1. Project Data

**Project ID**
P152018

**Project Name**
Floods Emergency Recovery Project

**Country**
Serbia

**Practice Area (Lead)**
Water

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**Prepared by**
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**Reviewed by**
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**ICR Review Coordinator**
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**Group**
IEGSD (Unit 4)

2. Project Objectives and Components

a. Objectives

The Project Development Objectives (PDOs) as stated in the Project Agreement (page 8), and the Project Appraisal Document (PAD, page six) were:
(i) To help restore power system capability to reliably meet domestic demand: (ii) To protect livelihoods of farmers in flood affected areas: (iii) Protect people and assets from floods: and (iv) To improve the Recipients capacity to respond effectively to disasters.

b. Were the project objectives/key associated outcome targets revised during implementation? No

c. Will a split evaluation be undertaken? No

d. Components

There were four components (PAD, pages 7 -8).

1. Energy Sector Support. The estimated cost at appraisal was US$207.2 million. The actual cost was US$151.0 million. The actual cost was lower than the appraisal estimate, due to the cost savings during implementation.

This component aimed at increasing the power system's capability through power purchases, improving distribution system reliability, energy conservation measures, and restoring strategic energy assets. There were three sub-components: (i) supporting electricity purchases by Elektroprivreda Srbije (EPS - a state-owned public company) to improve power availability and avert an impending energy crisis, particularly over the first winter following the floods: (ii) restoring the distribution network and load management through installing metering devices, mobile substations and energy efficient lights in the flood affected areas: and (iii) supporting the Tamnava West Field mine back into operation.

2. Agricultural Sector Support. The estimated cost at appraisal was US$70.0 million. The actual cost was US$59.2 million.

This component aimed at supporting the government's Farm Incentives Program, aimed at protecting the livelihood of farmers affected by the floods.

3. Flood Protection. The estimated cost at appraisal was US$22.0 million. The actual cost was US$34.3 million. The actual cost of this component was higher than the appraisal estimate, due to the increase in project scope, following project restructuring (discussed in section 2e).

This component aimed at supporting the rehabilitation of flood drainage control infrastructure, and strengthening the capacity of government agencies for improving flood management. There were two sub-components: (i) rehabilitating priority drainage control in the flood affected areas: and (ii) project management support.

4. Contingent Emergency Response Component (CERC). No amount was allocated for this component at appraisal. No amount was incurred for this component, as the component was not triggered during implementation.

This component aimed at improving Serbia's capacity to manage the risk of future disasters by including a CERC, which would allow project resources to be quickly diverted to disaster response in case of a future
emergency. This was a new instrument in the Bank arsenal at appraisal. This component also could be used to channel additional funds, should they become available as a result of the emergency.

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

**Project cost.** The estimated cost at appraisal was US$300.0 million. The actual cost was US$244.63 million.

**Project financing.** The project was financed by an IBRD loan of US$300.0 million. The amount disbursed was US$244.6 million. About 3,200,000 Euros (approximately 3,625,334 US$), representing about 1.2% of the IBRD loan, was cancelled during implementation, when the Bank declared mis procurement for an activity under component three (procurement of two meteorological radar systems). The cost of recovering the mining operations were overestimated at appraisal. (However, this was mainly because the original estimates had to be done quickly, because of the emergency nature of the project).

There was parallel financing for housing sector rehabilitation activities from the European Union (EU) and the United Nations (UN). There was also financing of US$10.0 million during implementation, from a trust fund for financing long term mitigation and resilience building activities.

**Borrower contribution.** No borrower contribution was planned at appraisal. There was no counterpart funding during implementation.

**Dates.** The project became effective on March 6, 2015, and was to close on December 31, 2017. The project closed 22 months behind schedule on October 31, 2019.

