



## 1. Project Data

**Project ID**  
P087304

**Project Name**  
SN-Dakar -Diamniado Toll Highway Project

**Country**  
Senegal

**Practice Area(Lead)**  
Transport & Digital Development

**L/C/TF Number(s)**  
IDA-45790

**Closing Date (Original)**  
31-Jul-2015

**Total Project Cost (USD)**  
96,599,507.47

**Bank Approval Date**  
02-Jun-2009

**Closing Date (Actual)**  
31-Jan-2018

	<b>IBRD/IDA (USD)</b>	<b>Grants (USD)</b>
Original Commitment	105,000,000.00	0.00
Revised Commitment	99,572,766.85	0.00
Actual	97,437,816.72	0.00

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## 2. Project Objectives and Components

### a. Objectives

The project development objectives were to: "(i) improve mobility between Dakar and Diamniadio; and (ii) provide communities affected by the construction of the highway access to basic social and economic services" (Financial agreement (p.7); Project Appraisal Document (p.5)).

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

No



**c. Will a split evaluation be undertaken?**

No

**d. Components**

**1. Road infrastructure** (Appraisal US\$264.6 million, provided by the African Development Bank (AfDB): US\$49 million; French Development Agency (AFD): US\$33 million; Concessionaire: US\$110.7 million; Government of Senegal (GoS): US\$71.8 million; Actual US\$351.4 million). The component included construction of the 20-km highway of the Dakar Diamniado Toll Highway (DDTH), i.e., from interchange to Diamniadio (Phase 3: Sections 3 and 4) that would cross *Pikine Irrégulier Sud* (PIS) and the Mbao forest, and the provision of toll systems for Phases 2 and 3.

**2. Right of way clearing for section 3 and 4 of the Dakar Diamniadio Toll Highway and urban development of *Tivaouane Peulh* Resettlement Site Preparation** (Appraisal US\$158.3 million, provided by IDA: US\$58.5 million, French Development Agency (AFD): US\$25.2 million; GoS: US\$74.6 million; Actual US\$147.1 million). The component was to finance the development of a new resettlement site in *Tivaouane Peulh* (TP). Activities included construction of urban infrastructure, public facilities, and housing to allow people affected by the construction of the highway to resettle to a new neighborhood (TP); clearing the right-of-way and compensation of project affected persons (PAPs), closing of the Mbeubeuss waste disposal site that is near the resettlement site, and implementation of the Mbao Forest Management Plan (PAFCM) for the Mbao forest crossed by the highway.

**3. Urban restructuring of *Pikine Irrégulier Sud*** (PIS) (Appraisal US\$55.0 million, provided by IDA at US\$27.3 million; French Development Agency (AFD) at US\$18.7 million; GoS at US\$9.0 million; Actual US\$54.7 million). The component was designed to support urban restructuring of PIS, which was split in two by the highway, including construction of urban roads, drainage networks, and public facilities and delivery of land titles to occupants.

**4. Program implementation** (Appraisal US\$14.1 million of IDA financing; Actual US\$15.8 million). The component financed coordination and supervision of project activities performed by the implementing agency (APIX).

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

*\* Variations in the exact amounts between PAD, ICR's Data Sheet, and Operational Portal are due to the exchange rate for financing in euros and CFA francs between appraisal and completion.*

*Project cost.* The total cost of the project was estimated at US\$531.4 million at appraisal (PAD, p.i). The actual amount was US\$570.71 million at completion, which included the costs of additional works requested by the GoS during construction (ICR, p.11).



*Financing.* The project was financed through an IDA credit in the amount of US\$105 million that was disbursed at US\$97.5 million (ICR's data sheet). IDA resources were allocated to components 2 and 3 to finance the social and environmental measures required to restore and improve the living conditions of the communities affected by the toll highway, and support project implementation under component 4. The African Development Bank (AfDB) co-financed component 1 -road infrastructure (estimated US\$49 million; actual US\$47.5 million), and the French Development Agency (AFD) co-financed components 1, 2, and 3 (estimated US\$80 million; actual US\$76.9 million).

*Borrower contribution.* The Borrower (GoS) committed US\$186.6 million for components 1,2, and 3, which was increased to US\$235.8 million at completion. Private financing in the amount of US\$110.7 million was from a concessionaire as planned under component 1-road infrastructure. The cost of the highway was financed by the concessionaire at 41%

*Dates.* The original project closing date was extended twice by 30 months from July 31, 2015 to January 31, 2018. The first extension was for 18 months to January 31, 2017 due to delays (i) in closing of the Mbeubeuss open dumpsite due to uncertainty around opening of the new landfill in Sindia, as its commissioning was opposed by the local population, and (ii) in the construction of local roads due to a slow clearing of the right-of-way, lack of counterpart funding, and difficulties in completing PAPs' files. The second extension was for 12 months to January 31, 2018 to finalize ongoing works, i.e., construction of the church in TP and completion of the pending activities under the Mbao Forest Management Plan. The Mbeubeuss open dumpsite was still not closed despite the efforts of the GoS, and funds were reallocated to develop a new strategy for solid waste management in Dakar. The ICR (p.24) reports that the Government requested a third extension of the project closing date from January 31, 2018, to September 30, 2018, to complete the remaining works. The request was declined considering the slow progress in implementing the project activities and agreed actions plans.

