CASE STUDY

Kenya

1. Noteworthy practices for project preparation

EXISTING ENABLING ENVIRONMENT

Early involvement of multilateral institutions is key to the establishment of an effective enabling environment for project development

The Government of Kenya is introducing a legal and institutional framework, consistent with international good practice, with the support of multilateral institutions to build an effective enabling environment for project preparation. The World Bank's Infrastructure Finance and PPP (IFPPP) project was instrumental in building upstream support to PPP institutions and developing an initial pipeline of PPP projects. Under the IFPPP project, the Government of Kenya created an enabling environment to channel private finance to infrastructure projects (the PPP Act 2013 and the PPP guidelines). While multilateral assistance has facilitated creation of a favourable enabling environment and improved public sector capacity, consistent and targeted efforts are still required to yield sustainable outcomes.

PUBLIC SECTOR CAPACITY FOR PROJECT PREPARATION

Dedicated team within the Government Contracting Authority (GCA) to support project planning and preparation

Recognising the gap in the internal capacity of the GCAs, the Government of Kenya established dedicated PPP nodes within each GCA to drive broader PPP agenda planning, preparation, and implementation of PPP projects, and the coordination of funds for project preparation. The PPP node brings in external expertise, as well as strong project ownership within the GCA (each member of the PPP node is of the same rank as a head of department). The GCA also establishes a dedicated project appraisal team during the project appraisal and planning stage, which includes a member of the central PPP Unit.

PROJECT APPROVALS AND QUALITY ASSURANCE

Clearly defined framework for Fiscal Commitment and Contingent Liability (FCCL) to facilitate the early identification of fiscal risks

The National Treasury of Kenya, in association with the World Bank, prepared the FCCL guidelines and technical manual for managing fiscal liability risks in PPPs. The FCCL assessment is undertaken twice during the PPP lifecycle, once at the feasibility stage and again during the negotiation stage. The tool is managed by the Public Debt Management Office (PDMO) in the National Treasury. The PDMO also publishes periodic updates of FCCL commitments, such as quantum and term length, contingent liabilities classified by category or sector, the reasons for undertaking contingent liabilities in the Annual Debt Report, and the Medium-Term Debt Management Strategy. The government's recent initiatives to strengthen the FCCL Framework represent a strong appreciation of the impact of the fiscal risks of PPP projects, especially in lower and lower-middle income economies.

2. Snapshot of project preparation activities

Kenya is one of the largest and fastest growing economies in Africa, and it transitioned to a lower-middle income economy[1] in 2014.

Kenya has embarked on a sustained campaign to scale up its infrastructure to meet its mission of becoming an upper-middle income economy, as per its long-term development plan – "Vision 2030". To meet the objectives of this plan, the government has undertaken a series of reforms aimed at improving institutional capacity, empowering sub-national governments, diversifying project finance and continuously strengthening the enabling framework for project preparation and implementation.

Some of the major reform actions over the past decade include the 2010 Constitution of Kenya, which created a decentralised system of governance, the PPP Act 2013 and the PPP regulations for national and sub-national governments, and the recent Draft Public Investment Management (PIM) Guidelines of 2018, which promote efficiency in project preparation and review. The 2010 Constitution of Kenya introduced a devolved system of government aimed at better service delivery and started a systematic process of strengthening the capacity of sub-national governments to plan and deliver infrastructure. The reform initiatives facilitated a surge in infrastructure investment, as well as greater private sector participation in projects. As per the Global Infrastructure Hub's InfraCompass[2], total investment in the infrastructure sector in Kenya for the period 2011-2015 stood at US $20.376 billion, with US $2.946 billion (14% of total investment) contributed by the private sector.

INSTITUTIONAL FRAMEWORK

Project preparation activities at the national level are led by relevant sector ministries and agencies, and at the sub-national level by the relevant county departments and their agencies, referred to as the Government Contracting Authorities (GCAs) henceforth. The GCAs are required to set up a PPP node, which is a dedicated team formed within the GCA, headed by an Accounting Officer (AO), to aid with the planning, preparation and implementation of PPP projects. The PPP node also coordinates with external stakeholders, such as multilateral development banks (MDBs), and is involved in the promotion of projects. The GCAs are assisted at each stage of project preparation by a range of institutions in providing project guidance, capacity building, project review and approval, and project marketing.

