



1. Project Data

Project ID P096181	Project Name CLEAN UP & LAND RECLAM		
Country Kosovo	Practice Area(Lead) Environment & Natural Resources	Additional Financing P105870,P131539,P131539	
L/C/TF Number(s) IDA-52400,IDA-H2340,IDA-H3190,TF-13509,TF-90160	Closing Date (Original) 31-Dec-2010	Total Project Cost (USD) 17,972,380.78	
Bank Approval Date 13-Jun-2006	Closing Date (Actual) 31-Aug-2016		
		IBRD/IDA (USD)	Grants (USD)
Original Commitment		5,500,000.00	5,429,949.98
Revised Commitment		14,696,702.41	5,340,451.45
Actual		14,682,211.81	5,273,556.54
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2. Project Objectives and Components

a. Objectives

The **original Project Development Objectives** (PDOs) of the Kosovo Clean-up and Land Reclamation Project as stated in the Project Appraisal Document (PAD) were to: "(a) address environmental legacy issues related to open dumping of ashes on land; (b) enable KEK ("Korporata Energjetike e Kosovës" - Kosovo Energy Cooperation) to free land for community development purposes currently taken by overburden materials and to enable KEK to remove Kosovo A ash dump; and (c) build capacity in KEK for continued clean-up and environmentally good practice mining operations" (PAD, p. 6).

The **original objectives** of the Project as stated in both Grant Financing Agreements dated December 13,



2006 and November 5, 2007 were: "(i) to address environmental legacy issues related to the open dumping of ashes on land from KEK's Kosovo A thermal power plant; (ii) to enable KEK to free land for community development purposes currently taken by overburden material and to enable KEK to remove the Kosovo A ash dump; and (iii) to initiate structural operations in KEK for continued clean-up and environmentally good practice mining operations" (FA H234, p. 5, and FA H319, p. 5).

The ICR Review is based on the assessment of the objectives as stated in the Financing Agreements.

Revised objectives

The first Project Level 1 restructuring in June, 2009 **revised the PDO** to the following: "(i) to address environmental legacy issues related to the open dumping of ashes on land from KEK's Kosovo A thermal power plant; (ii) enable KEK to free land for community development purposes currently taken by overburden materials and enable KEK to remediate Kosovo A ash dump; (iii) to initiate structural operations in KEK for continued clean-up and environmentally good practice mining operations (Amendment to the Financing Agreement, p. 1).

*With this restructuring, only the objective related to the "removal of ash dump" was revised to reflect a different method to be used to treat the Kosovo A ash dump. An additional investigation of the site was conducted after the Project's start and it was decided not **to remove** ash dump, but **to remediate it** using a combination of different methods.*

The second Level 1 restructuring on March 28, 2013 further **revised the PDOs** to: "(i) address environmental legacy issues related to the open dumping of ashes on land from KEK's Kosovo A thermal power plant; (ii) enable KEK to free land for community development purposes currently taken by overburden materials and enable KEK to remediate Kosovo A ash dump; (iii) support KEK and Ministry of Environment and Spatial Planning (MESP) to implement continued clean-up operations and environmental good practices in the mining and energy sector (Financing Agreement, p.5).

This revision reflected changes in the objective related to the inclusion of the Ministry of Environment and Spatial Planning in the Project as a beneficiary and an implementing agency, and expanded the Project's activity to the energy sector.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

28-Mar-2013

c. Will a split evaluation be undertaken?

Yes



d. Components

The Project originally had four components and two components were added after the restructurings in 2009 and 2013.

ORIGINAL COMPONENTS

A. Preparation of the Mirash Open Pit Mine for Ash Management: *(estimated at appraisal cost was US\$2.76 million: US\$1.86 million IDA and US\$0.9 million KEK. Actual cost was US\$2.76 million and US\$9.203 million of KEK contribution were provided to accommodate increased cost of the ash dump remediation).* This component aimed to prepare and reshape the dedicated part of the Mirash open pit mine with installation of a simple base liner with inclusion of a drainage and mine water management system to receive and store ash from Kosovo A Thermal Power Plant and the existing open ash dump. Activities under the component included various geotechnical, environmental and hydro-geological analyses, an environmental assessment and preparation of the environmental management plans. In addition, the component facilitated preparation of a land use plan.

The revisions were made to the component in the Project's restructuring in June, 2009. The alternative approach to deal with the ashes from Kosovo A and overburden materials from existing lignite mines was explored and chosen. Instead of full removal of the ash dump, it was decided to undertake in-situ remediation of the ash dump site that included reshaping, coverage and some partial removal.

B. Relocation of Kosovo A Ash Dumps into Mirash Open Pit Mine *(estimated at appraisal cost was US\$5.48 million: US\$2.95 million IDA, US\$1.0 million KEK, and US\$1.45 million TBD. The actual cost was US\$6.48 million).* The component intended to develop the full removal of the ash and overburden materials from the Kosovo A ash storage facility and to transport and backfill the materials to the disposal site in the Mirash mine (prepared under Component A). It included investments for site investigations and purchase new, and repairs of, the existing KEK machinery and equipment.

This component was also revised in the restructuring of 2009 to reflect change in the method of treatment of ash dump.