Overall, the project was restructured six times since its approval in 2009, among other, to amend the FA to extend the deadline for the opening of a fully operational replacement open dumpsite that was to replace the Mbeubeuss open dumpsite; to address changes in the Resettlement Action Plan (RAP) Addendum-3 to include a cash option, rental allowances, and valuation of compensation rates because many PAPs expressed their preference for cash payments rather than receiving project-built houses; to allow the relocation of PAPs in the RS before the closure of the Mbeubeuss open dumpsite site as previously planned; and cancellation of uncommitted funds in the amount of US\$5 million.

### 3. Relevance of Objectives

#### Rationale

To address the mobility challenge in the Greater Dakar Area (GDA), the Government of Senegal launched in mid-2000 the construction of a 32 km urban motorway, the Dakar toll road. It was an alternative route to National Road 1 (*Route Nationale 1*, RN1), which was the backbone of the transport system in the GDA. At project appraisal, it took on average two hours during off-peak and up to four hours during rush hour to enter or exit Dakar using the 30-km long road that links the city center to Diamniadio through Pikine, the largest suburb of Dakar. Major new investments in the Port of Dakar, the proposed economic zone near



Diamniadio, the new Blaise Diagne International Airport (AIBD), and the highly popular tourist destinations near Mbour required a reliable and efficient connection in and out of Dakar to support economic development.

In 2004, the GoS decided to finance the construction of the first two Phases (Malick Sy-Patte d’Oie, and Patte d’Oie-Pikine, 12 km combined) and requested assistance of the World Bank Group for the construction of the third Phase (Pikine-Diamniadio, 20 km) under a Public-Private Partnership (PPP) scheme. The WBG supported the GoS in selection of a private concessionaire for construction of the third Phase and operation of a tolling system for Phases 2 and 3 of the Dakar Diamniadio Toll Highway (DDTH). By project appraisal in 2009, the PPP procurement process for construction and operation of Phase 3 of the DDTH was completed. The contract was signed with Eiffage on July 2, 2009 that formed SENAC S.A. as a special-purpose vehicle to serve as the concessionaire.

Based on a multicriteria of technical, social, economic, and urban mobility factors, it was determined that the optimal alignment of the new motorway would connect Dakar (Malick Sy) to the new city of Diamniadio and would traverse the densely populated *Pikine Irrégulier Sud* (PIS) area and the Mbao forest reserve, which was the last protected forest area in the Greater Dakar Area. PIS was the largest informal settlement in the GDA, home to 250,000 habitants that was built in a flood-prone area and lacked proper infrastructure and services. The World Bank’s contribution to the toll highway project focused on mitigation of the negative externalities of the highway and restoration and improvement of the living conditions of the road’s dwellers.

Improving mobility between Dakar and Diamniadio continues to be among top priorities for the country as outlined in the GoS’s *Plan Senegal Emergent* (PSE) adopted in 2014. The Government awarded another 25-year concession to SENAC for the construction of a toll road extension to the new airport, AIBD, 17 km from Diamniadio. The GoS remains committed to continue addressing the issues of flooding, insalubrity, and lack of basic services in peri-urban areas like Pikine, as highlighted under Pillar 2 of the PSE (Access to social services) and the country’s National Social and Economic Development Strategy approved in October 2012 (ICR, p.14). The recent World Bank’s Country Partnership Strategy (CPS) FY13–FY17 focused, among other, on accelerating inclusive growth and generating employment through private sector participation in infrastructure investments, including roads and urban transport. The project objectives remained relevant and aligned with the GoS’s priorities and the World Bank’s country strategy.

**Rating**  
High

#### 4. Achievement of Objectives (Efficacy)

##### **Objective 1** **Objective**

Improve mobility between Dakar and Diamniadio.



## Rationale

According to the project's theory of change, a new highway road section would lead to reduction in travel time and increase in traffic, thus improving mobility between Dakar and Diamniado.

