712.51 | 175.13 | 179.51 | 183.99 | 188.59 | 193.31 | 198.14 | 203.10 | 208.17 | 213.38 | 224.18 |
| Total Benefits | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 |
| Net Benefits | -354.48 | -1,444.00 | -1,495.07 | -2,629.47 | -5,001.00 | -5,357.45 | -5,548.41 | -15,069.41 | 6,121.72 | 18,052.26 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 |
| NPV | 44,291.21 |
| RRR | 31% |

Panel B: Cashflow Analysis - Including all Project Expenses under Investment Costs USD (thousands)

| Investment Cost | 2,546.31 | 1,899.18 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 | 4,955.57 |
| Recurrent Cost | 263.69 | 263.69 | 263.69 | 263.69 | 209.39 | 170.45 | 170.86 | 170.13 | 179.51 | 183.99 | 188.59 | 193.31 | 198.14 | 203.10 | 208.17 | 213.38 | 218.71 | 224.18 |
| Total Benefits | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 | 28,764.77 |
| Net Benefits | -2,810.00 | -2,162.87 | -5,219.26 | -5,219.26 | -5,219.26 | -5,219.26 | -5,219.26 | -5,219.26 | -15,069.41 | 6,121.72 | 18,052.26 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 | 28,584.77 |
| NPV | 33,334.54 |
| RRR | 31% |

NPVIRR: 33%
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<th>NPV</th>
<th>ERR</th>
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<tr>
<td>Scenario 1 - Area reduced by 50%</td>
<td>14,382</td>
<td>-3,979</td>
<td>10%</td>
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<tr>
<td>Scenario 2 - Return at US$ 239 per ha</td>
<td>50,118</td>
<td>88,773</td>
<td>33%</td>
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<tr>
<td>Scenario 3 - Area reduced by 50% and Return at US$ 239 per ha</td>
<td>25,059</td>
<td>23,721</td>
<td>20%</td>
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Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

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<th>Title</th>
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<td><strong>Supervision/ICR</strong></td>
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<tr>
<td>Gavin P. Adlington</td>
<td>Lead Land Administration Speci</td>
<td>ECSEN</td>
<td></td>
</tr>
<tr>
<td>Irina Babich</td>
<td>Financial Management Specialis</td>
<td>ECSO3</td>
<td></td>
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<tr>
<td>Richard Gargrave</td>
<td>Sr Procurement Spec.</td>
<td>ECSOQ</td>
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<tr>
<td>Alexandra Cristina Montea</td>
<td>Junior Professional Associate</td>
<td>ECSEN</td>
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<tr>
<td>Hadzi-Vidanovic</td>
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<tr>
<td>Naima A Hasci</td>
<td>Sr Social Scientist</td>
<td>ECSSO</td>
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<tr>
<td>Aleksander Kaliberda</td>
<td>Consultant</td>
<td>CEUTU</td>
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<td>Vitaly Kazakov</td>
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<td>Galina S. Kuznetsova</td>
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<td>Knut J. Leipold</td>
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<td>Cora Melania Shaw</td>
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<td>Iain G. Shuker</td>
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<td>EASER</td>
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<td>Alexei Slenzak</td>
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<td>Sanjay N. Vani</td>
<td>Lead Financial Management Spec</td>
<td>OPSOR</td>
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<td>Anna L Wielogorska</td>
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(b) Staff Time and Cost

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Annex 5. Beneficiary Survey Results

5.1 Summary

All market stakeholders from land plot owners to the representatives of business communities consider the implementation of the electronic National Cadastral System (NCS) to be an important new step for the real estate market of Ukraine. For this survey, (a) three categories of users—proprietors of urban/suburban plots, rural land plot owners, and realtors—were interviewed, (b) an online poll of land owners and specialists was conducted, and (c) two focus groups with land plot owners and representatives of the business communities were organized.

The results of focus groups, which included representatives of business communities, show that the general review of NCS by business community representatives is positive since the system constitutes a new tool for operation on the market. This is why their suggestions on NCS improvement mostly involve their professional occupation, in particular, adding information about designated purpose of estate, type of ownership, possibility of land plot privatization, and data about protective zones according to the effective legislation.

Employees of land management agencies, both urban and rural, have the unanimous opinion regarding situation before and after the introduction of the system. They report about general benefit of NCS being reduction of time required for processing of customers’ requests. Map inaccuracies are considered a temporary drawback.

Land owners use the system to make sure of their title to the estate and in case of non-compliances they file requests for the correction of such inconsistencies. Many land owners are not very happy about the fact that the map can only be accessed using a cadastral number. One should also take into account the fact that land owners in rural areas are mostly elderly people with scarce experience of using similar systems and have lower expectations.

The results of weighing factor analysis of NCS assessment by users shows that the highest appreciation was given to the general level of satisfaction of working with the system. The ratings of such aspects as search accuracy, problem solution using the system and hit ratio (the situation when a user has found what he was searching) are below the mark.

All users consider inaccuracies of land plot display to be the greatest flaw of the system. They also expressed their suggestions regarding system improvements, which differ depending on the role the users play in the real estate market.

Owners of urban and suburban land plots usually suggested that more information be added to the system so that it reflects land plot fitness for construction and data about owners. Rural land owners would like to see additional information on the names of the streets, soil composition, and terrain. Business community representatives want more
information about the type of ownership, designated purpose of real estate, and utility system availability.

![Reasons for NCS Use](image)

- **Land plot search**: 55%
- **Check land plot location**: 47%
- **Find cadastral number**: 31%
- **Check if land plot boundaries comply with the information provided in state act**: 22%
- **Check land plot pattern**: 21%
- **Learn land plot designated purpose**: 20%
- **Clarify if land plot boundaries overlap with boundaries of other land plots**: 14%
The majority of NCS users rate the system between 8 and 10 on a 10-point scale.

NCS users’ scores show a high degree of satisfaction with the system.
5.2 In-Depth Interviews with Representatives of Local Land Management Agencies

Since the launch of cadastral map all employees of land management agencies involved with customer request processing use it as required.

The main change in their work is the fact that they do not have to handle huge amounts of paper documents anymore. Many issues can be solved with the help of electronic resources; the cadastral system creates all necessary templates of land records and registers. This reduces the time required to serve customers.

Customers now can place a request and get the results in a ‘single window.’ After receipt of state deeds for land plots, owners can use NCS to check the accuracy of data introduced to the uniform database, or see land plot configuration.

Introduction of electronic cadastral system increased the transparency of data about state deeds of ownership and land plot owners for the employees of land management agencies. The time of execution of state act has been reduced as long as customers file all necessary documents. The ease of use and load performance of the map are its advantages.

Major users’ suggestion regarding NCS quality improvement is improving the zoom level. Employees of land management agencies believe that perfect variant for map information capacity increase is adding data about premises located on the land plot.
Annex 6. Stakeholder Workshop Report and Results

Combined with Annex 5.
Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

1. Letter from the State Agency of Ukraine For Land Resources regarding the draft ICR, dated October 4, 2013, protocol #30-28-0 24-17382/2-13:

Dear Mr. Childress:

Further to your letter of 09.20.2013 please be advised as follows. SALR has reviewed the Draft Report on Completion of the Rural Land Titling and Cadastre Development Project.

Paragraph 1.6 Revised Components should be supplemented on page 9 with the information that component E was deleted and cadastre development activities were included in Component D, which was expanded by subcomponent D2.

In the second sentence of Para. 2.2 Implementation, we suggest to delete the words “and G (Project Implementation)” on page 11, as Addendum 2 has no description of component G and it is not clear what the component discusses. In the fourth sentence of this paragraph, we suggest to change the word “large” for “subject,” that is what was new was the management of not such large contracts, but contracts of such subject of procurement.