C. Reclamation of Overburden Dump Areas *(estimated at appraisal cost was US\$2.4 million: US\$0.075 million IDA; US\$1.15 million KEK, US\$1.175 million TBD. The actual cost was US\$4.05 million and US\$0.20 million).* This component intended to reclaim land through reshaping and re-cultivating the overburden dumps. The reclaimed land would be an area suitable for community development (agriculture, new housing developments or recreation). The component was to finance investigations, civil works, planting and greening areas.

Component activities were scaled-up after restructuring in March 2013 with available additional financing.

D. Project Management *(estimated cost at appraisal was US\$0.715 million: US\$0.615 million IDA, US\$0.015 million KEK, US\$0.085 million TBD. The actual cost was US\$2.010 million).* The component supported the Project's management with a technical assistance to the KEK in detailed design, construction supervision, procurement and financial management, monitoring and evaluation of project impacts including implementation of environmental management plan for construction activities carried out under the project. The Project Management Unit (PMU) got funds to organize training in environmental



clean-up projects to various departments of the MESP.

Additional resources for the Project's management were allocated to the KEK with additional activities to be undertaken after the Project's restructuring in June 3, 2009 and to the KEK and MESP for management of additional and new activities after restructuring in March, 2013.

ADDED COMPONENTS

E. Removal of Hazardous Chemicals from Kosovo A's Gasification Site *(the cost at appraisal was US\$2.7 million, actual cost at the end made US\$7.83 million: US\$5.631 million came from the first Additional Financing in 2007, and US\$2.203 million were allocated with the second Additional Financing in March, 2013).* This component was designed at the appraisal stage but its implementation started only with the first Additional Financing allocated in June, 2007. A significant amount of hazardous waste was stored in aging tanks at the former Kosovo A gasification site and this component aimed to facilitate their safe removal.

This component was revised in restructuring in May 2013 with additional funding available to scale up activities to ensure full removal of the hazardous chemicals.

F. Environmental Monitoring and Management *(the actual cost of this component was US\$2.9 million).* This component was added after the restructuring in March, 2013 with the second Additional Financing and aimed at building capacity in the MESP on environmental monitoring and management. It intended to support monitoring of the implementation of the Resettlement Action Plan (RAP) for the Shala neighborhood of Hade village planned by the MESP, preparation of the Environmental and Social Impact Assessment (ESIA) for a newly proposed Kosovo Power Project (KPP), finance international ESIA and RAP Panel of Experts and undertaking low carbon growth energy strategy (Project Paper on a Proposed Second Additional Financing and Second Restructuring, March 28, 2013).

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project cost. The original estimated Project's total cost was about US\$11.355 million, with US\$2.71 million identified at appraisal as financing gap. An additional funding was obtained and the final Project's cost was US\$35.43 million.

Financing. The total IDA financing was about US\$15.7 million, with actual disbursed amount US\$14,682. The first IDA Grant was US\$5.5 million (3.8 million SDR). Additional IDA Grant financing in the amount of US\$5 million (3.3 million SDR) was approved a year later in June, 2007. Additional credit equivalent of US\$4.2 million (SDR 2.8 million) was approved in March 2013.

Co- financing. The Government of Netherlands (GoN) extended a grant in the amount equivalent to US\$4.33 million in November 2007, and equivalent to US\$0.92 million in November 2012.

Borrower contribution. It was agreed at the appraisal that the KEK's contribution would be US\$3.145 million. However, KEK contributed an additional Euro 7 million and US\$3 million in the course of implementation.

Dates. The Project's preparation started in August 2005, it was approved on June 13, 2006. Activities



began with a retroactive funding in September 2006 and it became effective on February 28, 2007. Original closing date was December 31, 2010. It went through eight restructurings to extend the closing date, and the final closing date was August 31, 2016.

Restructurings. The Project was restructured nine times, including two times with revision of the PDOs in 2009 and 2013.

- Level 1 restructuring on June 3, 2009 revised PDOs, with subsequent changes made to the Component B.
- Restructuring on November 15, 2010 was to extend Project's closing date by twelve months from December 31, 2010 until December 31, 2011. It also extended the closing date for the Dutch Grant by 6 months from December 31, 2010 until June 30, 2011.
- Restructuring on December 13, 2011 extended the Project's closing date by 6 months from December 31, 2011 until June 30, 2012.
- Restructuring on May 16, 2012 extended the Project's closing date by 6 months from June 30, 2012 until December 15, 2012.
- Restructuring on November 21, 2012 extended the Project's closing date by 6 month from December 15, 2012 until June 30, 2013.
- Level 1 restructuring on March 28, 2013 revised the PDOs, provided an additional financing with a credit in the amount of SDR 2.8 million (US\$4.2 million equivalent), introduced changes to components, extended the Project's closing date by 18 months from June 30, 2013 until December 31, 2014.
- Restructuring on December 23, 2014 extended Project's closing date by 6 months from December 31, 2014 until June 30, 2015
- Restructuring on June 29, 2015 extended closing date by 8 months from June 30, 2015 until February 29, 2016.
- Restructuring on February 25, 2016 extended closing date by 6 months from February 29, 2016 until August 31, 2016.