The construction of a toll highway under this project was fully financed through the government and concessionaire funds. It was executed under a PPP arrangement that was supported by the World Bank Group through technical assistance and advisory services at an earlier stage. Through the Private Investment Promotion Project (P051609), the World Bank (IDA) financed the mobilization of transaction advisory services to advise the Government for selection of a private concessionaire for construction of Phase 3 and operation of a tolling system for Phases 2 and 3 of the Dakar Diamniado Toll Highway (DDTH). The WBG's International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA) were involved in advice on the concession aspects of component 1. The ICR (p.11) notes that IFC will be preparing a detailed report on the concession, which it supported through a loan to the concessionaire, SENAC.

## Outputs

A 20 km highway was constructed under the project from Pikine-Diamniadio (Phase 3). The Pikine-Diamniadio toll road was opened to traffic in August 2013. The Government financed the construction of Phases 1 and 2 from Malick Sy to Patte d'Oie (7 km) and from Patte d'Oie to Pikine (5 km) by 2010. Toll systems were installed for Phases 2 and 3 under the project. The Dakar-Diamniadio highway became the first greenfield toll road project in Africa other than South Africa.

## Outcomes

- The average travel time on the highway (from Malick Sy to Diamniadio) was reduced from 90 minutes in 2009 to 25 minutes in 2018, exceeding the project's target of 30 minutes.
- The volume of traffic on the toll highway reached 60,000 vehicles per day by January 2018 and 73,000 vehicles per day by end of May 2018, against the target of 37,500 vehicles per day. The volume of traffic was measured on Phases 2 and 3 of the highway (from Patte d'Oie to Diamniadio), which have toll systems financed by the project.
- The number of roundtrips between Dakar and Rufisque (a suburb of Dakar, and the fourth-most-populous city in Senegal) on weekdays in public mini-buses doubled from two to four after the construction of the toll highway, as targeted.
- Based on the project impact evaluation (2018), the induced effects of project expenditure contributed to an increase in local firms' income of 0.69% over 2014–2015. In addition, according to the survey carried out in 2015, 87.1% of businesses mostly in transportation, construction, manufacturing, and trade (compared to 80% in 2012) believed that the new highway improved the delivery of their inputs. This improvement was mostly due to the reduction of travel time on RN1. The survey also indicated that 59.7% of businesses became more competitive as mobility increased providing access to new markets (ICR, p.23).



**Rating**  
Substantial

## **Objective 2**

### **Objective**

Provide communities affected by the construction of the highway access to basic social and economic services.

### **Rationale**

According to the project's theory of change, building of a new resettlement site, including construction of roads, drainage system, housing and socio-economic infrastructure such as schools, markets, and social centers would increase access to services to the affected communities.

The construction of the motorway entailed significant social and environmental externalities that were outside the scope of the concession. It required the acquisition by the GoS of several hectares of the right-of-way, relocation of nearly 30,000 affected people and displacement of hundreds of small businesses and other social infrastructure. To respond to the high resettlement needs, the GoS had acquired 165 ha of land in Tivaouane Peulh (TP) outside of Dakar to build a Resettlement Site (RS) where populations affected by the construction of Phase 3 of the DDTDH and the restructuring of PIS could relocate. By addressing social and environmental negative externalities of the highway construction, the project supported the affected communities through relocation and infrastructure investments intended to provide access to basic social and economic services.

### Outputs

- 4.2 km of local roads were built. This was below the targeted 28 km due to the slow clearing of the right of way in PIS that affected the construction of the local roads.
- 6 of 8 storm water management ponds were constructed and 4.8 km of drainage network against the 3.6 km originally targeted due to complementary works.
- 16 new socio-economic facilities were built in PIS and TP (3 nurseries, 3 primary schools, 1 secondary school, 1 market, 4 women centers, 1 cultural center, 1 vocational training center, 1 sport center, 1 bus station), above the target of 11. The ICR (p.16) reports that all the facilities were functional by project closing but utilization was low due to a lower number of houses built; it was expected to increase once all dwellings were constructed by PAPs.
- Only 215 houses were constructed and occupied at project closure, as compared to the target of 2,000. Overall, 1,662 out of 2,000 available lots were allocated for houses, due to changes in the original plan as



resettlement became optional in TP. At appraisal, 80% of PAPs were in favor of the project building houses in TP but the trend reversed and PAPs expressed their preference for building their own houses in TP or relocating elsewhere. The ICR (p.17) explains that this was due to delays in selecting a construction firm and signing the contract, thus forcing PAPs to find alternative accommodations since they had to vacate their homes, and for some, these arrangements became permanent. The project had to request a waiver to convert the funds earmarked for the construction of houses to cash to be used for PAP compensations. Out of 1,662 allocated lots, 215 houses were built (13%), 602 houses were under construction by PAPs at project closure; and 338 plots were reserved for PAPs of the project financed by AFD for which the implementation of the RAP was yet to begin (ICR, p.17). The ICR adds that the occupancy rate of TP is expected to increase as the GoS was extending transport services and infrastructure to connect to TP, including a major expressway (*Voie de Dégagement Nord*).