**Other changes.** The following changes were made through a Level 2 restructuring on March 28, 2017.

- This project was initially designed as a disaster recovery operation, with activities focused on the critical sectors affected by the floods (energy sector, income support to farmers, and rehabilitation of flood drainage control infrastructure). As many of these activities had been completed by the middle of 2016, the project focus shifted from recovery to reconstruction. This change was reflected through the transfer of responsibility for the project from the Energy Global Practice to the Water Global practice in the Bank.
- Given the emergency nature of this project, the indicators were revised to reflect information that became available during the early stages of implementation.
- One PDO was removed due to data constraints, and replaced with a new indicator (discussed in section 9). The end target for the PDO indicator, associated with restoration of power supplies was reduced, in view of the faster than expected recovery of mining operations.
- Savings of US$17.3 million, realized in the energy sector, was reallocated for scaling up reconstruction activities. About US$ 3,625,334, representing 1.2% of the loan was cancelled during implementation, when the Bank declared mis procurement for an activity under component three.
- The closing date was extended by 22 months, from December 31, 2017, to October 31, 2019, for completing the ongoing reconstruction activities, that were disrupted due to a recurrence of flooding in March 2016.
3. Relevance of Objectives

Rationale

Country Context. Prior to project appraisal in May 2014, severe floods impacted economic growth by -0.9%. The rainfall was unprecedented, the worst since 120 years. As the Serbian economy was already weak and vulnerable to shocks, the floods caused significant hardships, particularly to the vulnerable segment of the population. About 110,000 households were cut off from electricity, as the water overflowing from the Kolubara river flooded the open pit mines - the Tamnava West and Veliki Crljeni - (these mines accounted for two thirds of the country's coal production, the primary fuel source to the power plants). 52,000 people suffered temporary unemployment, due to production disruptions. The agricultural sector was affected, with about 12,000 hectares (ha) of lands rendered unsuitable for cultivation. The floods damaged the flood protection drainage infrastructure, which left the country vulnerable to future floods. The PDOs of ensuring restoring electricity services, providing support to farmers in affected areas, and improving resilience to natural disasters, were central to the government strategy as formulated in 2014 following the flood events.

Government strategy. In 2014, the government adopted the Law on Post-flood rehabilitation for regulating rehabilitation efforts, and establishing an overarching organization to define the program of assistance and recovery, in line with sector priorities. Following the legislation, the government established the Office for Reconstruction and Flood Relief, to lead the reconstruction strategy. The "Energy Sector Development Strategy for the period 2020", identified ensuring electricity supplies, as a key government priority. The PDOs were relevant to the government's Strategy for Agriculture and Rural Development. This strategy outlined the path for sector development during 2014-2024.

Bank strategy. At appraisal, the PDOs were well aligned with relevant Bank sector policies and strategies, such as "Acting Today for Tomorrow" (2012), and the guidelines summarizing the Bank's global experience in "Building Resilience - Integrating Climate and Disaster Risk into Development" (2013). The PDOs are well aligned with both the focus areas of the Bank's current County Partnership Framework (CPF) for 2016-2020: (i) economic governance through efficient delivery of electricity services, especially in rural areas (CPF, page 16); and (ii) private sector growth and social inclusion, through enhanced infrastructure networks (CPF, page 17). The PDO was consistent with the CPF's crosscutting theme of responding to natural disasters (CPF, page 17).

The Bank had financed several projects in Serbia in the past, including the Energy Community of South East European Serbia project, and a irrigation and drainage project. The Bank supported the government in the aftermath of the flood by aiding in the preparation of the Recovery Needs Assessment, assisting in promoting donor coordination, and conducting a portfolio review to restructure two ongoing projects to help with recovery efforts. This project was initially designed as a disaster recovery project and focused on immediate needs in the critical sectors affected by the floods. With the faster than expected recovery of mining operations and delivery of income support to the affected farmers completed in the early years of implementation, the project focus shifted towards reconstruction and improved flood protection. This review assesses the level of ambition of this project to be appropriate, and the relevance of PDO is rated as High.
Rating
High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To help restore power system capability to reliably meet domestic demand

Rationale

Theory of Change. The results framework of the entire project was clear, and the causal links between project activities, their outputs and outcomes, were logical. The intended outcomes were measurable. Component 1 activities aimed at meeting the critical energy sector needs in the wake of the floods. Supporting electricity purchases by EMS, restoring the distribution network and load management (through metering devices, public lighting, and rehabilitating the fixed substations), and dewatering the Tamnava mine for resuming mining operations, were geared to assist EMS in meeting electricity demand reliably, and the outcomes of these activities were likely to contribute to the development outcome of restoring electricity supply to pre-flood levels in the affected areas.