In the fourth sentence of section Procurement, the acronym “PMU” on page 14 should be replaced by “PIU,” and in the third sentence of this paragraph and the section Large ICB contracts for mapping and IT systems in land projects have many unique challenges on page 28, the acronym “PIU” should be replaced by “SALRU,” as procurers were on the PIU (project implementation unit), not on the SALRU/PMU (project management unit). Also, in the fifth, last but one sentence of Procurement, the words “agreed procurement plans” on page 14 should be replaced by “contract implementation terms,” as most of the land surveying and mapping contracts were entered into in 2005-06 and the delays were due to late performance of the contracts, not due to the procurement plan. For example, in 2010-11, unintended contracts were concluded in connection with termination of a Swiss Photo contact.

In the section Outputs, the figure “35” on page 19 should be replaced by “34,” and in the description of component A of Addendum 2 on page 31 and in the second paragraph of section The main purpose of subcomponent A2 Legal Reform on page 55, the words “ten Cabinet of Ministers’ decrees” should be replaced by “nine Cabinet of Ministers’ decrees,” according to the actually performed contracts.

In item (h) of section Subcomponent D2 Cadastre System Development, the words “quality control of software for State Land Cadastre” on page 60 need to be changed for “quality control of NCS software.” Also, the section Component G Project Implementation on this page should be supplemented with information about the audit conducted in 2012 and 2013.
Addendum 1 *Project Costs and Financing*, on page 30, should be updated according to actual costs (Attachment 1 to this Letter) and the indicated total amount of financing at the foot of the page should be adjusted accordingly. The Table in paragraph 1.5 *Financing and Expenditure of Funds* on page 54 also needs updating (Attachment 1 to this Letter).

Also, we want to call the attention of the Bank to that we disagree and cannot agree with the general evaluation of the Project as moderately satisfactory, since on our part all tasks have been completed which is evidenced by the results of the missions, and the Project has attained all of its goals proof of which are the indicative indicators of achievement of Project objectives set out in the side letter to the Loan Agreement. We think the restructuring of the Project carried out by mutual agreement between Ukraine and the Bank should not affect the final evaluation of the Project. In our opinion, the Project was completed successfully and its outcome has a considerable positive impact on the country’s socioeconomic development.

In conclusion, allow me to thank you and the team of the Bank for active support in implementing the Project. Looking forward to continued fruitful cooperation.

Sincerely,

(signed)
A.M. Kadomsky
First Deputy Chairman

Attachments: as above on two pages in one copy.

2. Client Completion Report:

1. Introduction and Project background
1.1. Brief background on the country and on the privatization of land; rationale to the project
In 1991 process of land relations reforming started in Ukraine. There were not only changes in land ownership and land use structure, but also changes in distribution of primary land types.

As of January 1, 2013, the primary types of land use over 60,355 thousand hectares of Ukraine’s surface area were: agricultural lands (70.8%), forests and forested areas (17.6%), built-up areas (4.2%), areas covered with surface water (4.0%), open lands with or without insignificant vegetation such as stony areas, sands, ravines (1.7%), open bog covered areas (1.6%), and open dry lands with special vegetation (0.03%).
In view of ad hoc allocation of land rights in Ukraine in 2001, and the need for land sharing and creation of a cadastre system to implement land market, the project concept preparation for Rural Land Titling and Cadastre Development Project ("Project") was initiated. In January 2002, the concept was considered and approved by the Governmental Committee for Agriculture Sector Reform at the Cabinet of Ministers of Ukraine. A draft Project Preparation Advance letter to the World Bank was also approved.

1.2. Objective of the project (including modification during restructuring)

The objectives of the Project were to assist the Borrower with: (i) privatization of the lands of state and communal farm enterprises, agencies and organizations through transfer to the employees of these enterprises, agencies and organizations as well as retirees from among them, designating for each of them a land parcel (share); (ii) allocating land parcels to owners of land parcels (shares) in kind (on site) and issuing state deeds to them; (iii) establishing a land cadastre system.

1.3. Pre-Project situation of cadastral and registration

In late 1990s and early 2000s, the process of ownership rights registration for immovable property was almost non-existent, and only a few incomplete and uncoordinated documents dealing with property rights and registration existed. This illustrated the unsystematic and fragmented character of ownership rights registration system in Ukraine.

The responsibility for the establishment of a registration system for ownership rights to movable and immovable property was given the Ministry of Justice of Ukraine.

In accordance with the Decree of the Cabinet of Ministers of Ukraine (CoM) No. 661 dated May 16, 2002 the Ministry of Justice (MoJ) was assigned the responsibility for State Registry of Ownership Rights to Immovable Property (except for land parcels), and State Committee of Ukraine for Land Resources (SALRU) was assigned the responsibility for State Registry of Land. At the same time State owned enterprise (SOE) "State Land Cadastre Center" (SALRU) at SALRU appointed a database administrator for the State Registry of Lands, and SOE "Informational Center" (IC) at MoJ appointed a database administrator for the State Registry of Ownership Rights to Immovable Property.

State Registration of Ownership Rights to Immovable Property was carried out by Technical Inventory Bureaus (TIB) operating in appropriate administrative and territorial units. In the absence of a central repository, territorial bodies for land resources as well as structural divisions of State Land Cadastre Center operating in all oblasts and raions of Ukraine maintained land records and registered land parcels. Moreover, MoJ registered mortgages, deeds for immovable property and judicial encumbrances for rights to immovable property.

Early in 2003 the President of Ukraine issued the Decree No. 134 dated February 17, 2003 "On actions for establishment of a unified system for State Registration of Lands, Immovable Property and Ownership Rights to them as a part of State Land Cadastre." In pursuance of the President's Decree CoM issued its own decrees No. 689 dated May 15, 2003 "On actions for establishment of a unified system for state registration of lands,
immovable property and ownership rights to them as a part of state land cadastre" and No. 1088 dated July 17, 2003 "On establishment of a unified system for state registration of lands, immovable property and ownership rights to them as a part of state land cadastre." In July 2004 the Supreme Council (Verkhovna Rada) of Ukraine adopted the Law of Ukraine "On state registration of proprietary rights to immovable property and their encumbrances" used as the basis for the establishment of a unified (national) cadastre registration system where SALRU had to be a holder and SLCC had to be an administrator.

1.4. Legal/institutional basis for the cadastre and registration of land and immovable property

In 2006, a change in the course was implemented. This change envisaged the transfer of responsibility for state registration of immovable property from SALRU to MoJ. As a result of this, the Law of Ukraine "On state registration of proprietary rights to immovable property and their encumbrances" was never implemented. These changes were actually completed when the Verkhovna Rada of Ukraine in February 2010 adopted the Law of Ukraine "On amendment of the Law of Ukraine On State Registration of Proprietary Rights to Immovable Property and their Encumbrances" and other legal acts envisaging transfer of responsibility for state registration of ownership rights for property to MoJ, and in July 2011, the Law of Ukraine "On State Land Cadastre" envisaging that bodies of State Agency for Land Resources of Ukraine (SALRU) would have the responsibility for the establishment and maintenance of the state land cadastre, state registration of land parcels, their encumbrances and the maintenance of land records and issuance of extracts from the State Land Cadastre about land parcels. Both the Laws came into full effect on January 1, 2013.

To further the above laws, the CoM adopted a series of eight normative and legal acts on ownership rights, land inventory, cadastre maintenance etc.

Most recently, on November 20, 2012, the Verkhovna Rada of Ukraine adopted the Law of Ukraine No. 5508-VI "On amendment of CoM Decree "On State Duty" as it pertains to rate for registration of proprietary rights to immovable property."

1.5. Financing and expenditure of funds

The Project was financed from three sources: Loan Funds, Investment of Ukrainian Government, and SLCC funds (within Component E which was cancelled during the restructuring).

Information about expenditures financing for various Project components and sources of financing is provided below.

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<th>Components</th>
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### Project Components

#### Component A. Institutional Development and Legal Reform

**The main purpose of subcomponent A1** is to create appropriate conditions for the delivery of services to citizens to ensure their constitutional rights to land by regional and territorial bodies of land resources, and to enable them to comply with state policy in the area of land relations.

For this purpose the subcomponent strengthened the logistical base of land resources bodies, increased level of their work organization and improved conditions for the daily delivery of information services on land relations issues to citizens.