- The planned delivery of formal ownership rights (land titles) to PAPs in TP was not carried out. This was part of the project design but there was no related indicator or target set. The ICR (p.17) reports that the project intended to provide support to the '*Fondation Droit à la Ville*' that assisted in securing land titles but it turned out to be not the proper channel. The project financed the services of a consultant to explore practical solutions for land regularization and share the results with the Department of Urban Planning to integrate this activity into their program.
- The Mbeubeuss open dumpsite was not closed as planned. The RS was about 2 km from the Mbeubeuss open dumpsite. Because of its proximity to TP, the project planned to support the GoS in mitigating one of the largest source of pollution in Dakar by closing the Mbeubeuss dumpsite before PAPs resettle in TP and operationalize the new landfill to Sindia to receive the collected trash. The environmental studies performed during implementation indicated that the presence of the Mbeubeuss dumpsite in the vicinity of the RS of TP did not pose a direct public health risk to its future residents, therefore its closure of the dumpsite did not remain a condition for allowing project-affected persons (PAPs) to resettle in TP. The ICR, however, notes that Mbeubeuss still poses a health risk for the whole city.
- Studies were prepared for new solid waste management scheme in the Dakar region.

### Outcomes

- 199,226 PIS dwellers got access to a year-round asphalted road (within 150 meters) compared to 109,000 in 2009. This was 80% of the targeted 250,000 people due to a lower number of km of local roads constructed, as a result of a slow clearing of the right of way in PIS.
- The surface area in PIS liable to flooding dropped from 210 (hectars or ha) in 2009 to 142 ha at the end of the project, not reaching the target of 119 ha. The original baseline of 90 ha was updated by a 2009 APIX study to 210 ha (30% of the total surface of PIS - 700 ha), and the target was revised from 15 ha to 119 ha.
- The percentage of students walking more than one km to go to school dropped by 38 percent for the primary level and 20% for secondary level. 85% of displaced children were sent to school in PIS and TP compared to the target of 80%. Further, according to the survey performed under the impact evaluation



study for the project, parents of 71% of primary school students and 65% of secondary school students were satisfied with the education services provided under the project.

- 100% of the population displaced were satisfied with the relocation services against the target of 90% due to a wide range of benefits offered to PAPs as part of the resettlement package (based on the APIX surveys). Despite the high level of satisfaction, the ICR (p.17) also reports safety concerns (banditry) from the populations who are currently living in TP, as many of the plots are vacant.

**Rating**  
Substantial

### **Rationale**

The first objective of improving mobility between Dakar and Diamniado was substantially achieved as a result of the construction of a new highway. Under the second objective of improving access to basic social and economic services, while the socio-economic infrastructure was delivered beyond targets, some targets were underachieved. 100% of the displaced population was satisfied with relocation services due to a wide range of benefits offered as part of the resettlement package, and 85% children going to school with reported satisfactory education services, however only 80% of the targeted population of 250,000 got better access to roads. The rate of occupancy in TP was still low at project closing; the number of constructed houses was 13% out of the allocated lots, with 36% being under construction at project closure. The delivery of land titles to PAPs in TP is yet to be carried out. The utilization of socio-economic infrastructure is expected to increase with completion of the remaining houses and increase in transport services. On balance, the overall efficacy is rated substantial.

**Overall Efficacy Rating**  
Substantial

## **5. Efficiency**

### *Economic Analysis*

An ex-ante analysis was conducted for the initial highway sections in 2005 as part of the feasibility studies. A network model was created, including all road sections likely to be affected by the new motorway, and two different project construction sections (Patte d'Oie-Pikine and Pikine-Diamniadio). The study was updated in 2009, at project appraisal, and included two scenarios: the base case included the full impact of the route from Malick Sy to Diamniadio, taking into account the impact of the closure of Mbeubeuss and of the new resettlement site. A variant case was looking at the economic value of the project for the PPP portion only, i.e., the Pikine-Diamniadio section of the motorway. The estimated benefits were savings in vehicle operating costs and time savings. The economic rate of return (ERR) of the segment Pikine-Diamniadio was estimated at 12%, with a payback period of the project of 12 years from operation (PAD, Annex 9).



At closure, the ex-post ERR for the project section from Pikine to Diamniadio (Phase 3) was slightly lower than at appraisal, 10.5% as compared to the ex-ante 12%. This was due to a lower traffic diversion than expected from the congested national roads to the toll road. The ICR (p.15) notes that the GoS financing the rehabilitation of the existing RN1 (between Patte d’Oie and Pikine) provided an enhanced alternative route to users reducing the travel time between the center of Dakar and its suburbs (Pikine) from 30 minutes in 2009 to 17 minutes using the rehabilitated RN1.