3. Relevance of Objectives & Design

a. Relevance of Objectives

Original objectives (Rated Substantial)

Kosovo, after the break-up of Yugoslavia and devastating ethnic conflict in 1998-99, was experiencing severe economic difficulties and economic downturn. The Project was designed when Kosovo still did not have functioning Government and the transition from the administration by the United Nations Interim Administration Mission in Kosovo (UNMK) to the country's self- government was still going on. The electricity in Kosovo was generated by two old and poorly functioning, inefficient and severely polluting coal based power plants Kosovo A and Kosovo B, which had dry coal ash disposed of in open dump sites (ICR, p. 1). There were environmental issues related to this lignite mining and power generation operations with a major concern for human health with high pollution coming from the Kosovo A power plant. Air pollution was



accompanied with pollution of the wastewaters on large land areas around the plant (PAD, p. 5).

The energy and mining sectors were considered to be potential sources of the economy's revitalization, but as declared in the Kosovo Economic Memorandum (KEM) of 2004, they required investments in rehabilitation and modernization of the existing infrastructure, restructuring of the industry in line with the emerging regional electricity market, and in an environmentally and socially sustainable manner. That strategic direction was also emphasized in the WB's 2006 Interim Strategy Note (ISN) for Kosovo, with the focus on the long-term development of energy and supporting Kosovo's Lignite Power Initiative (LPI). Kosovo's energy sector review from regional perspective also emphasized the importance of the development of lignite mining in Kosovo for power generation and sale to the regional market.

The original Project's objectives aiming to remedy the Kosovo A power plant's ash dump, and at the same time to build capacity of the KEK to undertake such operations independently from the Project, were substantially in line with the country's conditions and needs. In addition, Kosovo has limited land area and areas freed from dumps would benefit local communities.

However, framing of the objectives was confusing, mixing objectives with components and outputs dealing with open dumping of ashes and the treatment of the overburden materials. IEG interprets two outcome level elements in the objectives: (i) to address environmental legacy issues related to the open dumping of ashes on land from KEK's Kosovo A thermal power plant and, (ii) to initiate structural operations in KEK for continued clean-up and environmentally good practice mining operations. The other objective, as originally formulated "to enable KEK to free land for community development purposes currently taken by overburden material and to enable KEK to remove the Kosovo A ash dump", is part of the outcome of the first objective. Therefore, pre-revision, the ICRR reviews achievement of these two objectives covering freeing of land under the first.

The PDOs were revised twice. At the **first revision** in 2009 the PDOs' were changed to reflect the adoption of a different technical approach towards the same objective - to remedy coal ash dumping. The new approach, according to the ICR, while being also environmentally sound, was less costly, easier to operate considering the existing capacity and equipment of the KEK, required less time and would pose less health risk during ash treatment. That decision on the technological issues of the remedy approach was only possible to make after investigation, which required the Project's financing (ICR, para 14). This revision of the objective increased relevance somewhat, but the revised formal rating is made in this assessment from the point of the second more significant revision outlined in the following paragraph.

Revised objectives (Rated High)

2nd revision. The PDOs were revised a second time in 2013 to increase the scope of the Project to address issues of the capacity building not only of KEK, but now also of the Ministry of Environment and Spatial Planning (MESP). That was due to the growing need for technical assistance within the MESP to deal with environmental management and monitoring responsibilities, which was made possible with the additional financing secured by the Project. This was a potentially significant change bringing in, with additional financing, a new entity with responsibilities for longer term environmental management. It is this potentially significant revision that is treated as the revision point of the split rating. The rating is High.

The importance of the country's power sector remains high and one of the key priorities outlined in the latest



country National Development Strategy for 2016-2021. It was specified in the Kosovo's Energy Strategy for 2013-2022. The three pillars of this strategy -security of sustainable and quality supply, restructuring of the energy sector, and due consideration for environment protection and social issues- have been at the core of the Kosovo Clean-up and Land Reclamation Project.

The original and revised Project objectives were relevant to the Bank's Country Partnership Strategy FY2012-FY2015, especially with its Pillar II, which aimed to support the GoK to increase energy efficiency and reduce environmental hazards. Revised objectives with an overall increased scope of the Project were highly relevant.

To summarize, the ICRR considers that the Project had essentially two objectives: (i) to address environmental legacy issues related to the open dumping of ashes on land from the KEK's Kosovo A thermal power plant; and (ii) to support KEK and, following the second revision of objectives in 2013, the Ministry of Environment and Spatial Planning (MESP), to implement continued clean-up operations and environmental good practices in the mining and energy sector.

Rating
Substantial

Revised Rating
High

b. Relevance of Design

Original design (Rated Substantial)

The original Project design was substantially in line with the declared objectives at the time of appraisal. The remedy of the old open ash dumping of the major country's polluter - Kosovo A thermal power plant - was supposed to be through full removal of the overburden materials to a specially prepared place. This was to be accompanied with building KEK's capacity in environmentally good practice mining operations, and making land available to local communities for various economic or recreational purposes. Bank explored at the design stage various technical approaches to remedy ash dumps and a full removal was, at that time, selected as the environmentally preferred option at that time. The Project allocated sufficient financing for these activities envisaged under its four components. The design was restricted to the specific method of ash dumps remediation and thus financing allocated to activities matched that approach. However, the design did not fully appreciate the limited capacity of the KEK to deal with that removal as well as the limited technical equipment available. There was apparently: "lack of dumping capacity, environmental requirements and the deteriorated state of the existing system", which also contributed to the change of the approach later (Supervision Report, February 15-19, 2010).