At the federal level, the National Treasury (NT) serves as the apex agency for project preparation. The NT provides guidance on project planning, provides independent review and approval of federally funded projects, and manages the fiscal implications of a project. The NT championed the preparation process of Vision 2030, which sets out the long-term strategic direction for infrastructure in Kenya and the outcomes envisaged. The NT is also responsible for the overall monitoring of projects and the medium-term plans of the line departments. In the case of PPP projects, the NT, through the Cabinet Secretary for Finance, oversees the operation of the PPP Unit (housed within the NT) and PPP Committee. The National and County Treasuries are also allocated the task of reviewing project concept notes up to a certain threshold, approving the feasibility study, and including the project in the pipeline for national and country level projects, respectively. As the main agency responsible for the management of public debt, guarantees and financial obligations at the federal level, the NT continuously monitors the fiscal risk associated with PPP projects.

While the GCAs and the NT form the key institutions in public infrastructure project preparation, the institutional structure is more diverse for PPP projects. Under the PPP Act 2013 and the PPP regulations, the government has established a separate central PPP Unit within the NT to drive PPP project and program preparation and implementation, and a PPP Committee to review and grant approval for PPP projects. The PPP Committee is an inter-ministerial committee chaired by the NT, responsible for PPP policy formulation, project approvals, monitoring and evaluation. The PPP Committee includes members from the line ministries, the Attorney General's office, and four independent members appointed by the Cabinet Secretary. The central PPP Unit, established as a specialised unit within the NT, serves as the secretariat and technical arm of the PPP Committee and oversees the country's PPP program. The PPP Unit was also strengthened through the secondment of international experts with an established track record in managing PPP programs.

The Government of Kenya has also created capacity at the GCA level with the establishment of a PPP node, and a project appraisal team within the GCAs to support and complement the internal capacity of GCAs in project preparation. The project appraisal

1 World Bank country classification

2 https://infracompass.gihub.org/

teams are dynamic teams formed for each project to undertake the appraisal of the specific project. The GCA also requests the central PPP Unit to nominate a representative for the project appraisal team to assist in project preparation. The project appraisal team assists the GCA project nodes in the preparation of project studies, such as project concept notes, pre-feasibility and feasibility studies. The PPP node follows a dynamic structure, wherein the team membership is revamped according to the needs and priorities of the projects. To ensure accountability at the highest level within the GCA, each member of a node, except for the accounting officer, is of the same rank as a head of department.

LEVERAGING MULTILATERAL ASSISTANCE TO STRENGTHEN THE PPP ENABLING ENVIRONMENT IN KENYA

The Government of Kenya collaborated with the World Bank in February 2013 under the Infrastructure Finance Public-Private Partnerships (IFPPP) project to work towards the establishment of a stable, predictable and transparent investment environment, along with a pipeline of finance-worthy projects. The US $40 million program is aimed at three key areas of development: i) enabling environment; ii) project pipeline; and iii) project financing. As of September 2018[3], the program is supporting more than 71 projects at various stages of development. Key program outcomes are summarised below:

i) Institutional reform and capacity building support – After the enactment of the PPP Law in 2013, the IFPPP established well-functioning PPP institutions by strengthening the central PPP Unit and creating more than 57 PPP nodes[4]. Under the IFPPP project, hands-on, skill-based and project-based training was offered to strengthen the capacity of the PPP Unit staff and the project teams. Separate programs were conducted for a select group of officials under the APMG's PPP Certification Program[5].

ii) Dedicated facility for project preparation – The government established a separate project development fund – the Project Facilitation Fund (PFF) – to support project preparatory studies for PPP projects. The PFF was established as a multi-purpose fund to provide financial assistance to:

- support GCAs in the preparation, appraisal and tendering phases of their PPP projects;
- support the activities of the PPP Unit in the delivery of its mandate;
- extend viability gap funding to PPP projects; and
- provide a source of liquidity to meet any contingent liabilities arising from a PPP project

The World Bank has also developed a detailed operational manual for the fund.

iii) FCCL Management Framework – The Public Debt Management Office (PDMO), a department within the National Treasury, manages a progressive two-stage Fiscal Commitment and Contingent Liabilities (FCCL) Framework, which is built on both quantitative and qualitative (option pricing model and Monte Carlo Simulation[6]) methodologies to evaluate risks arising from PPPs. The FCCL assessment is undertaken in two stages: i) feasibility stage to review risk allocation, affordability and sustainability; and ii) negotiation stage prior to contract award to review the variation in risks between GCA estimates and market feedback. The PDMO is required to publish all PPP FCCLs in the Annual Debt Report and the Medium-Term Debt Management Strategy.

iv) Transparency and disclosure – The program has strengthened the enabling environment by emphasising the development of transparency and disclosure practices. The PPP disclosure portal provides considerable literature on the existing PPP processes and all non-confidential information related to PPP projects. The PPP Unit is mandated to act as a central repository of PPP projects and undertake continuous monitoring and comparative assessment (ranking) of PPP projects.