The ex-post economic analysis was based on the HDM-4 model using the same network with the same technical data and initial conditions. Construction costs and implementation period were updated, and the traffic growth was adjusted to correspond to the average growth over 2005–2017 on all road sections included in the road network analyzed. Data on maintenance works unit costs were retrieved from the feasibility study of 2005 and increased by 20% to reflect the actual costs, as recommended by APIX. Operational costs for the motorway (toll collection and operation) were provided by the concessionaire for 2017 (ICR, Annex 4).

*Operational/Administrative efficiency*

The project had a 2.5 -year extension. Despite the extension, all planned activities were not completed; at project closing, there were still 1,047 PAPs awaiting compensations. There was also a cost increase under the highway construction borne by the Government, i.e., (a) under the concession contract, the public sector was bound to cover the costs related to price indexation (this led to a cost overrun of US\$66 million) and (b) a couple of addenda to the contract were signed upon request for the Government to accelerate some works so as to open earlier sections of the toll road and additional works on interchanges, new pedestrian bridges, and other works.

**Efficiency Rating**

Modest

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:

	<b>Rate Available?</b>	<b>Point value (%)</b>	<b>*Coverage/Scope (%)</b>
Appraisal	✓	12.00	50.00 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	10.00	62.00 <input type="checkbox"/> Not Applicable

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

**6. Outcome**

The relevance of the objectives is rated high. The mobility between Dakar and Diamniadio improved substantially due to the construction of the highway. While the socio-economic infrastructure was delivered



beyond targets, some other targets were underachieved. 100% of the displaced population was satisfied with relocation services due to a wide range of benefits offered as part of the resettlement package, and 85% children going to school with reported satisfactory education services, but only 80% of the targeted population of 250,000 got better access to roads. The rate of occupancy in TP was still low at project closing; the number of constructed houses was 13% out of the allocated lots, with 36% being under construction at project closure. The delivery of land titles to PAPs in TP is yet to be carried out. The utilization of socio-economic infrastructure is expected to increase with completion of the remaining houses and increase in transport services. On balance, the overall efficacy is rated substantial. Efficiency is assessed as modest due to the project's operational and administrative inefficiencies that led to delays and incompleteness of several activities. The overall outcome rating is moderately satisfactory.

**a. Outcome Rating**

Moderately Satisfactory

## 7. Risk to Development Outcome

*Operations and maintenance of infrastructure.* The ICR (p.16) reports that the concerned municipalities in PIS have taken measures to ensure the sustainability of these investments including maintenance, water and electricity connections, as well as security and safety of sites (p.16). It will depend on the financial and institutional capacity of the municipalities to sustain these commitments. However, as the rate of occupancy in TP was still low at project closing, it entails a risk of degradation of the infrastructure due to underuse, notably for the treatment plant, the community market and socioeconomic center. The Government also needs to finalize the downstream collectors and basins, as some of the drainage systems were not completed by project closing, including two retention basins as well as two sections of the primary collector.

*Fiscal risk.* The ICR does not discuss fiscal risks related to PPPs and the contingent liabilities that may arise for the Government from PPP contracts.

*Institutional.* As the Government is expanding the toll road network, further improvements to the regulatory framework are needed to regulate PPP complex contracts in the long term, including through structuring of a dedicated regulatory body with an adequate level of competences, capacities, and independence.

*Disposal of solid waste.* The project sought to use the construction of the new toll highway as a leverage to resolve a lingering waste management and environmental issue affecting the GDA. However, as the Mbeubeuss open dumpsite was not closed as planned, the issues of solid waste management remain unresolved. Given its adverse affects on the population of the Greater Dakar Area, it is imperative for the GoS to devise the solution, in particular, with the development of new urban hubs in Diamniadio–Mbour area.

*Compensation of project-affected persons (PAPs).* The counterpart funding expected to finance the compensation of PAPs was lacking during the project implementation, which affected the pace of execution of the RAPs. The GoS remains formally responsible for the conclusion of these compensations in accordance with the World Bank procedures until their full conclusion. The World Bank will continue to follow the process with the Government, including through the preparation of a comprehensive social audit of the project.



*Land titles.* Although 1,662 out of 2,000 available parcels were allocated in the RS of TP, official land titles or Right of Land Occupancy were issued to the PAPs by project closing. This poses a risk to the people who agreed to resettle in TP, especially as they do not have legal ownership of the land. The World Bank will continue to follow the process after closing.