The first revision of design was made during the restructuring in 2009 which made the project more relevant to existing circumstances and needs. The ICR reports that after the Project's approval, a detailed site investigation was conducted on the wet disposal method in the depleted Mirash Open Mine Pit. It led to a change in the original approach of ash removal to in-situ remediation to adjust the approach better to existing circumstances, reduce cost and implementation time, as well as to decrease environmental risks. "The redesign better accommodates the changed situation on the ground and mitigation of the associated



environmental impacts, and therefore is more effective in reaching the environmental goals of the project given the different scenario" (Restructuring Paper, para. 1). The revised design adopted changes to reflect a modified technological method of remediation of ash dumps through reshaping, coverage and partial removal. However, IEG does not treat this change as a restructuring for the purpose of doing a split rating since it was a new technical solution to the same overall objective and since the second revision of objectives in 2013 was the more significant institutionally.

2nd revision of design (Rated Substantial)

The Project scope expanded with the 2nd Level 1 restructuring in 2013. The revised design incorporated elements, which were originally designed but not included in the Project due to limited financing available at the appraisal stage. For instance, the original design had a target of, and associated activities related to safe removal of the hazardous waste stored at the former Kosovo A gasification site. When additional financing was made available, these designed earlier activities were brought into the Project as a new Component E. The revised design also incorporated new activities aimed at building capacity not only of the KEK, but also of the MESP in modern technologies in environmental mitigation using transparent, efficient and socially sustainable approaches. It contributed to institutional strengthening and ensured sustainability of the approaches by facilitating formation of a new Reclamation Department. That was possible with additional financing available and reflected in the design by adding Component F, an environmental monitoring and management component, in the restructuring of 2013. Added activities were not directly related to the major Project's focus on cleaning and land reclamation, such as preparation of the Environmental and Social Impact Assessment for the newly proposed Kosovo Power Project and monitoring of a contract for the ongoing resettlement for the Shala neighborhood of Hade village, which was not linked with this Project, but was transferred from another WB funded operation. These added activities on the preparation of the ESIA and Resettlement Program strengthened capacity of the implementing agencies, but were not directly relevant to the Project's objectives.

The design had an overall results' chain with intended outputs leading to achieving final objectives as they were formulated, was appropriate considering weak capacity especially at the initial stages of capacity in the implementing agency. Designed institutional arrangements with the Project Management Unit (PMU) formed within the KEK were instrumental in sustaining implementation at a good pace despite the long period of political instability and frequent changes of ministers and key Government staff during the transition from caretaker organization to local authorities.

Rating
Substantial

Revised Rating
Substantial

4. Achievement of Objectives (Efficacy)

Objective 1

Objective

Original Objective 1: To address environmental legacy issues related to the open dumping of ashes on land



from KEK's Kosovo A thermal power plant.

Rationale

As noted earlier, the objectives "to enable KEK to free land for community development purposes currently taken by overburden material and to enable KEK to remove the Kosovo A ash dump" are treated as outcomes linked to the objective, and thus are assessed in this Review under Objective 1. The efficacy of this objective rated as Substantial.

Implementation started before the Project became effective with the retroactive financing. However, with the change of ash dump remediation methods, there were delays during the first two years of operation due to insufficient funding available for the construction of the wet ash transport system, which was finally provided by the KEK. The Project disbursed only US\$1.47 million before Level 1 restructuring in 2009 (ICR, p. xii).

Outputs on land reclamation:

- A detailed site investigation and preparation of design to identify target area were completed,
- Targeted heaps and slopes were physically reshaped, main and minor access roads constructed, and a surface drainage system was installed;
- The Project removed 500 m³ of illegally deposited municipal waste and 400m³ of illegally deposited construction waste to the designated ash mine;
- The Project filled and reshaped collapsed underground mine structures on six hectares, constructed drainage and a road for a village;
- The Project planted over 138,000 tree seedlings on the reclaimed land.

Outcome on land reclamation: The PAD did not set target value for the land area to be reclaimed and Project only intended to initiate reclamation, expecting that the KEK would continue these activities beyond the Project's life (PAD, p. 33). The total land area to be reclaimed was 957 ha, and the target land area to be freed by Project was set at 526 ha (equal to 55 percent of the total area). This target was fully achieved and the Project reclaimed larger land area than planned (653 ha or 68 percent) in October, 2011.

Outputs on remediation of ash dumps:

- Earthmoving equipment was procured though with significant delays only in August 2009;
- Mirash mine was prepared to receive hydraulic ash disposal in 2009;
- The hydraulic system for ash disposal was installed;
- Targeted mine area was reshaped and a drainage and mine water management system installed;
- A pipeline leading from Kosovo A power plant to Mirash mine for disposal of wet ash was installed;
- Removal of unstable parts of the ash dump, reshaping and covering other contaminated parts of the ash dump to allow re-vegetation.

Outcome on ash dump remediation:

- **The practice of open coal ash dumping was halted.** The power plant's ashes now are disposed of



directly into the prepared Mirash mine pit using environmentally sound technologies, which also allowed reduction of ash dust. Based on information provided by the ICR, the Project achieved this objective and stopped Kosovo A power plant's practice of an open dumping of coal ashes. However, that result was produced only in August 2013, two and a half years later than expected.