[3] PPP Program status report, PPP Unit Kenya https://pppunit.go.ke/wp-content/uploads/2018/10/Kenya-PPP-Pipeline-Status-Report-September-2018.pdf

[4] As of June 2017, https://www.gtai.de/GTAI/Content/DE/Trade/Fachdaten/PRO/2017/07/Anlagen/PRO201707075012.pdf?v=1

[5] The APMG PPP Certification Program is an initiative of the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the Inter-American Development Bank (IDB), the Islamic Development Bank (IsDB), the Multilateral Investment Fund (MIF), the World Bank Group and the Public-Private Infrastructure Advisory Facility (PPIAF), to provide infrastructure practitioners with a definitive credential demonstrating alignment with international PPP good practice.

[6] The Monte Carlo Simulation is a technique used to understand the impact of risk and uncertainty in financial, project management, cost, and other forecasting models.

PROJECT PREPARATION LANDSCAPE

Project preparation activities are decentralised in Kenya, with the line ministries and their agencies and departments responsible for project preparation at both the federal and sub-national level. The steps in project preparation vary between PPPs (guided by the PPP Act 2013) and publicly financed projects. A snapshot of the existing project preparation landscape is summarised below:

Project conceptualisation and planning. The project identification and planning framework in Kenya is guided by a hierarchical planning process managed by the National Treasury (NT). At the federal level, the NT prepared Vision 2030, which sets out long-term development objectives to transform Kenya into "a newly-industrialising, middle-income country providing a high quality of life to all its citizens in a clean and secure environment". Vision 2030 is implemented through five-year plans (the current plan is the Medium-Term Plan III (2018-2023)), which provide medium-term reform actions and a pipeline of programs and projects to be implemented. The national level plans are complemented by county level plans.

PPP project preparation. The steps in project preparation for PPP projects are guided by the PPP Act 2013 and the PPP guidelines. After the project conceptualisation stage, the GCAs initiate the preparation of project pre-feasibility and feasibility studies. The GCAs submit a list of potential PPP projects along with the pre-feasibility report or a project concept note to the central PPP Unit, which undertakes independent screening and decides on the PPP suitability of the proposal (utilising the standard PPP Screening Tool [7] by the World Bank) to finalise a list of projects amenable to the PPP approach. The approved project pipeline is disclosed in the project disclosure portal and the PPP project pipeline report is available on the PPP Unit's website.

During the feasibility stage, the project appraisal team of the GCAs are responsible for project feasibility studies, with the assistance of external transaction advisors. The feasibility stage requires detailed assessments of socioeconomic impact, financial viability or bankability, affordability, market and risk identification. The PPP projects are assessed and approved, hierarchically, by the PPP Unit, the PPP Committee and the National Cabinet. The feasibility report is submitted to the PPP Unit for approval. The PPP Unit submits the feasibility report to the PDMO within the National Treasury for FCCL approval. The National Treasury, through its PDMO division, conducts an assessment of fiscal risk and contingent liabilities of a project and forwards the recommendations to the PPP Committee for its consideration. In the case of state-owned enterprises (SOEs), to ensure the quality of projects, the feasibility study is reviewed by the Project Committee of that SOE and approved by the Board. The feasibility study is thereafter submitted to the Cabinet Secretary for the line ministry or County Executive Committee member for the relevant county department and forwarded to the Cabinet Secretary, National Treasury or County Executive Committee Member for Finance for independent review and concurrence.

Public investment projects. The public investment projects are largely implemented by the GCAs, which are reviewed and incorporated by the National Treasury as part of the budget preparation process. The project concept notes are submitted during the annual budget cycle, which are reviewed by the NT for linkage to national plans and priorities. Kenya has recently embarked on a comprehensive reform process to strengthen the public investment management framework with the introduction of the Public Investment Management (PIM) Guidelines 2018 (Draft).

[7] https://pppknowledgelab.org/tools/tools-assess-whether-implement-project-ppp#ppp-screening-tool

DRAFT PUBLIC INVESTMENT MANAGEMENT (PIM) GUIDELINES – STRENGTHENING THE PUBLIC INFRASTRUCTURE APPRAISAL PROCESS

The Draft PIM Guidelines[8] have been recently developed by the National Treasury of Kenya to streamline the use of government resources on projects at the national and county level as part of the reform efforts in public finance management. The PIM Guidelines are expected to play a strong role in strengthening the quality of project preparation, especially for the major publicly financed projects.