## 8. Assessment of Bank Performance

### a. Quality-at-Entry

Project preparation took almost five years starting in 2004 and was overall funded by the Government, the World Bank through a US\$1.5 million Project Preparation Facility (PPF), and a Public Private Infrastructure Advisory Facility (PPIAF) grant of US\$250,000. Financial and technical prefeasibility studies on traffic, toll sensitivity, and acceptability were financed through the PPF and were carried out by well-known consulting firms (Axelcium, SETEC, and Tecsalt). The preparation for the bidding process started in 2006 through a World Bank financed project, the Private Investment Promotion Project (P051609), which was approved in 2003 with the objective of creating conditions to increase private investment, and by December 2008, the contract was awarded to the concessionaire. During preparation, APIX underwent a reorganization financed through the PPIAF grant to prepare for the project (ICR, p. 23). The WBG's International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA) were involved in advice on the concession aspects of component 1, and IFC provided a loan to the concessionaire SENAC. The ICR (p.57) adds that IFC acted as the lead arranger and global coordinator for the PPP portion of the Dakar toll road. The project is a good example of cross collaboration within the World Bank Group and with development partners.

The project involved extensive technical, financial, and economic feasibility studies, identification of alternative solutions, comprehensive communication and consultations. The studies and documents focusing on the social and environmental aspects of the project and fiduciary assessments were initiated early during the project preparation.

The project had a complex design with a large number of affected people to be reallocated. It involved high risks, and some activities were out of the project scope. The World Bank did not finance the highway construction, and this reduced the World Bank's leverage on the Government to accelerate the works planned under the World Bank-financed upgrading of PIS. Strong measures were not in place to mitigate the risk of deficiency in counterpart funding, which had been already experienced in other World Bank - financed projects. The design included urban restructuring beyond the PIS, in particular related to the closing of Mbeubeuss open dump that led to two project restructurings and amendments to the FA leading to delays in effectiveness.

**Quality-at-Entry Rating**  
Moderately Satisfactory

### b. Quality of supervision



The ICR (p.32) reports that the World Bank team provided constant support during implementation through supervision missions, site visits, and communications (e-mails, official communication, and video and audio conferences). With the 2.5 years extension, the World Bank supervision over the last years of the project was strengthened with weekly meetings, especially regarding the social safeguards aspects and several site visits per year. Considering the complex social aspects of the project, the World Bank appointed a safeguards specialist in the Dakar office to help mitigate the risks and support the client as needed. The project also benefitted from higher-level management support (site visits by the Country Director, Transport Director, and Manager and regular communication with high-level government representatives). The M&E implementation was adequate, and the World Bank team ensured that all fiduciary arrangements were respected according to the FA. There were, however, still several infrastructure activities not completed by closure, including lack of progress on land titles. Despite a hands-on supervision of social safeguards, the team could not ensure completion of the resettlement-related compensation, and the project closed with safeguards issues to be yet resolved.

### **Quality of Supervision Rating**

Moderately Satisfactory

### **Overall Bank Performance Rating**

Moderately Satisfactory

## **9. M&E Design, Implementation, & Utilization**

### **a. M&E Design**

The results framework had clear linkages between outputs and outcomes, and the objectives. There were six measurable and timebound outcome indicators identified to measure the achievement of the two objectives. All components were associated with at least two intermediate indicators. Baselines and targets were set at appraisal. The ICR reports that the M&E design provided clear guidance on what data to collect, how and when, and the responsible party (ICR, p.26). The project also planned for a detailed impact evaluation exercise.

Two outcome indicators, i.e., the average travel time between Dakar and Diamniadio and the volume of traffic on toll highway, measured the impact of Phases 1, 2 and 3 in relation to the average travel time and Phases 2 and 3 in relation to the volume of traffic on the toll highway, and, as the ICR (p.26) notes, the M&E could have been complemented by sub-indicators directly linked to the project activities measuring time and traffic on Phase 3 of the toll road. Also, it finds that the M&E framework could have been more comprehensive, measuring specific project outputs such as the closing of Mbeubeuss, the distribution of land titles for PAPs who chose to move to TP, and the implementation of the PAFCM.

### **b. M&E Implementation**



The indicators were regularly tracked by the concessionaire (for indicators linked to the toll road) and by APIX, which had a dedicated M&E specialist working full time on the project. According to the ICR (p.26), the project implementation unit diligently and regularly reported on the indicators and worked closely with the other responsible agencies to ensure timely and accurate reporting.

The indicator 'Surface area in PIS liable to flooding (hectares)' was not updated during implementation when it was found by a study conducted by APIX in 2009 that the surface in PIS liable to flooding was 210 ha (30 percent of the total surface of PIS - 700 ha) instead of 90 ha, leading to modification of the related target. A detailed impact evaluation was carried out.

### c. M&E Utilization

The ICR (p.27) reports that the project's M&E findings were regularly shared with stakeholders through progress reports and the World Bank's aide memoires after each mission. The M&E was useful for monitoring the results of the project and measure the achievement of the PDOs.