- **Remediation of ash dump.** The coal ashes, which had been continuously openly dumped during the previous 50 years were remediated. The Project adopted a different approach than the one proposed at the appraisal, which required significantly more funds than were allocated by the Project. It took two years for KEK management to approve additional financing at the amount of Euro 7 million to finance the hydraulic ash system in 2011 and it was fully commissioned only in December 2013. The Project remediated 78 percent of the total overburden area instead of the planned 55 percent. The set target of the area to be remediated by the Project was less than the total area but such remediation will be continued by the KEK as now usual practice after the Project's closing.

Outputs on remediation of other hazardous waste:

- Feasibility study, Environmental Impact Assessment were completed in 2010;
- Chemicals were packaged for export, export permits were prepared, bilateral agreements with destination reached;
- The target of 13,245 metric tons of phenol in water liquids were treated on site;
- Hazardous chemicals were exported. The Project almost met the target of removing 4,545 metric tons of hazardous substances (the target was 4,780 metric tons in storage tanks), and 2,232 metric ton of tar deposits in 2013.

Outcomes on remediation of other hazardous waste: By the end of the Project, the hazardous substances from the storage tanks and other containments at the Kosovo A's gasification site were removed with 14,771 tons of Low Level Organic Content (LLOC) liquids treated locally and 5,109 tons of High Level Organic Content (HLOC) materials exported and disposed to licensed disposal facilities and following the Basel Conventions. All Project's targets on removing hazardous substances and tar were met.

Rating
Substantial

Objective 2

Objective

Original Objective 2: To initiate structural operations in KEK for continued clean-up and environmentally good practice mining operations.

Rationale



The Project originally intended to strengthen the KEK's capacity through trainings and hands-on experience to undertake clean up and reclamation of overburden areas activities and learn how to apply them in the mining operations.

Outputs:

- The KEK and Project Management Unit's staff were trained on the job to be fully responsible for cleanup and land reclamation operations with support of the International Mining Expert. The activities undertaken suggest that this training has had an impact on skills and capacity. Part of the evidence is in the achievements outlined above under Objective 1 and some of those already initiated and continued and enlarged under the Revised Objective (below), that are not repeated here.

Outcome: The Project achieved its original outcome of increased capacity in the KEK on good environmental practices in mining operations by October 2010. The PDO indicator for measuring the result was in size of area - 127 ha - cleaned-up and reclaimed by the KEK using own resources. The KEK reclaimed 165 ha of overburden land using own staff, equipment and finances.

Rating

Substantial

Objective 2 Revision 1

Revised Objective

To support KEK and Ministry of Environment and Spatial Planning (MESP) to implement continued clean-up operations and environmental good practices in the mining and energy sector.

Revised Rationale

As a result of the restructuring in 2013 and the provision of the Additional Financing, the Objective 2 not only added MESP as a beneficiary of the capacity building, but also additional activities, such as preparation of the Environmental and Social Impact Assessment (ESIA) for a newly proposed Kosovo Power Project (KPP), and monitoring of the Resettlement Action Plan affiliated with another WB's Kosovo Lignite Power Technical Assistance Project (LPTAP). The continued clean-up appears to have been sustained. Past practices are no longer used. Despite the fact, that the ESIA is not disclosed yet because it depends on the parameters of the proposed power plant, it is expected to contribute to longer-term environmental management and, considering that most other outcomes have been reached, IEG assesses the efficacy of the revised objective 2 as, on balance, Substantial. More specifically outputs and outcomes were the following:

Outputs:

- A Reclamation Department was formed in the KEK with more than 50 staff members;
- Three air quality monitoring stations were installed and training on their use was conducted;
- Soil and water management program initiated to collect pollution data;



- Low carbon energy growth study conducted;
- The draft ESIA was completed in July, 2016 but not disseminated before the Project's closing. According to the ICR the delay with disclosure is due to the on- going discussions with the KPP potential investor (ICR, p. 19);
- The RAP for the Shala neighborhood of Hade village was completed in July, 2016.

Outcomes:

- The revised outcome of building capacity in the KEK to undertake clean up and land reclamation activities was met with the KEK reclaiming 127 ha of overburden land using own resources;
- The outcome, related to the capacity of the MESP in using overall good environmental practices in lignite mining operations was reportedly almost fully met. These issues with the specifics of the proposed new project (KPP) caused several extensions of the Project's closing date. Two months before Project's closing date, the ESIA was not yet agreed between the GoK and private investor (ISR, June 2016). However, it will be disclosed by the GoK as agreed with the Bank after all agreements on parameters of the proposed plant are reached.
- The Resettlement Action Plan (RAP) for the ongoing resettlement for the Shala neighborhood of Hade village prepared.
- The Resettlement Completion Report is completed and published.