Within subcomponent A1, the supply of necessary office furniture, office equipment, computer and copying equipment was guaranteed for SALRU, Republic Committee for...
Land Resources of AR of Crimea, 24 oblast and Kyiv and Sevastopol city Main Departments for Land Resources and 665 raion and town departments (offices) for land resources—in total for 692 offices for land resources.

The main purpose of subcomponent A2 "Legal Reform" was to prepare appropriate legislation needed to improve management in the area of land use, in particular to prepare necessary legislation and/or amendments to existing legislation after enactment of the Land Code and future enactment of laws regulating system of cadastre and property registration to be established, including technical assistance in the analysis of existing legal status and in the creation of a library of international and national laws and commentaries to them.

In order to achieve the subcomponent objectives an analysis of efficiency and adequacy of law codes, laws, regulations was carried out; lessons learned from operation of the laws in the developed world and possibilities of their adoption in the legislation of Ukraine were studied; and proposals regarding improvement of the legislation, drafts relevant laws and regulations for furthering the Land Code of Ukraine were elaborated. Moreover, a comparison of the Land Code of Ukraine and other normative and legal acts of Ukraine, land laws and regulations in the area of environmental, agricultural, commercial and civil law was carried out for the purpose of studying contradictions between them. On this basis of this study: (a) recommendations were prepared for amending the land laws; (b) a list of materials was prepared to create a legal library at SALRU with materials on land, agricultural and environmental legislation as well as judicial practice of European group of countries in original languages and translated into Ukrainian; (c) court practice and comments from experts in the area of use and development of land legislation of Ukraine were selected; (d) international legal expert evaluation was carried out for drafts and existing legal acts regulating land relations in order to bring them into compliance with EU standards. Fourteen draft laws of Ukraine, ten draft Decrees of the Cabinet of Ministers of Ukraine and eleven draft orders of executive bodies were developed.

Between 2008 and 2011, the implementation of subcomponent A2 was suspended because of unregulated issue of priorities in the area of land legislation development, in particular, because of absence of the key Law of Ukraine "On State Land Cadastre," which was adopted only in July 2011.

Normative and legal acts were developed and finalized to remove gaps and correct existing contradictions in the land law, in particular to improve: (a) legal regulation of non-agricultural land use in order to remove conflicts in the regulation of the effective and efficient use and disposal of lands transferred from state ownership into collective ownership and consolidation of land, and to ensure the protection and restoration of useful properties of land; (b) legal regulation of relations connected with land survey works, as it pertains to types, composition and content of the land management documentation; (c) legal relations related to the State Cadastre of Ukraine maintenance, improvement of economic and legal mechanism for the regulation of land relations for allocation of lands for non-agricultural and non-forestry needs, optimizing land use and
land management at the regional level, improvement of land management-related legislation; (d) legal regulation of relations connected with normative monetary valuation of land parcels; and (e) legal regulation of relations connected with land auctions, etc. Implementation of the component has been successfully completed and all indicators were achieved.

**Component B. Public Awareness**

*The main purpose of the component* was to provide information to all state deeds owners of their ownership and user rights and obligations, legal procedures related to owning and renting land parcels by way of carrying out media campaigns, and sociological studies to identify characteristics of the current state of land use, determine its trends, and forecast the likely situation in the case of changes in legislation. In order to achieve the goal, a series of contracts were signed.

To achieve the goal the following measures were taken: (a) during the Project period, a system was provided to inform land owners, representatives of local authorities and agricultural businesses in rural areas, as well as media informing citizens about land relations, which included four information campaigns where central television, radio and regional newspapers, internet were used as along with SALRU’s own printed materials (broadcasts include 150 television and 100 radio programs, stories, live broadcasts, including the regular television and radio program "My land is my property," 475 issues of 25 regional newspapers, 5 press tours, 4 training seminars, and 120 publications actualized the project website www.zemreforma.info, etc.), (b) a webportal (www.land.gov.ua) was created to ensure the dissemination of information to the society in the period after the project closing; (c) three comprehensive sociological studies of land relations were carried out, and their results were disseminated through two conferences and a special edition publication.

Implementation of the component was successful: achievement of the planned indicator was exceeded, and at the same time the implementation was cost effective.

**Component C «Training»**

*The main purpose of the component* is:

1. Carrying out a comprehensive program of short-term training in land management and land survey aimed at ensuring that qualified and highly specialized personnel are available under the Project to restructure the large farm enterprises and convert four million (4,000,000) land share certificates to state deeds, including training of district-level staff of the SALRU enabling them to utilize and administer the automated systems to be established under Component D.2 of the Project, preparation of training materials, and provision of technical assistance for course development and workshops for training of trainers, English language courses for SALRU and PIU and study tours for key personnel to review comparative practices abroad.

2. Carrying out a selected program of long-term training to equip universities selected by the SALRU on the needs of new land management graduates, and to assist them in further developing their courses and long-term training capacity, including provision of required study tours to university staff.
In order to achieve the goal series of actions were implemented and the following results were achieved:

- carried out refreshment training for 3,273 specialists out of the land resources bodies in 549 raion territorial divisions of SALRU, from all SALRU's 27 main departments in oblasts and cities of Kyiv and;

This figure includes 78 specialists who have completed train-the-trainers courses for two levels of Cadastre Registration System in March 2012 out of the Project funds. Moreover the same specialists from SALRU and SLCC completed trainings on the system roll-out, on registration procedure carrying out, and the system administration in the second half of 2012 and at the beginning of 2013. But the last training was carried out without engagement of the Project funds, therefore the number of persons who completed this training is not included in the Project’s data.

- strengthened logistical base of nine leading universities by supplying them equipment and specialized software;

- renewed training and methodological base in 22 state-owned universities training specialists for land resources bodies, through the development of 9 methodological manuals;

- conducted refresher training for 557 lecturers from 22 state-owned universities training specialists for land resources bodies;

- elaborated a concept for development, and provided logistical support specialized training and methodological center which will provide support, assistance and coordination of training and refresher courses for specialists-land surveyors.

Refresher training for SALRU’s territorial bodies’ specialists ensured professional support for land resources bodies’ specialists in the area of roll-out and implementation of the National Cadastre System and land resources management—both tasks fall under the primary tasks of Land Reform implementation in Ukraine.

Refresher training for university lecturers from universities training specialists for land resources system as well as logistical, training and methodological support of these universities enabled them to train highly qualified specialists with the latest theoretical and practical knowledge in the area of cadastre maintenance and land resources management.

The goal of the component has been achieved and its target indicators exceeded.

**Component D «Land Survey Works and Cadastre System Development»**

The main purpose of subcomponent D1 «Land survey works» was to carry an integrated program to systematically privatize the land of the Borrower's former collective farms and issue free-of-charge state deeds for land to individual rural land owners, including preparatory investigation and consultation with the owners of the said collective farms (such as the provision of information to the inhabitants of each region falling under such process), the preparation of base maps and the surveying of boundaries of the collective farms, the identification of holders of existing land share certificates and development of the list thereof, and the identification and delineation of land and assets to be transferred, the preparation of environmental assessments, farm restructuring and subdivision plans and land survey work to convert about four million land share certificates, carrying out quality control of the works, and issuing of the state deeds for lands, paying all
In order to achieve the objectives of the subcomponent, a package of land survey works was performed and related legal and administrative measures were taken including field survey of agricultural lands to be shared with the owners of land shares (shares), with reference to the State geodetic network, drawing up land management documentation for shares allocation in situ, the distribution of land between owners of land shares (pai) at meeting, determining land boundaries in situ, registration of state property rights to land and their issuance to owners. During the first stage of the component implementation, a series of contracts were signed for pilot projects’ implementation to test specifications for land survey works and make appropriate changes for further contracts envisaging performance of main scope of the work.

During the implementation period of the subcomponent and before the beginning of this work performance under the Project (2005) the President of Ukraine issued a series of orders aimed to accelerate issuance of state deeds to land shares (pai) owners and appropriate large-scale works were performed outside the Project with regard to 3,290 thousand certificates.