Outputs (ICR, pages 16-17 and pages 34-35).

- 20,000 electricity meters were replaced in the flood-affected areas, as targeted.
- 1,162 public lighting meters were installed, slightly short of the target of 1,192 meters.
- The dewatering of the Tamnava mine was completed in the first quarter of 2015. This restored and secured regular production of electricity and reduced the demand for imports, as the domestically produced electricity was adequate to reliably meet demand.
- None of the fixed substations were replaced in the flood-affected areas, as compared to the target of five. The ICR (page 7) notes that although EPS procured the substations, they were not installed, due to the lack of permits from the Ministry of Construction, Transport and Information (MCTI). According to the information provided by the team, the COVID-19 pandemic and the long state of emergency in Serbia have impacted the planned activities related to the five substations, and the five substations are likely to be installed by the end of 2020.

Outcomes (ICR, page 16).
ERS supplied 21,635 Gigawatt Hours (GWh) of electricity, as per the revised target. The original target of 30,485 GWh was higher than actually needed to reliably meet demand. There were no power shortages during the project execution period.

Given that the outcome was realized and excepting for the sub-stations, all outputs were completed, efficacy of this PDO is rated as substantial.

Rating
Substantial

OBJECTIVE 2
Objective

To protect livelihoods of farmers in flood affected areas

Rationale
Theory of change.

Component 2 activities was intended to meet the critical needs in the agricultural sector. It provided direct income support to farmers, aimed at protecting the livelihoods of farmers in the flood-affected areas in the short run, and to the intended outcome of restoring agricultural output to pre-flood levels in the affected areas.

Outputs (ICR, pages 18 and 36).

- 101,839 farms received government support in the flood-affected areas, relative to the baseline (June 2014). This exceeded the revised target of 100,000 farmers, although short of the original target of 120,000 farmers (due to incorrect information at appraisal). The ICR notes that the Farm Incentives Program was slightly modified during implementation, through reducing subsidies to the larger farms. As a result, resources for small and medium-sized farms increased, resulting in more farmers receiving support from the program.
- 362,244 people directly benefited from the project activities at project closure. This exceeded the revised target of 350,000, although short of the original target of 441,000. 30% of the beneficiaries were women, as compared to the target of 50%.

Outcomes (ICR page 18 and pages 32- 33).

- 25,041 hectares (ha) of cultivable land received flood protection. This exceeded both the original and revised targets of 20,000 and 18,950 ha, respectively.
- A study conducted to measure agricultural production indicated that by 2016, agricultural production in the municipalities affected by the floods had recovered to levels obtained in the base year of 2013. By 2016, agricultural and livestock production was 9.4% and 1.5% higher, than in the base year of 2013. The ICR (page 18) acknowledges that it is difficult to attribute this recovery solely to project activities, given that agricultural production also depends on many exogenous factors outside the control of the project. For instance, in 2017, due to a severe drought,
agriculture production declined sharply in Serbia by about 20 percent, suggesting high sensitivity to frequent climatic disruptions.

While it is difficult to assess the extent to which the recovery in the agricultural sector can be attributed to project activities, it is reasonable to conclude base on outputs and the theory of change that the project made a significant contribution to protecting the livelihood of farmers in the flood-affected areas. The relevance of this PDO is rated as substantial.

Rating
Substantial

OBJECTIVE 3
Objective
To protect people and assets from floods

Rationale
Theory of Change.

Component 3 activities were aimed at protecting people and assets from floods. Constructing flood protection works in the flood affected areas and areas vulnerable to flooding, and strengthening the technical capacity for improved flood protection, were aimed at increasing the number of households receiving improved flood protection, and to the long-term development outcome of improving resilience to floods.

Outputs (ICR pages 18 - 19).

- Rehabilitation of priority flood protection and drainage control infrastructure were completed, as targeted.
- 71 kilometres (Km) of flood protection works were completed. This exceeded the revised target of 65, and almost equal to the original target of 71.5 km.
- Technical support was provided to ensure that de-watering of the largest flooded open pit mine, would not collapse during the de-watering process.
- Technical studies were prepared to identify priority flood prevention infrastructure works, as targeted.
- Equipment was provided for improved response in the event of flooding (mobile flood defenses and protection and rescue equipment for national and regional water management institutions).
- Due to a case of mis-procurement associated with acquisition of meteorological radars to improve weather monitoring, works relating to the radars were not completed as targeted (discussed in section 5and 10b).