The indicators linked to the mobility between Dakar and Diamniadio will continue to be monitored by the concessionaire and the Government. The indicators linked to the resettlement of populations in TP including easy access to social services and satisfaction of PAPs would inform projects in education, health and the PIS II project where PAPs will be resettled in TP.

### M&E Quality Rating

Substantial

## 10. Other Issues

### a. Safeguards

The Environmental Assessment category was rated 'A' at appraisal. The following safeguards policies were triggered at appraisal: Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Physical Cultural Resources (OP/BP 4.11), Involuntary Resettlement (OP/BP 4.12), and Forests (OP/BP 4.36) (PAD, Annex 10). The World Bank safeguards policies also applied to the Government-funded sections of the highway (Phases 1 and 2) and the PPP-funded section (Phase 3).

According to the ICR (p.27), all safeguards documents were reviewed by the World Bank and disclosed according to the guidelines. Safeguard audits of Phases 1 and 2 were performed, and the GoS was required, as an effectiveness condition for the World Bank project, to compensate or secure in an escrow account the funds needed for the remaining PAPs of Phases 1 and 2.

**Environmental Assessment.** The ICR (p.28) reports all environmental and social management plans of works were satisfactorily implemented. The RS of TP was developed, and drainage and sanitation works have been carried out to preserve the roadway and protect residents against flooding. Additionally, nuisances were minimized during construction with the construction of a sound barrier protection wall.

**Natural Habitats. Forests.** The ICR (p.27) reports that the project successfully mitigated the impact of the toll highway on the Mbao forest. The forest is considered the 'green lung' of Dakar and is home to a variety of economic activities such as gardening, livestock farming, and medicinal plants, contributing to the growth



of the area. The toll road crossed the Mbao forest, and about 35 ha of forest were affected, with 8,000 trees cut down. To mitigate this impact, the project financed the implementation of the Mbao Forest Management Plan (PAFCM). The following activities were completed: (a) compensatory reforestation and enrichment of about 116 ha (two trees planted for each tree cut down); (b) development of an arboretum complex; (c) studies for the construction of a national herbarium; and (d) construction of a produce storage facility, a processing unit for vegetables, fruits, and cereals, a honey farm, and toilets and sanitary blocks for gardeners active within the forest.

**Physical Cultural Resources.** The ICR did not report on this safeguard policy. According to the PAD (p.34), this policy was triggered since the route for the toll highway consisted partly of a new right of way. However, no known physical cultural resources were in the area involved. A chance-find procedure would be applied during construction and if necessary adequate mitigation measures would be implemented. A chance find procedure would be included in the contracts for the contractors.

**Involuntary resettlement.** Two Resettlement Policy Frameworks, nine Resettlement Action Plans (RAPs), and six RAP addenda were prepared for the clearing of the right-of way for the toll road (all Phases). PAPs were presented with options to receive full financial compensations or a combination of financial compensations and resettlement in TP. Additional benefits were offered to PAPs that included moving and rental expenses, free or half-priced plot in the RS, and tax exemption on the transaction of the plot in the RS (ICR, Table 4).

A communication strategy developed by APIX was implemented through meetings (public hearings, community meetings, and home visits); press releases and posters; television and radio broadcasts, including on community radio stations; the publication of leaflets and brochures (guide for the displaced, guide to resettlement, and leaflet presenting the project); and local activities (youth groups and sports tournaments). To better support the PAPs, a local APIX office called the 'Office' was opened in Pikine where most of the PAPs were located. The project also opened smaller local offices in specific neighborhoods and established consultation groups involving local authorities and PAPs with different committees. These local offices made it possible to receive PAPs on a permanent basis and to record their concerns or complaints. A partnership with local community organizations, sports and cultural associations, and women's groups was also established.

The ICR (p.29) reports that 10,584 PAPs, have been compensated out of 11,494 identified PAPs (92%). 137 are awaiting for additional checks for lost rental income or payment of additional rental charges; these PAPs received principal payments for their houses or businesses. The ICR states that the process will continue beyond project closing as per conditions of the signed FA. Initially, 12,022 PAPs were identified, and 528 have been removed from the list as they were no longer considered eligible for compensations according to the RAP (318 are PAPs who could not be located after more than six years of active search by various means of communication and 210 are PAPs who are located in areas where works will no longer be performed). Ultimately, 11,494 PAPs (including families and businesses) were to be compensated representing approximately 30,000 individuals.

At project closing, 1,047 PAPs (8.8%), of which 137 have received partial payments, are awaiting payments for a total estimated amount of US\$11.3 million as follows:

(a) 397 eligible PAPs (of which 21 are awaiting complementary payments) remained to be compensated for a total estimated amount of US\$5.7 million, pending release of compensation funds from the Government.