As a result of the works state deeds were issued in exchange for 513,668 certificates, including 14,831 certificates converted under pilot contracts. Moreover, state deeds were drawn up in exchange for 3,605 certificates which were not issued because of changes in legislation, which came into effect on January 1, 2013. Works for converting 175,975 certificates were deemed "variation" caused by death or absence in the place of residence of land shares (pai) owners, since in these cases issuance of state deeds to citizens was impossible.

In this way the Project covered all vulnerable people - the owners of land shares (pai), whose certificates for land shares (pai) were converted into state deeds for free. In order to create cartographic basis for the Cadastre and Land Management System, the following tasks were performed: aerial photography works in the scale of 1:25000 for the whole territory of Ukraine followed by the creation of orthophoto maps at the scale 1:10 000 for the total area of 602,761.83 sq. km. and orthophoto maps at the scale 1:5 000 for villages for the total area of 57,185.20 square kilometers; aerial photography works at the scale of 1:8000 followed by the creation of orthophoto maps at the scale 1:2 000 for townships and towns with population less than 200 thousand persons; these works also cover water conservation zones along the Southern Coast of the Crimea and the Azov Sea coast in Donets'ka oblast with the total area of 23,846.21 sq. km.; and creation of base and index cadastral maps for the total area of 600,377.69 sq. km.

In this way the mapping works under the Project ensured cartographic basis of unified quality and in a single unified coordinate system for the first time since Ukrainian independence was proclaimed in 1991. Also, in order to provide an independent assessment of quality of land survey and mapping works performed under subcomponent
D1 of the Project, a selective field quality control of 5% - 7% of the total scope of work was conducted in every oblast.

The results of this selective quality control of land surveying and mapping works show that works performed are generally in compliance with regulatory and technical documents and terms of reference.

Implementation of the subcomponent ensured achievement of one of primary goals of Land Reform in Ukraine, implemented in the country which started in 1990: to demarcate the boundaries of agricultural land parcels (being land shares or pai) in situ and to register these parcels in the cadastre system after determining their legal status, including private ownership rights, which is very important for rural residents as well as for farmers and agricultural enterprises which take the land parcels on lease.

Creation of cartographical base for cadastre maintenance, which was done for the entire territory of Ukraine for the first time in the last 30 years, guarantees to land parcels owners their rights to their property and provides the possibility to demarcate and manage land parcels boundaries in situ and to decide wide variety of land policy issues, in particular, to increase the efficiency of land resources management, to carry out land valuation, to implement economic instruments for efficient and expedient land use and land mortgage system development.

On the Closing Date of the Project all the works under subcomponent D1 are completed and all its goals have been achieved.

**Component E «Cadastre System Development»**

The main purpose of the component E was to develop the national cadastre system to establish its use as the basis of an ownership rights registration system envisaging registration of legal ownership rights, transfers of these rights, mortgages, and encumbrances for property, as well as institutional development of the SLCC, including the modernization of the Center's network consisting of about six hundred sixty two divisions, and to develop and establish a three-tier system of computerized cadastre and registration that would include data registration, global positioning system and to provide other equipment and transport for land management purposes.

At the beginning of the project, the State Land Cadastre Center was determined an institutional authority for the component E implementation. However, because of non-implementation of the Law of Ukraine "On state registration of proprietary rights to immovable property and their encumbrances" and other legislation related to the development of state land cadastre and registry of rights to immovable property, Component E was suspended and subsequently cancelled. Only after the project restructuring, which lasted from 2006 to 2009, SALRU recommenced development of the State Land Cadastre within modified component D2.

**Subcomponent D2 «Cadastre System Development»**
Within subcomponent D2, (a) computers, copying machines and scanners were supplied to all SALRU's territorial units in 24 oblasts, AR of Crimea, and cities of Kyiv and Sevastopol; (b) server and network equipment, power supply units and diesel (generator units for Main (Kyiv) and Reserve (Yahotyn) data processing centers) were installed; (c) premises were refurbished; (d) Main and Reserve data centers’ equipment was supplied and installed, and power lines were laid and helped connect the Main and Reserve data centers to the ITS building; (e) training was carried out; (f) orthophoto maps and index cadastral maps for the whole territory of Ukraine were uploaded to State Land Cadastre systems, cadastral and GIS software were installed, software for Improved Pilot Cadastre Registration System (CRS) was developed and it has become the basis for standard functions of the cadastre system that was configured in accordance with requirements of current legislation regarding State Land Cadastre maintenance and launched on January 1, 2013; (g) goods supply for creation of Integrated Information Security System for cadastre was carried out; (h) quality control of software for State Land Cadastre was conducted; and (i) information exchange between State Land Cadastre and Registry of proprietary rights to immovable property was ensured.

In this way, hardware, software, and created infrastructure has ensured implementation and will ensure further smooth operation of the State Land Cadastre system which evidences that the component's objectives have been achieved. The benefits of a developed cadastre system include reduced waiting time, faster processing of data to obtain cadastre extracts, and significant decrease in cost of parcel registration and obtaining cadastre extract.

Component G «Project implementation»

Within the framework of the Component G “Project Implementation,” the following elements were carried out: ongoing project management, including management of financial activities, loan disbursement, procurement, support of contracts implementation signed with contractors (suppliers/agents/consultants), drafting reports for submission to the Ministry of Economic Development and the Ministry of Finance in accordance with CoM Decree No. 1027 dated 26.11.2008), as well as reports to the World Bank in accordance with conditions of the Loan Agreement.


In accordance with the conditions of the Loan Agreement the reports on audits of Project's financial statements for above mentioned years were submitted to the World Bank and accepted by the Bank. In total the PIU’s relevant agencies ensured signing of 221 contracts, and provided current management for each component of the Project in 2003-2013.

3. Project Monitoring and Evaluation
Project M&E activities were carried out regularly both on the Bank side and on Ukrainian side. In accordance with the conditions of the Loan Agreement SALRU submitted to the
World Bank quarterly financial monitoring reports for the Project which included: (a) management report, (b) procurement report, and (c) the financial statements. Moreover the PIU submitted to the World Bank quarterly reports regarding (a) progress in procurement, (b) progress in Project Development Indicators achievement agreed by way of negotiations or revised later; (c) short report about actions completed for each component.

In order to monitor and evaluate the Project implementation, representatives from the World Bank carried out monitoring missions two times per year with participation of the Ukrainian representatives.

During the missions, the issues regarding implementation status of Project's components, implementation of the procurement plan, disbursement of loan funds were considered, and Agreed Actions for further implementation of the Project were signed based on this assessment.

The Agreed Actions status was discussed regularly using video conferences attended by the Task Team Leader, First Deputy Chairman of the State Agency/Project Coordinator and Project Director. Such a level of representation provided the possibility to take timely decisions in regard to future actions needed for the Project implementation.

From Ukrainian side in accordance with legislation (CoM's Decrees No. 1317 dated 10.10.2001, and then No.1027 dated 26.11.2008) reporting documents for the Project monitoring were submitted to the Ministry of Economic Development and Trade of Ukraine, the Ministry of Finance of Ukraine, and the Ministry of Foreign Affairs of Ukraine.

Having analyzed the reports for the Project the Ministry of Economic Development and Trade of Ukraine prepared quarterly proposals for the Cabinet of Ministers of Ukraine in order to take the necessary measures needed to resolve the project issues to ensure its successful implementation and completion.

Regular annual audits of the Project activities were performed by Accounts Chamber of Ukraine and the State Financial Inspection of Ukraine. Monitoring and evaluation of the Project was performed twice a year during project portfolio review in Ukraine by the World Bank. As a result of M&E of the Project by the Bank and CoM, a series of management decisions were taken including decisions about the Project restructuring and extension of the Closing Date.

4. Financial management

Financial Management of the Project was carried out in accordance with the World Bank's Guidelines clarifying the requirements of the Bank to the loan disbursement, preparation of financial statements and carrying out independent audits. Regular annual audits of the Project activities whereas performed by Accounts Chamber of Ukraine and the State Financial Inspection of Ukraine.
Financial Management of the Project was carried out by MoF, SALRU, SLCC and PIU consultants, in particular: by Department for debt and international financial policy (MoF), Department of Financial Support and the Department of Accounting and Reporting (SALRU), Financial and Economic Department (SLCC), and the Finance Division of PIU.