Revised Rating Substantial

5. Efficiency

At Appraisal

The PAD provided information on the economic and financial analysis conducted based on three types of benefits: i) health benefits due to elimination of the dust from the ash dump and pollution infiltration from the ashes into the groundwater; ii) benefits of reducing risk of loss of property through elimination of the geotechnical instabilities from the dumps; and iii) reclamation of the overburden dumps and freeing land for natural habitats and other purposes of local communities (PAD, pp. 16-18). These benefits were calculated in monetary terms with a discount rate of 12%. The Project's ERR was estimated at 27% and the NPV at US\$11.8 million. A qualitative assessment was done of benefits from strengthening an integrated approach in the KEK for dealing with environmental legacy issues from lignite mining and power generation activities.

At Project's closing

The Project is estimated to have achieved ERR of 12% (ICR, p. 21). The original estimates for the quantitative effect of air pollution on mortality, cases of chronic bronchitis were updated and presented in the ICR. The estimated number of Disability Adjusted Life Years (DALYs) for Obiliq municipality caused by the ash dump and ash practices amounted to 215 cases per year, representing a benefit of US\$1.9 million per year



(estimated at US\$1.6 million per year at the appraisal). The benefits of prevention of loss of properties have been estimated by the ICR at US\$350,000 (estimated at US\$420,000 at appraisal). The benefits from reclaimed land was estimated at the appraisal to be US\$4.2 million per year for agriculture over a period of 5 years, and US\$2.76 million per year for resettlement over a period of 10 years. The ICR calculated annual benefits from reclaimed land for agriculture purposes at the amount of US\$4.5 million also as at the appraisal stage for a period of 5 years, and US\$2.3 million for resettlement also for a period of 10 years. However, IEG questioned why agricultural benefits would stop after 5 years and the project team agreed that they would be expected to continue. This suggests some underestimation of benefits at the reclaimed site.

The ICR's analysis shows that project returns were lower than expected at appraisal but the ICR argues that they still were high for operations of this nature, providing an example of a similar project in the region. An example of the Montenegro Industrial Waste Management and Clean-up Project (P122139) was given to show that the cost of ash dump remediation under this Kosovo project was substantially lower per hectare. However, IEG notes that while the cost differences with this comparator are substantial in favor of this Kosovo project, comparability is questionable because the Montenegro case was for a much smaller site and therefore without the advantages of the returns to scale.

Also with respect to cost effectiveness, the ICR argues (p.46) that the combination of international support for the design while using works executed and financed by the energy company KEK itself using existing staff and substantial own funds represented a very cost-effective approach. Thus, the Kosovo CLRP used US\$5.5 million from IDA resources and US\$1.5 million from KEK's contribution to cover that cost. This is a financial benefit but arguably only partly an economic benefit.

The ICR notes that the project generated other important benefits which were not monetized. These were capacity building of environmental staff and institutional strengthening of the KEK and MESP which would be expected to continue contributing to improved lignite mining and energy generation based on good environmental practices with enhanced monitoring.

The ICR does not analyze net benefits forgone due to the Project implementation lasting eight years instead of the planned five. IEG has recalculated the ERR to approximate what the cost and benefit streams would have looked like over the planned five year project and finds an ERR of about 15%. The slow implementation was therefore quite costly in terms of discounted foregone benefits although, as noted above, there would be additional benefits from extending the agriculture benefits to the full period of the benefit streams.

In conclusion, given the non-monetized benefits in the capacity development for KEK and MESP and the on-site practice for future wider improved environmental management, the relative cost effectiveness against the only available comparator, and what seems to be the failure of the analysis to accommodate longer agriculture benefits, which would have increased the benefit stream, on balance, Efficiency is rated Substantial.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

Rate Available?	Point value (%)	*Coverage/Scope (%)
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Appraisal	✓	27.00	100.00 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	12.00	100.00 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The Project was not without some problems including a lengthened implementation period but it generated the intended, and some additional, benefits although with a lower than projected ERR. It also was a learning experience in terms of the technology of dump remediation. It is rated on balance as Satisfactory in a split rating analysis covering the 'before' and 'after restructuring' performance. The following table summarizes the project ratings both before and after the restructuring of 2013.□

Project/Rating	Disbursement Share	Relevance of Objectives	Relevance of Design	Efficacy	Efficiency
Original Project	62.3%	Substantial	Substantial	2 objectives Substantial	Substantial
Restructured Project (2013)	37.6%	High	Substantial	2 objectives Substantial	Substantial

As can be seen in the Table, the split does not change the pre-restructuring rating. The Project's objectives and design before restructuring in 2013 were assessed as substantial being in line with the country's needs and priorities and well aligned with the Bank's strategy in Kosovo. Revision of the PDOs in the restructuring of 2009 did not bring any material change to the objective, but rather changed a technical method of achieving outcome. The 2013 restructuring was more substantive bringing in a new institution for support. Both efficacy and efficiency of the Project are rated as substantial with, in Efficacy, two objectives rated substantial for both the before and after restructuring scenarios.

a. Outcome Rating

Satisfactory

7. Rationale for Risk to Development Outcome Rating

There is some risk of the KEK returning back to unsustainable environmental practices of dumping ashes, which mostly relates to the maintenance of procured and installed equipment and retaining technical expertise at the KEK. However, as the ICR stated, there are several strong factors in place which would restrain KEK from returning to these unsustainable practices. First, Kosovo is seeking accession to the EU. Being a candidate for EU membership, Kosovo has mainstreamed in its legislation the EU Directive on use of the Best



Available Techniques to comply with international standards. Second, there are technical factors; the Kosovo A power plant discontinued the practice of dumping of ashes during Project' implementation and the old system and equipment conveying the dry ash was dismantled. The newly established wet ash handling system is in place. Third, if Kosovo returned back to the old unsustainable practices it would impede attraction of international funding for future investments.