Outcomes (ICR pages 19 and 33).

- 24,944 households received improved flood protection (through application of improved design and construction standards) at closure, far exceeding both the revised and original targets of 9,000 and 7,000 households respectively.
• 362,244 people directly benefited from project activities at closure. This exceeded the revised target of 350,000. 30% of the beneficiaries were women, compared to the target of 50%.

While the outcomes were nominally met or exceeded, taking into account the incomplete/delayed works related to meteorological radars, this objective is rated as substantial.

Rating
Substantial

OBJECTIVE 4
Objective
To improve the Recipient's capacity to respond effectively to disasters.

Rationale
Theory of change.

Activities aimed at contingency emergency response were likely to improve the government's capacity to better respond to disasters. While the activities enumerated above, aimed at responding to the immediate needs in the wake of the flood, the focus shifted towards rehabilitation during implementation. The combination of these activities was likely to contribute to the long-term development outcome of restoring economic growth in Serbia.

Outputs (pages 19 and 21).

• Support was given to the government for establishing the Office for Reconstruction and Flood Relief for coordinating flood recovery efforts.
• A Contingent Emergency Response Component (CERC) was planned to prepare for future adverse natural or man-made shocks. The borrower sought to trigger the CERC in the time of flooding in 2016. However, the Loan Agreement assigned responsibility for preparing the Project Operations Manual (POM) for CERC to the government rather than a specific agency. However, the POM was not prepared, and the CERC was ultimately not triggered or deployed.

Outcome.

• Since the CERC was not triggered during implementation, the efficacy of this objective is rated as not applicable.

Rating
Not Rated/Not Applicable
OVERALL EFFICACY

Rationale
Based on substantial ratings for outcomes of three of the four objectives, and the fourth objective being not applicable, overall efficacy is rated substantial.

Overall Efficacy Rating
Substantial

5. Efficiency

Economic analysis. A cost-benefit analysis was conducted for energy sector interventions. This component accounted for 69% of the cost at appraisal. The Net Present Value (NPV) was EURO 1,935 million, and the ex ante Economic Internal Rate of Return (EIRR) was 99.7%. The ICR notes that the original model was not available, and a new model was developed using the same assumptions and actual data for this component at closure. Economic models were not developed for either agricultural support or flood protection support at appraisal.

Ex post economic analysis. A cost-benefit analysis was conducted, comparing scenarios with and without the project at closure for the three component activities, accounting for the entire project cost, at closure. The cumulative Net present Value (NPV) for the project was EUR 2,338.6 million, and the Benefit-Cost (B/C) ratio was 12.7. The results of the economic analysis for the three components are as follows:

Energy Sector Support. The benefits of energy sector interventions were assumed to come from avoiding the economic costs, due to reductions in load shedding. The NPV for this component was at 10% discount rate, was EUR 2,012 million, and the B/C ratio was 17.1. The ICR (page 44) notes that the EIRR could not be computed for this component.

Agriculture Sector Support. The economic benefits of agricultural sector interventions were assumed to come from: (i) ensuring food self-sufficiency; (ii) additional cash income to farmers; (iii) maintaining local jobs; (iv) benefits to upstream and downstream sectors (that is, input-supplying industries, and the food processing and trade sectors). The NPV was EUR 161.8 million, the EIRR was 24.4%, and the B/C ratio was 3.5.

Flood Protection Support. The economic benefits from flood protection and drainage investments were expected to come from reduction in losses in the agricultural and livestock production and protection of family household assets. The NPV for this component, at 10% discount rate was EUR163.8 million. The EIRR was 77.3 % and the B/C ratio was 8.2.

Cost savings. Cost savings realized due to the faster than expected recovery of the mining operations, were reallocated for scaling up reconstruction activities. However, the savings were partly offset by increased supervision costs, due to the extension of the project closing date.
**Administrative and Operational issues.** After the emergency period, EPS faced a high staff turnover, and this hampered communication with the Bank staff. A recurrence of flooding in March 2016, led to project disruptions. Although this flood was smaller than the floods of 2014, they were of sufficient magnitude, for the government to invoke the CERC, to respond to the floods. However, the Project Operational Manual (POM) associated with CERC was not ready, and the Bank responded by restructuring the project to incorporate elements of disaster response. There was a declaration of mis procurement relating to purchasing of meteorological radars. This led to a cancellation of about 1.2% of the IBRD loan for the project.