During the project implementation, the finance department of PIU included: Deputy Director of PIU for Procurement and Finance, Project finance manager, PIU accountant and Component D accountant. In the last two years of the Project implementation, Finance Department functions were performed by PIU's Financial Manager and Accountant of component D. The process of financial management of the Project may be divided into three parts:

- Drawing up and correcting general project budget by categories and components for the entire period of the Project implementation and detailed budget with distribution of funding for the next year in accordance with the World Bank requirements based on the Procurement Plan agreed with the World Bank and approved by decisions of SALRU’s Tender Committee.
- Preparation and correcting of the budget request for the amount of assignments from General Fund (funds of the Government of Ukraine) and Special Fund (Loan funds) of the State Budget of Ukraine needed to finance Project's expenditure for the next budget period in accordance with the current legislation of Ukraine.
- Drawing up and correcting the cost estimate for the current year (with monthly breakdown of expenditures from general and special funds of the State Budget of Ukraine) in accordance with requirements of the current legislation of Ukraine.

In accordance with the Loan Agreement, yearly independent audits of the Project's Financial Statements were conducted, and its results were used as the basis for the report in accordance with standards acceptable to the Bank. Some observations and recommendations provided in the Management Letters from independent auditors to SALRU's management were taken into account during the work.

Financial management system has been developed on the basis of software package "1C Enterprise 7.7. Accounting for budgetary institutions of Ukraine". Additional software module used with the default configuration provided possibility to keep records of Project's expenditure using Plan of accounts for the Project and to prepare Financial Statements under the Project in accordance with IBRD requirements. The system is designed for simultaneous operation of multiple users.

5. Procurement
Procurement under the Project was carried out in accordance with rules and procedures prescribed by the Bank pursuant to the Bank's Procurement Guidelines «Procurement under IBRD Loans and IDA Credits» for works, goods, and technical services and pursuant to "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" for procurement of consultants' services as provided in the Loan Agreement. To support procurement process under the Project, Procurement Specialists, who have prior experience in procurement under the World Bank's rules and procedures, were employed. To improve and the quality of procurement, the specialists attended every
training for procurement held by the World Bank Country Office and in addition they attended joint training courses held by the Bank and International Training Center (Torino, Italy).

Support of contracts concluded under the Project was ensured by coordinators of corresponding components that were a part of PIU project and appropriate departments of SALRU.

Procurement under the Project was agreed with procurement specialists from the Bank. Post Reviews of procurement under the Project were carried out permanently by the Bank's Procurement Specialists and were successful with no objections. Independent auditors from the Bank also carried out yearly procurement audits and had no objections. But problematic situations took place during the Project implementation. As a result of bidding № DKZ-D2-ICB.9.201 «Development of Cadastre System» unsuccessful bidders initiated two court proceedings for alleged violations of procurement procedures, but after their consideration by the Commercial Court of Kyiv both cases were dismissed. Moreover during their contracts implementation Blominfo A/S (Denmark) and Blom ASA of Norway applied to the Adjudicator regarding certain issues of the contracts implementation.

BSF Swissphoto AG (consortium Swissphoto), whose contract for land survey and mapping works was terminated because of non-implementation thereof with appropriate seizure of performance security, applied to the Adjudicator requesting to repay bank guaranties and to pay additionally for works partially completed under the contract.

6. Social and economic benefits of the Project

As a result of subcomponent A1 implementation, the following social and economic benefits were provided:

- strengthened logistical base of land resources bodies;
- increased level of their work organization and improved land resources management;
- improved information services delivery to citizens in the area of land relations.

Information campaigns under Component B were the first (and so far the only) example of systematic coverage of land relations in Ukraine in terms of the interests of an average land owner. Through the dissemination of information about land owners’ rights, the campaign activities facilitated to correct the information asymmetry between various layers of society. Ability to use rights was one of the factors promoting constant increase in the number of people who receive monetary rent for use of their parcels, and the amount of the rent significantly increased. Awareness of their rights allowed share (pai) owners to feel more confident, a sign of which was a decrease of fears in relation to introduction of the land market. Thanks to the clarification about the National Cadastre System, the possibilities for share owners in terms of protection of their ownership rights and for society in terms of control over legality of land resources use, a base was established as early as in May 2012 for acceptance of this innovation by citizens.
Results of sociological research revealed characteristics of modern status of land use, its trends, and enabled forecasting in the case of changes in legislation and may be used for improvement of Ukrainian land policy.

Component C results enabled universities to train specialists with the current level of theoretical and practical knowledge in the area of land management and cadastre, and provided not only refresher training to specialists from government land resources bodies, but also created conditions for their further training with the use of modern equipment and professional software.

Implementation of the Component D “Land surveys and cadastre system development” enabled citizens of Ukraine: (a) to exercise their rights to land shares (pai) at no charge; (b) to complete privatization of agricultural land in Ukraine, which in turn promoted formation of land market; (c) provided an opportunity to implement important socio-economic processes in rural areas; (d) enabled increase of local budgets revenues; and (e) created more favorable conditions for foreign and domestic capital investment in agriculture.

At the same time, implementation of the cadastre system facilitated development of land relations and ownership protection, implementation of land market, and promoted reduction of corruption occurrences in the area land relations. The system developed provides: (a) protection of land owners’ and land users’ rights; (b) acceleration of land registration and simplified access of citizens and legal persons to the land cadastre data; (c) reduction in time and costs during transactions with land parcels; and (d) increase in efficiency of finding (delivery) and management of cadastral data, reduced costs of collecting and maintaining of cadastre information, conducting analysis (including spatial analysis) of cadastral information, simplified assessment and analysis of market and rental value of land, fast decision making at regional and national levels in the area of land valuation, land use planning, land protection, monitoring, and management of land resources in the country. The main advantages of developed cadastre system are: public cadastre map with feedback function and an ability of the system to reveal and correct errors committed in past and to avoid them in future. This enables the cadastre system to ensure completeness, accuracy, up-to-datedness, and reliability of data about land parcels and rights to them.

7. Sustainability of the Project Results and Future Needs
As a result of the project logistical support to SALRU allows for an improvement in the delivery of public services. The development of normative and legal acts over the course of the project will help in the creation of a transparent land market. The public outreach efforts during the Project have not only led to the expansion of the free information available to the public through the new portal www.land.gov.ua, but also created a more informed citizenry. Training activities are being used to educate specialists with the latest high technology cadastre system and further support in this area is required. Project results have had a positive impact on a series of issues including efficient land management, greater transparency, and simplification of registration procedures, and lower registration costs.
It is also necessary to implement self-financing mechanism for the cadastre system i.e. to channel funds obtained from services delivery for needs and development of the system itself, which is extremely important to build the National Spatial Data Infrastructure. By completing much of the technical mapping work that is considered by the government as a prerequisite for opening up a land market, the project has contributed to the resolution of some important policy issues discussed in the LGAF.

8. Bank Performance

The project management team from the Bank has created an effective scheme of the Project’s organization with the help of Task Team Leaders (there were 3 TTLs during the entire project implementation period) and other qualified professionals.

The team provided prompt resolution/settlement of all problematic issues and took necessary decisions during the project, especially during restructurings. Full-scale advisory support was available on technical, financial, procedural, and legal issues in accordance with global best practices. Procurement documents were agreed to promptly in accordance with agreed terms and proposals and remarks to them were reasonable. Financial transactions (replenishment, letters of credit finalization, special commitments, and payments) under the Project were carried out in the prescribed manner that promoted the disbursement of loan funds. Close contact between the Bank and the Ukrainian side enabled the achievement of project objectives. Thus, the scheme of the project organization was efficient, professional, and highly effective.

Supervision of the project implementation was carried out by the World Bank on a regular basis. Monitoring missions were conducted for the Project were conducted twice a year, and videoconferences with management of SALRU, SLCC and representatives of contractors were held regularly.