(b) 513 PAPs (of which 116 are awaiting complementary checks once their additional files are complete) were considered complicated cases involving heredity and ownership issues as well as cases with incomplete files and, in some cases, lost files, for which compensation funds to the tune of US\$5.6 million are required.

The ICR (p.30) reports that the World Bank will continue close supervision of the management of the remaining cases, for which the budget has been allocated. Overall, safeguards performance is rated moderately unsatisfactory, i.e., 1,047 PAPs (8.8%) were still to be compensated by project closing, in part due to the complexity of some cases and in part due to insufficient counterpart resources made available on time; the resettled PAPs in TP were still awaiting their land titles; and the Mbeubeuss dumpsite was still open and continued to cause significant adverse impacts in the GDA.

## **b. Fiduciary Compliance**

**Financial Management.** The ICR (p.30) reports that the accounting system and financial and accounting manual remained adequate throughout the project. There were delays in the submission of interim financial reports and the approval of annual budgets. A World Bank financial management specialist based in Dakar supported the project through implementation. Audit reports were provided on time, and all audits were unqualified. At project closing, the physical inventory of assets and final audit were successfully performed.

**Procurement.** With regard to PPP procurement, the ICR (p.8) reports that by project appraisal in 2009, the PPP procurement process for the construction and operation of Phase 3 of the DDTH was completed. Prequalification was launched in April 2007, and the selection of the private operator was carried out through an international call for tenders resulting in three qualified bidders. Two of them submitted technical bids, and the 30-year concession contract in the amount of approximately US\$125 million was awarded to Eiffage in December 2008; the contract was signed on July 2, 2009. Eiffage formed SENAC S.A. as a special-purpose vehicle to serve as the concessionaire.

Procurement under the project was carried out using the World Bank's standard bidding documents by AGETIP for technical aspects of the project (Components B and C) and by APIX for project management (Component D). In both agencies, key staff responsible for procurement received training in the World Bank's procurement procedures. The ICR (p.31) reports that at the end of the project, there were no red flags in procurement. However, the monitoring and updating of the Procurement Plan was not performed regularly, and the management of the contracts, including the activities of Components B and C carried out by AGETIP, had many requests for addendum and modifications.

## **c. Unintended impacts (Positive or Negative)**

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## **d. Other**



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## 11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	---
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	---
Quality of M&E	Substantial	Substantial	---
Quality of ICR		High	---

## 12. Lessons

Three lessons were selected from the ICR, with modification of the language:

- Addressing social and environmental safeguards without direct financing of major infrastructure involves risks that are outside of the project control and lessens the leverage of the World Bank.** The absence of participation of the World Bank in financing of the infrastructure reduced its leverage on the Government to accelerate the works planned under the World Bank- financed activities in upgrading of the PIS, particularly once the main infrastructure was completed and the focus of the Government was directed to other flagship projects. Upon conclusion of the infrastructure, the pace of implementation of the resettlement processes slowed down substantially, affecting the overall project implementation.
- Clearly defining the boundaries of a project is an important task, and teams should always keep a clear view of the project’s objectives at preparation.** Under this project, several activities were incorporated in its scope that were not an absolute necessity to achieve its objective, such as the Mbeubeuss landfill decommissioning. It led to several project restructurings as it was a pre-condition of resettlement that later was found through the studies to be unnecessary.
- Easing the possibility to pay compensations to PAPs from the credit or the loan of World Bank-financed projects through a revision of the procedures could allow more speedy and efficient execution of projects.** The key target of the activities financed by the World Bank under the project specifically was to mitigate the impacts of the infrastructure on the dwellers, both in the construction and operation stages. However, the payment of the compensations of the PAPs remained the responsibility of the Government that had its focus reduced in the process. In the specific cases of projects that trigger revenues



(for example, concessions), an alternative could be designing innovative financing schemes where the compensation would be sourced from the payment of the tolls, for example, directing the value added tax and/or other taxes collected to the payment of compensations.

### 13. Assessment Recommended?

Yes

Please explain

It would be important to carry out the assessment to follow up on the satisfactory completion of social safeguards implementation, progress with land titles, and the growth of traffic on the tolled highway. Sustainability of results of the impact evaluation and the PAPs satisfaction with relocation and socio-economic services are also important to re-assess in the future.

### 14. Comments on Quality of ICR

The ICR is clear, succinct, and consistent, both internally and with the guidelines. It is outcome-oriented, and its evidence is robust, drawing from a variety of sources of data. It presents a candid, well written and argued self-assessment of the implementation experience. It explains what was planned against what was achieved, and provides an insightful analysis of issues that affected the project implementation and results. Additional strengths of the report include the analysis of the M&E design and indicators, and reporting on implementation of the environmental and social safeguards policies. The ICR provides useful lessons/findings that are based on project experience. The ICR quality is rated high.

#### a. Quality of ICR Rating

High