In sum, although there were administrative shortcomings, given the economic justification for the project, and that the extension of the closing date enabled the project to achieve several results beyond the targets, overall efficiency is rated as substantial.

**Efficiency Rating**

Substantial

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

6. **Outcome**

The relevance of the PDO to the government and bank strategy is high. Given that outcomes of three of the four objectives were realized, overall efficacy is substantial. Despite some administrative shortcomings, given the economic justification for the project, efficiency is rated as substantial. Taking these ratings into account, outcome is rated as **satisfactory**.

a. **Outcome Rating**

Satisfactory

7. **Risk to Development Outcome**
Institutional risk. The risk associated with the sustainability of a reliable support system for farmers is likely to be low. The ICR (paragraph 113) notes that the government is already implementing Serbia's strategy for agricultural and rural development for sector development during 2014-2024. Further, Serbia's European Union (EU) accession path, and its convergence with EU Common Agricultural Policy, is likely to ensure sustainability of the farm support scheme in the long run.

Government Commitment. The rehabilitation of flood protection infrastructure under this project aimed at meeting the immediate needs. The sustainability of these activities would depend on the government's commitment to preserve the rehabilitated assets, through adequate maintenance.

Technical risk. The five substations were procured, but had not been installed at closure, due to the separation of contracting and installation. According to the information provided by the team, these activities are likely to be completed using own funds by the end of 2020.

Environmental risk. There had been several flood events in the previous 15 years. Given that the project activities were disaster recovery interventions, there is the possibility that the development outcome of these activities could be undermined by climate change factors.

8. Assessment of Bank Performance

a. Quality-at-Entry

This project was prepared based on the experience of prior Bank-financed projects in Serbia, and emergency operations financed by the Bank in other countries. Lessons incorporated at design, included combining investments in critical sectors with capacity building for flood protection, and complementing the Bank's effort in early recovery through through ongoing projects. Given the emergency nature of the project, the preparation team appropriately opted for relatively straightforward activities (financing electricity purchases, providing income support to farmers and flood protection works). The existence of detailed studies enabled launching energy sector interventions immediately after effectiveness, and provisions for retroactive financing enabled the government to launch key procurement packages before Board approval (ICR, paragraph 69). Several risks were identified at appraisal, including high reputational risk for works associated with the Tamnava mine, and substantial risk associated with capacities of the implementing agencies. Mitigation measures incorporated at design, included adequate staffing of the Project Implementation Unit (PIU), and consultations with civil society. Even with the mitigation measures, the project risk was rated as substantial at appraisal (PAD, page 13). The implementation arrangements were appropriate, with the Office of Reconstruction and Flood Relief responsible for oversight of implementation (the responsibility was transferred to the Public Investment Management Office, once the Office of Reconstruction and Flood Relief reached the end of its legislated mandate). While the public power utility (EMS) was responsible for energy sector activities, the Ministry of Agriculture and Environmental Protection and Directorate of Agrarian payments was responsible for providing support to farmers, and a PIU established within the Directorate of Water Management (DWM) was responsible for implementing component three activities. Both EMS and DMW had executed prior Bank-financed projects and were familiar with Bank procedures. The arrangements
made at appraisal for monitoring and evaluation, and safeguards and fiduciary compliance were appropriate (discussed in Sections 9 and 10).

There were minor shortcomings in Quality-at-Entry. One, the disaster recovery activities were to be based on the principle of "building back better". Since this term was not defined, it is not clear whether this principle was observed. Two, the project overestimated the risk associated with the Tamnava mine, given that this activity was completed faster than expected, with no adverse effects.

Quality-at-Entry Rating
Moderately Satisfactory

b. Quality of supervision

The additional presence of Co Task Team Leaders (TTLs) in Belgrade throughout implementation, aided in regular contact between the Bank and implementing agencies, outside the formal Bank supervision missions (ICR, paragraph 105). The support provided by the team aided in safeguards and financial management compliance (discussed in section 9 and 10). The Bank appropriately restructured the project, to reallocate the savings, due to the faster than expected completion of the mining activities.