The existing public investment management system is constrained by the absence of an effective quality assurance framework, leading to sub-optimal project selection and structuring. There are no standard manuals or procedures outlined for project studies, appraisal or selection, leading to unstructured appraisal and review processes. The absence of an independent review system further constrains the quality of project preparation. Beside environmental assessments carried out by the National Environment Management Authority (NEMA), there is no independent review to challenge project design, assumptions, justifications and costing etc. Further, the administrative overheads (associated with the budget preparation process) and information asymmetry severely restrict the capacity of NT to act as a gatekeeper in project selection. In some cases, the feasibility studies were conducted after the project had been approved, while in other cases, new projects have been misrepresented as ongoing projects to avoid rules which limit new projects.

To address these challenges in public investment planning, the NT introduced the Public Investment Management (PIM) Guidelines 2018 (Draft). The PIM Guidelines bring in standardised processes (national and county level) for the entire project management cycle, including planning, identification, feasibility assessment, approval and budgeting. The guidelines shall be supported by capacity development of the NT and the GCAs. The NT shall be supported by a dedicated PIM unit to support the monitoring and enforcement of the PIM Guidelines. The GCAs shall be supported by Project Committees (dedicated teams within the GCAs) in undertaking the review and appraisal of project preparation documents (such as project concept notes and feasibility studies), followed by submission and coordination with the NT. The project committee shall include the following members: head of the GCA, members of the planning, GCA and finance departments, and four expert members (with expertise in the project domain). The guidelines also stipulate that the cost of a feasibility study shall not exceed 0.5% of the total project cost and mandate the Accounting Officer to take special permissions from the NT in case the value exceeds this amount.

The investment cycle, as reflected in the Draft PIM Guidelines 2018, comprises of a five-stage process: (i) project identification and planning; (ii) project feasibility and appraisal; (iii) project selection and budgeting; (iv) project implementation, monitoring, and evaluation; and (v) project reporting and disclosure. The guidelines provide a unified process of initiation and preparation of project studies. They also provide standard templates for concept notes and feasibility reports. Projects go through a multi-stage approval based on the size of investment as follows:

i) Project cost up to Ksh. 100 million[9] – Only project concept notes need to be prepared. The concept notes shall be prepared internally by the GCAs and approved by the Project Committee.

ii) Projects above Ksh. 100 million – Concept note and feasibility reports need to be prepared. The concept notes must be reviewed by the NT before initiating the feasibility stage. The involvement of the NT at the concept stage will improve the screening process and assure greater project quality, especially in high-value projects. The National and County Treasuries will be responsible for approving the feasibility report and the inclusion of the project in the pipeline of projects at both the national and county level.

iii) The project shall also be re-appraised in cases where a project has been in the pipeline for more than three years without budget provision, a change in project scope, an increase in project cost of more than 25% of the original cost, or force majeure.

The interventions envisaged under the PIM Guidelines are expected to strengthen the project preparation standards in Kenya. Some of the immediate outcomes of the guidelines will include strengthening the quality of the project pipeline, mitigating project risks, the standardisation of project preparation processes, improving public sector capacity (in the GCAs and the NT) to plan and deliver on large-value projects, and strengthening transparency and accountability for the portfolio management of public investment projects.

8 The draft version of the guidelines was uploaded to the National Treasury portal for citizen's comments in September 2018.

9 Approximately US $978,000, as of December 2018.

3. Guidance for project preparation

Guidance	FRAMEWORK FOR THE MANAGEMENT OF FISCAL COMMITMENTS AND CONTINGENT LIABILITIES (FCCL)
Owner	National Treasury of Kenya
Project development stage	Project feasibility and appraisal
Details	The FCCL Framework was prepared in assistance with the World Bank under the IFPPP project. The FCCL Framework comprises FCCL guidelines and the FCCL technical manual. The FCCL guidelines provide a description of the assessment and approval of FCCLs associated with PPP projects. The FCCL technical manual's objective is to provide a detailed description of the FCCL Framework and methodologies for quantifying risks, and illustrate the use of the long-term fiscal planning tool and template for the project risk matrix.