The KEK has now the Reclamation Department established and strengthened under the Project with the necessary equipment, knowledge and expertise to finalize the remediation of the remaining area under the ash dump and has mainstreamed practices of land reclamation of overburden areas and mine restoration.

a. Risk to Development Outcome Rating

Modest

8. Assessment of Bank Performance

a. Quality-at-Entry

Project design was substantially relevant to the country's needs and priorities and it ensured a high level of ownership by the Government. This commitment and ownership ensured that the KEK contributed more funding than agreed at the initial stage so as to not disrupt implementation and maximize results. It appears that Government and KEK intend to continue the introduced environmental practices.

The original design had a broader scope than available financing could support at the preparation stage. This allowed later upscaling of the Project's objectives and expansion of activities when additional financing became available. This could be accomplished without spending too much time to conduct investigations for the design of additional activities and components. At the same time, the design was not too complex considering existing capacities in the KEK. However, the overdesign and under-funding initially could be construed to have risked overdesign for the financial scale of the Project had additional funding not been forthcoming.

The moderate shortcomings in design were related to the reliance on one technical approach to remediate ash dumps at the preparation stage before conducting detailed investigations and reflecting it in the PDOs, which triggered the Level 1 restructuring when a different and evidently better approach was investigated and selected. Thus, the design underestimated the cost of the major investment, causing significant delay to locate additional funding to undertake the planned activities.

Quality-at-Entry Rating

Moderately Satisfactory



b. Quality of supervision

Based on the ISRs, the Bank team provided strong support to the client in all aspects of implementation: technical, administrative, as well as with raising additional financing and finding solutions to complex issues. There was a significant number of implementation support missions conducted regularly. The Bank team appropriately monitored social and environmental safeguards, especially in regards to the RAP preparation and implementation beyond the scope and timing of the Project. The Bank team appropriately assisted on procurement when the Project encountered challenges through recruiting additional expertise and enhancing capacity building. The World Bank task team was actively overseeing implementation of the resettlement plan after the Project's closing date.

However, the Bank restructured the Project nine times due to expanding its scope with available additional financing. The ICR raises a valid question, that, instead of delaying the implementation adding financing and revising objectives and adding implementing agencies and activities, it would probably have been more efficient to have designed and initiated a separate Project. These frequent additions over time contributed to delaying completion for five and a half years. This especially concerns the activities which were new to the implementing agency, too complex, and beyond the original Project's scope as was the case with the resettlement issues, an additional activity outside the project but found necessary and added to the Project close to completion. In addition, the Project's extensions could have been done fewer times allowing for more realistic periods for completion of intended activities.

Quality of Supervision Rating

Moderately Satisfactory

Overall Bank Performance Rating

Moderately Satisfactory

9. Assessment of Borrower Performance

a. Government Performance

The ICR offers limited detail on Borrower Performance. However, despite a difficult political situation in the country during the Project's implementation, the GoK performed mostly satisfactorily. There were delays with ratification of the Project Agreement at the initial stage, but these were reasonable considering that the Project started when the country was under UN management and transitioned to the newly formed Government.

Government Performance Rating

Moderately Satisfactory

b. Implementing Agency Performance

There were two implementing agencies – the KEK and MESP (the latter was added with the second additional financing) with two Project Implementing Units (PIU). Overall performance of these agencies was satisfactory, with a high level of commitment which was reflected particularly in providing machinery



and equipment for the Project's activities, forming a new Reclamation Department in the KEK with 50 staff, and extending significant additional co-funding to remedy ash dumps. The KEK reportedly contributed to delays with signing equipment procurement contracts, which slowed down implementation. Also, it did not process timely rent payment for resettlement purposes. The MESP experienced difficulties with elaboration and implementation of the ESIA due to insufficient capacity for that task, but this was improved with time.

Implementing Agency Performance Rating

Moderately Satisfactory

Overall Borrower Performance Rating

Moderately Satisfactory

10. M&E Design, Implementation, & Utilization

a. M&E Design

Originally it was expected that the PIU in the KEK will be responsible for monitoring project progress. Later with MESP joining the Project, its PIU also undertook specific M&E activities. Objectives as they were formulated were confusing, with some being intermediate outcomes (remediation of ash dumps and land reclamation). The M&E framework as designed at appraisal had six outcome indicators linked to the three Project's components. The baseline values of targets established for the ash dump site and reclamation area were confusing to follow with target area established in hectares and in percentages at the same time. An indicator to measure reduced dust arising from the transport of ash which initiated and enabled KEK to eliminate dust arising from the ash dump, as noted in the ICR had no defined target (ICR, p. 5). However, overall, the set of proposed indicators and implementing arrangements were adequate to ensure monitoring of implementation and major results.

b. M&E Implementation

The Results Framework and monitoring indicators, as developed at appraisal, were revised twice during Level 1 restructurings in 2009 and 2013. The revision concerned not only adding and replacing indicators related to method of ash dumps remedy, but also correction of target values to bring them in line with activities and increasing them from the original values to reflect the Project's progress (ICR, p. 12).

c. M&E Utilization

M&E data was used to adjust Project implementation, as well as to update overall targets. The Project also facilitated installment of air monitoring stations to institutionalize monitoring of pollution and undertake analysis reaching pollution measurement beyond the Project's immediate scope.