There were shortcomings in supervision. Formal bank supervisions occurred at longer intervals, with formal missions less than the recommended Bank practice of twice a year missions. The ICR (paragraph 105) acknowledges that implementation may have suffered due to insufficient supervision. For instance, closer supervision could have substantially reduced the chances of detecting and resolving the issue of mis-procurement, before it reached a crisis point of cancelling part of the loan. The ICR (paragraph 106) notes that there were problems associated with essential documentation (such as Aide Memoires and the Mid Term meeting), which played a role during the flood event of 2016, when the government requested to trigger the CERC. Critical discussions with the Project Implementation Unit (PIU) to respond to the floods were not documented. Better documentation could have aided in decision-making regarding the deployment of CERC. This necessitated project restructuring to address the floods of 2016, and to concentrate more on flood defenses and preparedness.

Quality of Supervision Rating
Moderately Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. M&E Design, Implementation, & Utilization
a. M&E Design

The key outcome indicators (restoring electricity supply and farm income to pre flood levels, the number of hectares of agricultural land and households receiving flood protection, were appropriate for monitoring performance. While targets had been set for some indicators at design, targets for other indicators were set at the beginning of implementation, after the activities had been prioritized. Given the emergency nature of this project, the indicators were revised to reflect information that became available during the early stages of implementation. Both EPS and the PIU under the DWM were responsible for monitoring performance (PAD, paragraphs 45 and 46).

One PDO indicator "restoration of farm income to pre-flood level" (measured on the basis of standard output in percentage terms), was dropped during restructuring, since statistics on "standard output" were no longer available from the National Statistics Office. A new indicator to measure recovery of agricultural production to pre-flood levels in the affected municipalities replaced this indicator. The end target for the indicator on availability of power supplies restored to pre-flood levels, was revised in view of the faster than expected recovery of mining operations.

b. M&E Implementation

A dated covenant in the Legal Agreement, that required the PIU to maintain a M&E specialist, ensured continuous monitoring throughout implementation. The M&E system was implemented using existing structures, to which the PIU had access in existing regional branches of the ministry. The ICR (paragraph 82) notes that M&E was deemed to be satisfactory during implementation.

c. M&E Utilization

The project management unit utilized the M&E information to make changes to the project's design during implementation, and to monitor implementation progress. The M&E data was instrumental, during the restructuring to reallocate project resources from component one to component three activities, and this aided in achievement of better results.

M&E Quality Rating
Substantial

10. Other Issues

a. Safeguards
The project was classified as a Category B (partial assessment) project under World Bank safeguard policies. Four safeguard policies were triggered: Environmental Assessment (OP/BP 4.01); Pest Management (OP 4.09); Involuntary Resettlement (OP/BP 4.12); and Projects on International Waterways (OP/BP 7.50). The PAD (paragraph 80) notes that since some activities had not been determined at appraisal, an Environmental and Social Management Framework (ESMF), a Pest Management Framework and a Resettlement Policy Framework (RPF), were to be prepared early during implementation.

**Project on International Waterways.** This safeguard was triggered, as water from the open Tamnava mine, was to be discharged into the Kolubara river, which is a tributary of Danube river. The PAD (paragraph 82) notes that a notification letter, prepared by the Ministry of Mines and Energy (MME), was submitted to the riparian countries, through the Danube River Basin Commission on July 31, 2014. On September 11, 2014, the Danube River Basin Commission confirmed that the riparian member states did not raise any issues.

**Environmental Assessment.** The ICR (paragraph 97) notes that site-specific Environmental Management Plans (EMPs) were prepared for the 12 subprojects. EPS was responsible for activities associated with dewatering the Tamnava mine, and there was compliance with environmental safeguards. Later in implementation, the activity associated with rehabilitation of five substations was stalled. Although EPS assigned a staff for this position, the role was not dedicated, and the quality of work suffered during the last 12 - 18 months before closure. The ICR notes that no action was taken on this deficiency due to other issues, relating to the non-completion of this activity.

**Pest Management.** The PIU prepared a Pest Management Study on best practices, which was approved by the Bank (ICR, paragraph 96). The ICR does not report any pest management issues during implementation.