On the Bank's side the missions involved specialists in Procurement, Finance, Legal Issues, Land Management and IT specialists, and specialists for cadastre and cartography. As a result of the Bank's missions the Ukrainian side received letters with Aide Memoires on the progress in the project implementation where resolving of current issues under the project was emphasized. In this way, overseeing of the project implementation was carried out objectively, impartially and in a professional manner.
Annex 8: Comments of Cofinanciers and Other Partners/Stakeholders

COMMENTS ON THE DRAFT IMPLEMENTATION COMPLETION AND RESULTS REPORT

FAO has been supporting the Rural Land Titling and Cadastre Development Project in the framework of the World Bank-FAO Cooperative Programme from its early stages. Three FAO experts (land policy and reform expert in 2005, and information technology, cadastral mapping and land surveys experts from the autumn of 2010 until project completion in 2013) have been involved in the implementation support and supervision missions. The fluency in Russian of two of the experts has contributed to better level of communication and understanding with the government counterparts. The expertise since 2010 covered the supervision of the biggest project Component D: Land Survey Works and Cadastre System Development.

Sub-Component D1: Titling, Mapping and Quality Control Works

D1 aspired to achieve the following targets (cf. revised key performance indicators, June 2010):

- Issued personal titles for rural ground areas in exchange for 4 million certificates for the right of property of land parcels (‘pai’); – achieved, including
  - 711,678 titles under project contracted activities, and 3.29 million titles with support from other sources

The target for this PDO outcome indicator has been achieved within the Project’s lifespan. Project titling work estimates proved to have been overestimated during project design, due to a high incidence of target beneficiaries anticipating or by-passing the project supported titling services. Despite that, all targeted rural lands have been subdivided within the Project. More than 0.7 million individual rural land parcels have been allocated (with their property boundaries surveyed and unique parcel identifiers assigned), then recorded in the temporary cadastre system and after 01 January 2013 – in the State Land Cadastre (in the National Cadastre System, NCS). More than 0.5 million GosActs for these 0.7 million parcels have been delivered free of charge to the rightful claimants. For the remaining 0.2 million parcels State deeds were prepared but not delivered as “variations” in the titling contract quantities due to absence or decease of the owners and pending inheritance litigation.

- The aerial survey of the territory of all oblasts is completed (600 sq. km targeted, Ukraine’s territory is 603.6 sq. km); – achieved and exceeded, including
  - Orthophoto (base) maps for 602.8 sq. km in 1:10,000 plus additional 57.2 sq. km in 1:5,000 and 23.8 sq. km in 1:2,000

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24 Prepared by Paul Munro-Faure, Deputy Director, Climate, Energy and Tenure Division, Rumyana Tonchovska, Senior Land Administration Officer – Information Technology, Vladimir Evtimov, Land Tenure Officer Food and Agriculture Organization of the United Nations (FAO), October 10, 2013
Index cadastre maps completed for all oblasts (target 24 oblasts)

All intermediate performance indicators for the mapping works have been fully achieved and exceeded. More than that, the target 600,000 sq. km of modern digital mapping has been delivered under the Project, covering practically 100% of the territory of Ukraine. Mapping works under the Project were carried out in 24 oblasts, the Autonomous Region (AR) of Crimea and the cities of Kiev and Sevastopol thus fully equipping Ukraine with base mapping of uniform quality for the first time after independence (in fact, even earlier – since 1986): up-to-date aerial photography, an up-to-date digital orthophoto map in appropriate large scales, as well as a digital Cadastral Index Map (CIM) recording and making visible in their spatial context all the privatized and surveyed land parcels (around 13 million “active” rural and settlement ones) with their assigned unique parcel identifiers.

- **Other Unintended Outcomes and Impacts** (cf. ICR, page 25)
  - Integration of spatial data in the National Cadastre System (NCS)

The titling and mapping products under the Project – which are essentially digital (spatial) data sets, – have been successfully loaded nationwide in the NCS by 31 December 2012. The spatial data have been transformed in bulk by the SLCC, – the system administrator of NCS – into the single national coordinate system, fully integrated in the NCS, and stored together with the other (archive and operational) spatial, alpha-numeric and image data, in the NCS database. SLCC has completed the population of NCS with spatial data on state borders and boundaries of administrative territorial units in Ukraine, and the “active” exchange files from individual parcel surveys.

A short- and mid-term data quality improvement concept and implementation plan are being implemented by SLCC. Batch corrections, mostly of spatially misplaced parcels were implemented in early 2013 with in-house developed software modules as a result of the comprehensive error analysis which was carried out after the launch of the Public Cadastre Map on 01 January 2013, and the participatory, formalized feedback. This level of public commitment in data quality improvement corresponds to the best global practices.

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25 “active” parcels’ exchange files show the survey of the parcel at the time of the last registered transaction; in addition to the “active” parcels, NCS database stores also approx. 5 million “archive” parcels’ exchange files

26 including State deeds with their alpha-numeric and graphical parts, individual parcel exchange files, orthophoto maps, Cadastral Index Maps, topographic maps (including relief), soil maps, statutory land valuation maps, lower level administrative subdivision schemes, etc.

27 around 10.9 thousand e-applications via feedback by 15 Feb 2013, 75% addressed and mass slip-ups handled
Good service delivery practices in compliance with the VGGT

Several of the land governance practices in Ukraine in the area of cadastre, especially service delivery ones, which were established with project support, can successfully showcase Ukraine’s compliance with relevant good practices recommended by the internationally endorsed *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (FAO, 2012).*

Valuable by-products with far reaching positive impacts for improved land governance:

- A comprehensive inventory of all existing archive mapping source materials was carried out throughout the country in all the relevant central, oblast and rayon authorities, which held archive mapping and land-related documentation. This inventory and source materials informed the establishment of the CIMs, and enabled the planning of archive map digitizing works.

- A complete redesign, reconfiguration and re-survey of the Geodetic Reference Infrastructure of Ukraine was carried out, digital mapping data produced and uploaded into the NCS, thus launched an efficient and smooth transition to a modern (GNSS\(^{28}\)) geodetic reference network and coordinate system (USK'2000) in all the sectors of Ukrainian economy which use spatial data.

- The integration of mapping data in the unified data base allowed the identification of existing spatial data issues, and the development of spatial data quality improvement concept and implementation plan.

- A complete record (database and standard spatial identification) of existing administrative territorial units (state, oblast, autonomous region, cities, rayon, villages, settlement areas, spatial planning zones, etc.) has been established and settlement of territorial boundary disputes between various level jurisdictions has been initiated.

\(^{28}\) Global Navigation Satellite System
Sub-Component D2: Cadastral Information System

I. GENERAL COMMENTS:

Comment 1. ICR, point 1.2 Original Project Development Objectives and Key Indicators

The ICR has to reflect the original PAD Objective of Component E. Cadastre System Development: Three phases of implementation are described in the design of the original Component E:

“Phase 1. Interim System. The development of this interim system is essential to ensure that a system is in place for electronic recording of the large number of State Deeds for Land to be issued in rural areas under Component D of project. -achieved.

Phase 2. Cadastre System Development and Rural Office Network - achieved.

Phase 3. Registry Module Upgrade and Urban Office Network. ...Until the law is passed, there is the risk that the institutional responsibility for registration of urban properties may be assigned to a different agency from the CC, which would make any investment in CC urban registry offices redundant... This would require that the cadastre system design has additional flexibility to allow alternative institutional arrangements for the registry, and that the registry system module of the cadastre system would need to be upgraded after the law is passed.

...a "second best" solution would need to be sought. This would require that the cadastre system design has additional flexibility to allow alternative institutional arrangements for the registry, and that the registry system module of the cadastre system would need to be upgraded after the law is passed.”- PAD, May 30, 2003 – the second best option has been implemented.