M&E Quality Rating

Substantial

11. Other Issues

a. Safeguards

Environmental. The Project was classified as Category A, triggering OP 4.01 at appraisal. The Environmental Impact Assessment (EIA) was prepared and disclosed before the Project's effectiveness. The main concern was about possible negative impacts from the construction phase of the project. The EIA and EMP were updated and disclosed with a change in remediation approach after restructuring of 2009 (Restructuring Paper, para 9). A second EIA was prepared at the restructuring in 2013 to mitigate possible negative impacts from removal of chemicals at the gasification site. The Project was compliant with the environmental safeguards.

Social. The Project design did not trigger the Involuntary Resettlement safeguard (OP/BP 4.12) at appraisal and, according to the ICR, the Project did not cause any resettlement. However, that safeguard was triggered in the CLRP after the restructuring in 2013, when this Project took over monitoring of the Resettlement Action Plan (RAP) from the Kosovo Lignite Power Technical Assistance Project (LPTAP), which was another Bank financed project. This resettlement was undertaken in connection with LPTAP for the Shala neighborhood of Hade village. The Inspection Panel registered a Request for Inspection concerning the Second Additional Financing Energy Sector Clean-up and Land Reclamation Project (CLRP-SAF) and the proposed Kosovo Power Project (KPP). The Request was submitted by three representatives of communities in Kosovo that are located in Kosovo's New Mining Field, who alleged adverse impacts which they believed resulted from the technical advice provided by the Bank under the CLRP-SAF, as well as from the proposed KPP. The Inspection Panel reviewed the case and recognized that the Bank's approach to preparation of the Resettlement Policy Framework and the Shala RAP, monitoring and supervision of the process were in compliance with OP/BP 4.12 on Involuntary Resettlement (Management Report and Recommendations in Response to the Inspection Panel Investigation Report, p. iv). However, the Panel found two minor instances of non-compliance with OP/BP 4.12 pertaining to the preparation of the RPF and the Shala RAP (way of valuation of assets, delays in construction of infrastructure and malfunctioning of sewage). The mitigation of these issues under the RAP had been completed before the Project's closing.

b. Fiduciary Compliance

Financial management

PIU staff, as well as other employees of the KEK and MESP went through intensive financial management training. Based on the IEG discussions with the Task Team Leader, the Project was in compliance with the



financial management requirements.

Procurement

An Operational Procurement Review was conducted at the preparation stage and drew a conclusion of 'high risk'. In order to mitigate this risk, PIU staff were trained on procurement. The Project used Standard Bidding Documents, and all procurement actions were conducted based on prior and post reviews (ICR, p. 9). While Project experienced delays, especially with procurement for establishment of the wet ash system, it often happens with large procurement using international bidding procedures. Based on the IEG discussions with the Task Team Leader, the Project was in compliance with the Bank procurement rules.

c. Unintended impacts (Positive or Negative)

d. Other

12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	---
Risk to Development Outcome	Modest	Modest	---
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	---
Borrower Performance	Moderately Satisfactory	Moderately Satisfactory	---
Quality of ICR		Substantial	---

Note

When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.

The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

13. Lessons

The ICR presents 5 lessons, but the two most important and relevant to other Bank operations, with some adjustment of language, are the following:

1. Client ownership and full client commitment and engagement from the outset in Project design enhances



effectiveness, efficiency and sustainability. In this case, the KEK's strong ownership of the Project was demonstrated with the provision of significant funding to cover the financing gap to remediate ash dumps using a technological approach not envisaged at appraisal. If such funding had not been provided by the Client, the Project would probably have failed to meet its objectives. Also in this case, embedded mechanisms of mainstreaming of the remediation operations in the design, led, in turn, to strengthening institutional development and capacity. As a result, the KEK, while implementing the Project, established a new Reclamation Department, which was engaged in all remediation operations and now is capable to sustain clean-up operations on its own.

2. Highly technical projects, such as clean-up and reclamation operations, require intensive investigations as part of project preparation and design. These investigations demand significant time and resources to generate the design with specific required inputs and activities identified. In cases of limited time and resources for preparation, and where an optimal remediation strategy cannot be conclusively determined at appraisal, the Project Development Objective needs to be crafted for flexibility to allow alternative technical solutions.

14. Assessment Recommended?

No

15. Comments on Quality of ICR

The ICR presents sufficient information on project preparation and implementation, especially on the first two components. There is information on all major outputs and on their measuring indicators. It provides thorough and detailed description of the technological issues and approaches studied and selected to remedy the ash dump issue, accompanied by visual materials. The ICR is supplemented by a detailed and informative Borrower's ICR. The ICR candidly presents some shortcomings and major challenges faced by the Project. However, it lacks information on Project management issues, especially on compliance on financial management and procurement. The economic analysis section would have benefited from more explanation of the methodology, for example, how the agriculture benefits were calculated. Lessons learned from the Project could benefit similar operations related to pollution management and remediation.

a. Quality of ICR Rating

Substantial