**Involuntary Resettlement.** The ICR (paragraph 91) notes that a Resettlement Policy Framework (RPF), and abbreviated Resettlement Action Plans (ARAPs) were prepared and publicly disclosed during implementation. The ICR (paragraph 93) notes that there was no land acquisition without prior compensation. Of the 12 flood protection subcomponents, land or asset loss was identified for six subprojects. Three of these subprojects required land acquisition by eminent domain, and the remaining three required clearance of private assets attached to public land. There were no adverse livelihood impacts, and there was no physical displacement in any of the sub projects.

**b. Fiduciary Compliance**

**Financial management.** A financial management assessment conducted at appraisal, concluded that the arrangements were satisfactory. Both EPS and DWM had executed prior Bank-financed projects, and familiar with Bank procedures and policies (PAD, page 35).

The ICR (paragraph 85) notes that the financial management was satisfactory during implementation, and no major issues were identified, either by the auditors or the Bank's supervision team. The ICR
(paragraph 86) also notes that financial audits were for the most part, submitted in a timely fashion. The ICR (paragraph 87) notes that in one instance, the auditor issued a modified opinion, on the basis that the EPS did not recognize the clean up provisions for depots in thermal plants. The audits for component two and three activities were unqualified.

Procurement. An assessment was conducted at appraisal to assess the capacities of the implementing agencies to address procurement issues (paragraph 74). The procurement risk was assessed as substantial at appraisal. The key risks, included potential risk of delays in the implementation of works contracts, and insufficient knowledge of the implementing agencies on the Bank's procurement procedures. Mitigation measures incorporated at design, included simplified procurement methods until the situation permits the use of the usual deadlines, other conditions waived under the emergency procedures, and a simple procurement plan for the first 18 months, that was to be updated annually or before as required, to reflect the actual implementation needs (PAD, paragraph 74).

The ICR (paragraph 89) notes that the departure of the procurement specialist in DWM in early 2016 was not reported to the Bank team, and the position remained unfulfilled for over a year. This contributed to procurement delays during implementation. In October 2018, the Bank declared mis-procurement for an activity under component three (two meteorological radar systems), and this led to cancellation of 1.2% of the IBRD loan.

c. Unintended impacts (Positive or Negative)

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d. Other

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11. Ratings

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<th>Reason for Disagreements/Comment</th>
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12. Lessons

The ICR draws the following main lessons from the experience of implementing this project, with some adaptation of language.
1. Flexible procurement packages and provisions for retroactive financing are important tools for emergency situations. In this project, a significant set of technical designs existed that could be utilized quickly for implementing reconstruction activities. This, in conjunction with provisions for retroactive financing, enabled launching procurement activities even before the Bank approved the project.

2. Preparation of the Contingent Emergency Response Component needs to be treated as a priority. In this project, the precise responsibility for preparing CERC Project Operation Manual (POM) was not clearly specified, and no deadline was fixed for the completion of the POM. Though the CERC was a new instrument at appraisal, this project offers a concrete example of why teams should regard producing a POM for CERC, either during implementation or even during preparation, as a priority.

3. Supply and installation of equipment should not be separated during contracting. The rehabilitation of fixed substations in this project was an important activity, and the intention at design, had been to procure the needed goods and installation services in integrated contracts. However, the procurement of equipment was separated from the installation services during implementation, on grounds that there were qualified local firms to execute installation of the procured equipment. This activity was not completed and the substations not installed.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR provides a detailed overview of the project. The ICR provides a clear narrative of how the project scope shifted towards reconstruction, once the emergency activities were complete. The ICR is also candid in discussing the issues, associated with the Contingent Emergency Response Component (CERC), which precluded the deployment of CERC during implementation. The project's theory of change helps the reader in understanding how the ratings had been reached. The ICR draws clear and useful lessons from the experience of implementing this project. The economic evaluation at closure, where all components were included, was much better than the economic evaluation at appraisal, which looked at only component one activities.

One minor shortcoming is the length of the ICR. The main text at about 25 pages, is more than the recommended length of 15 pages. The ICR could have benefitted from better editing, and eschewing repetitions throughout the text.

a. Quality of ICR Rating
   Substantial