The objectives under the original Cadastre system design have been achieved (second best solution is implemented, allowing alternative institutional arrangements). Various additional modules have been developed, which has not been planed:

Exceeded parts include:
a) Business processes reengineering to simplify the procedures and to minimize the opportunities for corrupt practices,
b) Digital signature implementation for all the cadastre operators to introduce personal responsibility for the actions taken, online staff and offices performance is implemented,
c) Digital archive for all the old and incoming documents is in operation (the funds for this activity has been canceled on June 24, 2010 – “cancellation relating to works under component D specifically, archival data input through scanning due to lack of time to implement”),
d) Unified cadastre map has been created and data from about 1460 local coordinate systems have been transformed in a single coordinate system, called USK’2000, achieving absolute accuracies of GRN stations in USK’2000 (compliant with the EU TR89) within the 2-3 cm range, which is a remarkable result for a country with the size of Ukraine, public cadastre map online is operational and notary access to both systems is guaranteed.
Comment 2. ICR, point 1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

With the project restructuring in 2008 the reference to the title registry system has been deleted due to legal and institutional obstacles. The revised outcome enables such a cadastre and registry system to be established for rural land and only for the titles issued under the project, by the main beneficiary agency.

The objectives under the restructured Cadastre system design has been achieved and even exceeded.

**Exceeded parts include:**

a) Various additional modules have been developed, described above under point 1.;

b) The system includes both agricultural land and construction land;

c) nation-wide land parcels data have been digitalised and downloaded in the system – all GosActs have been scanned, indexed, data entry completed and verified and downloaded in the system, not just land and digitalisation of documents issued under the project, all cadastre index maps and all orthophoto, covering the entire territory are downloaded in the system.

Comment 3. Achievements under the project. The Component D2 indicator “Developed unified national cadastre system” has thus been fully achieved – both as per the restructuring paper and as it has been originally planned. The results achieved exceeded the expectations in the original PAD and in the restructuring. System sustainability in a long term has been achieved.

The National Cadastre System has been put in operation nationwide since January 1, 2013 and covers central level (central and reserve data centers), oblast level (all 25 oblasts plus 2 towns with a status of oblast) and rayon level (592 locations). The secrecy of the Coordinate System in Ukraine has been abolished in 2012, which allows public access to digital cadastre maps and orthophoto maps, an electronic signature has been implemented and several additional sub-systems have been implemented: 1) Online exchange of information with the State Registration Service and Notaries; 2) Geo-portal (Public cadastre map) with an e-service for citizen to report errors identified; 3) Online applications tracking system; 4) Digital archive for both historical and incoming documents (State deeds (16.8 million State deeds, scanned, indexed, data entered, verified and uploaded into secure central database, all cadastre index maps vectorised and uploaded into the system, scanning of incoming documents introduced nation-wide).

End users documentation and e-learning courses have been developed and are available as part of the NCS on-line help. A series of training and methodological materials to ensure unification of applied procedures have been developed, as well as system administration instructions. The Help Desk is fully operational and includes both telephone lines and electronic mailing system. The response time of the Help Desk is good and responses are provided in most of the cases at the same day.

The implemented National Cadastre system **covers both agricultural and construction land, includes all titles issued nationwide** and the interoperability with the title registration system, managed by the State Registration Service is ensured (information for all changes in the cadastre and in the title registration are automatically
shared and a module for notaries is implemented, which provides on-line information from both systems). The institutional capacity developed for keep the system running and to develop additional modules is highly satisfactory. Strong team of IT experts, cadastre and legal experts are involved in the system further development, maintenance and capacity building. There is a full ownership over the system, which is proved by the results achieved after the official launch of the system in January 2013 till September 30, 2013, when the FAO expert visited Kiev to assess the system sustainability.

Comment 4. Progress since January 2013. During the first nine months of the system operation (January 1-September 30, 2013) 803,077 new land parcels have been registered and 623,586 extracts has been issued. The Public Cadastre Map Web site has been visited by 2,514,011 people and 21,362 errors have been reported on-line during the first 9 months. The average processing time for registering new parcel in the cadastre is 21 min nationwide, in case all documents are submitted as per the law requirements. The work on data quality improvement is in the main focus of the SALRU and errors correction is continuing as planned. More than 2 million errors have already been corrected.

The cooperation with the State Registration Service is improving and the joint technical working group continues to meet to discuss further cooperation and possible improvements, based on the experience so far. The information sharing is done automatically during the night. By September 30, 2013, the State Registration Service (SRS) sent information for 1,210,967 changes, and the SALRU has provided information for 803,077 registered new parcels. During the first 9 months the system has registered 94,696 requests for information by notaries.

Several important milestones have been achieved after the project closure:

a) The National Cadastre System and the Public Cadastre Map are fully documented and the system has been audited by the independent quality assurance contractor;

b) The electricity power supply for the main data centre has been certified and is in operation; communication channels between the two data centres have been ensured by the SCC and are in operation and the two data centres (main and disaster recovery) are ready for production;

c) The number of IT staff has been increased after the project closure. Currently 74 employees from the central level are involved in the National Cadastre System maintenance, data quality improvement, system further develop, technical support and training and more than 700 staff at the oblast level provides methodological support to the users at the rayon level;

d) A detailed training programme is developed and the training is ongoing: 571 employees from all regional offices have been trained as regional system administrators between July, 1, 2013 till August, 9, 2013 and 20 employees will be trained on the system and database administration and management at the end of the October 2013;

Several statistical reports have been developed and integrated into the system; Several new services have been implemented and several more are in the pipeline; Digitalization
of relief and soil maps is ongoing as planned and almost 50% of work has been completed; National Spatial Data Infrastructure – pilot project in Fastov District, Kyiv Region has been successfully completed. Various statistical data has been integrated with the maps, the urban plans have been digitized and included as a separate layer, 3D Model has been developed to demonstrate the possible use of the NSDI for climate change monitoring, early warning system for flooding, fast data production in case of natural disasters. SALRU is planning an official presentation to the Government of Ukraine in October 2013. The achieved results are very promising and are in line with the European Union INSPIRE Directive and the Public Sector Information Directive.

II. SPECIFIC COMMENTS ON THE ICR

Comment 1. ICR, point 1.5 Original Components (as approved), point E.

The definition of the cadastre system does not comply with the original text of the PAD. Component E of PAD envisages that “Once developed and in use, the cadastre would have multiple purposes. The most critical of these for Ukraine in the next few years is that it would be the basis for a title registry system, which records the legal rights to ownership, transfers of ownership, mortgages and restrictions on the property.”

The PAD is further describing the “ideal scenario” and a "second best option": “cadastre system design has additional flexibility to allow alternative institutional arrangements for the registry, and that the registry system module of the cadastre system would need to be upgraded after the law is passed.” – see PAD, Annex 2, pages 47(last par.))-48 (first par). This second best option has been achieved.

Comment 2. ICR, point 1.7 Other significant changes, fourth and fifth bullet points

Fourth bullet: ”Cancellation of $11.85 million on June 24, 2010 relating to works under component D specifically, archival data input through scanning due to lack of time to implement the activities and costs of registration of state deeds due to the work having been paid for through other means. The country director approved the cancellation”. – Comment: By the time of project completion the work has been completed with alternative sources of financing. This has to be clarified in the ICR.

Fifth Bullet: “Under a Programmatic Adjustment Loan (PAL), which was prepared in parallel with the project and coordinated with it, the government was obliged to adopt the legal basis for implementing a unified title registry. Although the government failed to do so, the funds under the PAL were nonetheless released to the government”. - The implemented National Cadastre System is compliant with the “second best option”, described in the original PAD with the achieved interoperability (legal and technical) with the title registration system.

Comment 3. ICR, point 2.1. Project Preparation, Design and Quality at Entry

The PAD describes the “ideal scenario” and a "second best option": “cadastre system design has additional flexibility to allow alternative institutional arrangements for the registry, and that the registry system module of the cadastre system would need to be
upgraded after the law is passed.” – see PAD, Annex 2, pages 47(last par.))-48 (first par). This has to be added at the end of the point 2.1.

Comment 4. ICR, point 2.2 Implementation

In addition to the political support the efficient management capacity of the head of the State Agency for Land Resources of Ukraine, the excellent technical and management capacity of the head of the State Cadastre Centre and the established Task Force with the clear mandate to manage the system development and to take decisions were critical for the success.

The text at the end of the first paragraph “Ultimately, while the country did not adopt a unified title registration system under a single agency as envisioned in Component E” does not comply with the described “second best solution” in the original PAD – see comment 1 above. The implemented system and the ensured interoperability with the title registration system can technically support any kind of institutional arrangements and one-stop-shop, in case the necessary legal changes are implemented.

Comment 5. ICR, point 2.5 Post-completion Operation/Next Phase, par. 2

The assumptions made at the second par. has to consider the following facts:

“Nevertheless, it is important to note that the while the development of the new IT system can be viewed as a substantial step, there is still much to be done with regard to operations.”

“First, a long-term strategy for updating, maintenance and sustainability of the vital spatial data assets developed by the Project (i.e. the digital orthophoto map and the cadastral index map) is still needed.” – The long term strategy and action plan have been developed and the process is ongoing with government financing: tender for supply of aerial camera with the software complex to ensure fast processing of images and orthophoto production (1 hour flight will require 24 hours processing time) has been announced at the beginning of October 2013 and the plan is to renew the orthophoto on a 5 years base (average the orthophoto maps of five Oblasts will be produced per) year. The work will start early 2014. Digitalisation of soil maps and relief maps is ongoing with own resources and will be completed by the end of 2013. The training of IT staff at local, oblast and regional level is ongoing after the project closure and the system is stable with efficient Help Desk on place. No system interruption has been registered the first 9 months of operation.

“Second, the current cadastral index maps only reflect the parcels of land which have been registered. Thus, the records are incomplete and a plan is needed to include all private and public land parcels in the country, as well as registration of buildings.” – A plan for inventory is developed and the land inventory is ongoing - statistical reports are available for the work completed. The buildings are not included in the cadastre law, but this is highly needed in the future. Pilot project for buildings cadastre registration has been completed after the project closure.
“Third, further institutional cooperation between the MOJ and SALRU is needed to facilitate completion of a linked cadastre-legal registry system.”. The cooperation between the SALRU and the SRS is continuing after the project closure at the political and technical level. The technical working group is reviewing the results of information sharing during the past 9 months and is preparing proposals for further simplification of procedures. It has to be mentioned that both systems (cadastre and titling) are very new and require some time, before taking next steps. As both systems are centralized, the introduction of one-stop-shop is technically possible within a period of less than a month, after the agreement between the institution is reached and legal changes implemented. The notary module is in fact one-stop-shop, as it provides data from both cadastre and registration system to the notaries. The SALRU plan is from the beginning of 2014 digitally signed extracts to be issued on-line without clients to visit the cadastre office, subject of adopted legal changes.

**Comment 6. ICR, point 3. Assessment of Outcomes, 3.2 Achievement of Project Development Objectives**

Second par. does not reflect the original PAD text: “Under the original PDO and design the project should be considered unsatisfactory. As noted previously, the original PDO reflects an overly ambitious project design that included the creation of a unified title registration and cadastre system which had to be abandoned due to institutional rivalry between the MOJ and SALRU.” – see comment 1. The original PAD envisages “ideal scenario” and “second best option”. The second best option has been achieved.

**Comment 7. ICR, point 3. Assessment of Outcomes, 3.2 Achievement of Project Development Objectives**

Last par. does not reflect the reality. “While the achievements with the cadastral system are significant and exceeded targets and expectations, an issue of efficiency arose over the contract dispute with the IT system contract which delayed system development and required significant supervision and input from the Bank side. Thus, the rating of satisfactory rather than highly satisfactory is assigned.” – The cadastre IT system has been developed and successfully piloted before the project extension. Additional time was needed to roll out the system nationwide and the extension of nine months has been granted. During the extension time the Cadastre Law has been changed and the contractor rejected to introduce the new legal changes, after the pilot has been accepted, which lead to the contract closure on mutual agreement.

The SALRU has react very quickly in this extraordinary situation and managed to further develop the system in-house in compliance with the new law, which introduced sharing of information with SRS and implementation of Public Cadastre Map. The system upgrading has been completed and rolled out as planned as part of the extension time. The contract dispute did not lead to further delays. The new law came into force on January 1, 2013, which is the date of the launch of the National Cadastre System. The system could not be put in operation prior to that as it was redesigned to comply with the new law. The contract with the independent quality assurance contractor, supervising the initial software development contract has been amended to cover the quality assurance and
quality control of the in-house development.

III. CONCLUSIONS:
The original PAD objective of Component E, Cadastre System Development – the described "second best" solution has been implemented, allowing alternative institutional arrangements for the registry...after the law has been passed." The National Cadastre System exceeded the requirements from both the original PAD and the restructuring. The exceeded parts include: business processes reengineering to simplify the procedures and to minimize the opportunities for corrupt practices, digital signature implementation for all the cadastre operators to introduce personal responsibility for the actions taken, online staff and offices performance is implemented, digital archive for all the old and incoming documents is in operation (the funds for this activity has been cancelled on June 24, 2010 – “cancellation relating to works under component D specifically, archival data input through scanning due to lack of time to implement”), unified cadastre map has been created and data from about 1460 local coordinate systems have been transformed in a single coordinate system, called USK’2000, achieving absolute accuracies of GRN stations in USK’2000 (compliant with the EU TR89) within the 2-3 cm range, which is a remarkable result for a country with the size of Ukraine, public cadastre map online is operational and notary access to both systems is guaranteed. Both agricultural and construction land parcels are included in the system. All issued documents nation-wide have been scanned, indexed and uploaded in the system, not just the ones issued under the project, as planed in the restructuring of the project. Government financing is ensured after the project closure to maintain and further develop the system. The cooperation between the SALRU and the SRS (under the MoJ) continues after the project closure at political and technical level.

IV. LESSONS LEARNED:

1. **Step-by-Step approach** proved to be a key for the successful completion of the IT system development and implementation. The original PAD describes three phases of IT system implementation, starting with simple data base to keep the ownership documents, issued under the project in digital form, then development of cadastre system at oblasts level to support the day-to-day operation and after that development of nation-wide system with designed two options, based on different scenarios for the institutional and legal arrangements. The benefits of that were local capacity building from the beginning of the project to work with digital records, to develop and maintain the IT system.

2. **High level political support** is critical for the success of the Land Administration IT systems. In case of Ukraine the new laws on cadastre and registration has been adopted, introducing obligatory information sharing between the cadastre and registration, public access to cadastre information, the secrecy of the coordinate system has been abolished, additional funds have been allocated to extend the activities under the project.

3. **Establishment of clear management and reporting mechanism** with delegated level of authority to the technical experts to take decisions is a key for the success. The efficient management capacity of the head of the State Agency for Land
Resources of Ukraine, the excellent technical and management capacity of the head of the State Cadastre Centre and the established Task Force with a clear mandate to manage the system development and to take decisions were critical for the success.

4. **Introducing of independent quality assurance and quality control** is a good international practice. The role of the independent quality assurance and quality control contractor was extremely important to ensure that the system is fully documented, to guide the local team to introduce international standards for version control, testing and system maintenance.

5. **Data quality improvement** is a long process and has to be considered as priority during the entire project duration. In Ukraine lots of preliminary work has been done to analyse the alphanumeric and legal data, to classify the errors, to implement number of pilot projects for data quality improvements and to design online module for citizens to report errors (crowdsourcing).

6. **System sustainability** is of key importance to guarantee the IT system maintenance and further development. In case of Ukraine a strong team of IT and business experts has been established and kept after the project closure. The number of IT staff after the project closure has been increased, the training continue after the project and new modules have been implemented.

7. **Future development is important.** Long term plan has been developed and a pilot project has been implemented during the first 6 months after the project, which integrates various statistical data with the road, gas, electricity, water supply maps, urban plans and a 3D Model has been developed to demonstrate the benefits of building National Spatial Data Infrastructure for climate change monitoring, early warning system for flooding, fast data production in case of natural disasters. The achieved results are very promising and are in line with the European Union INSPIRE Directive and the Public Sector Information Directive.
Annex 9. List of Supporting Documents

Project Appraisal Document

Loan agreements

Cancellation letters

Restructuring paper

SALRU client completion report

Aide Memoires, ISRs for the Project

Customer Satisfaction Surveys