Guidance	PROJECT DISCLOSURE
Owner	PPP Unit, National Treasury of Kenya
Project development stage	Project marketing
Details	The "Project Disclosure Portal" was launched in 2018 by the Government of Kenya with support from the World Bank, as a push to improve transparency of information on PPP projects. The portal is a digital platform that provides information on multi-sectoral projects at various stages of the PPP lifecycle. It serves as a marketing and stakeholder awareness tool, which provides the rationale for choosing the PPP model as the procurement method, the rationale for unsolicited proposals, scope, project estimated costs, likely sources of revenue and associated project documents. The PPP Unit is responsible for managing the portal. **Link for further details:** *https://pppunit.go.ke/*

4. Project case example: Nairobi – Nakaru Mau Summit Highway

QUICK FACTS

VALUE (IN US $ MILLION)

700

STATUS

Procurement stage – RFP evaluation

PROJECT OWNERSHIP

Kenya National Highways Authority (KeNHA)

SUPPORT AGENCIES

KeNHA, Government of Kenya, Intercontinental Consultants and Technocrats Pvt. Ltd.

SOURCE OF PROJECT PREPARATORY FINANCING

World Bank funding through the IFPPP project

PROJECT BRIEF

The Nairobi – Nakuru Mau Summit Highway is a brownfield project, involving the expansion and improvement of a two-lane road into a four-lane dual carriageway from Rironi in Nairobi to Mau Summit in Nakuru County.

The stretch of road is strategically important to the country and forms part of an international corridor connecting land-locked countries, such as Uganda, Rwanda, Burundi, South Sudan and the Democratic Republic of Cargo, to the Port of Mombasa. Considering that this stretch of road was amongst the most dangerous roads on the planet (according to the World Health Organisation), the project studies aimed to re-design the highway to improve the safety, quality and capacity of the road.

The project is being implemented by the Ministry of Transport and Infrastructure, represented by the Kenya National Highway Authority (KeNHA). It is part of the first-mover PPP program, supported by the Kenya Infrastructure Finance Public-Private Partnership (IFPPP) project, which financed the project studies. Feasibility studies included technical studies, financial feasibility, a preliminary environmental and social impact assessment, and a resettlement action plan.

The Government of Kenya (GoK) will levy tolls on users and compensate private players through availability payments.

The Intercontinental Consultants and Technocrats Pvt. Ltd. and its consortium were appointed as transaction advisors to assist KeNHA in the preparation of the project studies, bid management and financial closure of the project. The project has been designed under a 30-year Design-Build-Finance-Operate-Maintain-Transfer (DBFOMT) arrangement. The private concessionaire shall be responsible for the construction, operation and maintenance of the highways, separated into the following segments:

i) widening of 175km of the A8 highway between Rironi and Mau Summit and turning it into a four-lane dual carriageway, including operation and maintenance;

ii) strengthening of 58km of the A8-South highway between Rironi and Naivasha, including operation and maintenance; and

iii) operation and maintenance of 12.43 km of the A8 highway between Gitaru and Rironi.

The concessionaire will be compensated by KeNHA through availability payments linked to performance. The government shall hire a toll operator through a separate contract.

PROJECT TIMELINE

2010	The National Transport Policy identified several policy initiatives for the road sector in Kenya
2012	Kenya Infrastructure Finance Public-Private Partnership (IFPPP) project launched
2013	PPP Act enacted
Feb-15	Intercontinental Consultants and Technocrats Pvt. Ltd. and its consortium hired as transaction advisors
Nov-16	Feasibility study approved and RFQ for the project launched
Feb-17	RFQ submission
July-17	RFP documents issued
April-18	RFP close date
2019	Scheduled financial close

LEARNINGS FOR PROJECT PREPARATION

1. Multilateral assistance was key in the planning and development of the project

The project was developed as one of the strategic roads under the first-mover PPP program for the road sector in Kenya and was supported by the World Bank-assisted IFPPP project launched in 2012. The multilateral assistance program has helped: i) strengthen the enabling environment for project preparation; ii) develop internal public sector capacity; iii) provide project preparatory financing; iv) strengthen the quality assurance standards; and v) facilitate consultations with investors and private stakeholders.

The broader objective of the IFPPP project was to facilitate the establishment of an effective enabling environment for project preparation and identify ways to increase private investment. The PPP Act 2013 and the guidelines developed under the IFPPP project formed the guidance for the transaction advisors, as well as KeNHA, in undertaking the project studies and review. The program also supported the strengthening of internal public sector capacity in KeNHA and the PPP Unit through specific hands-on, skill-based and project-based training. The preparatory studies for the project were financed by the World Bank facility, which helped KeNHA to hire quality transaction advisors to undertake the project studies. The World Bank is also playing an important role in engaging with the potential investors to expedite financial close.

2. Project structuring to facilitate the deepening of local financial markets

The depth of the financial markets is often cited as an important indicator of the maturity of a PPP market, as well as the quality of the project preparation in a country, especially because of the high-quality standards prescribed by the financial markets. The project was developed as part of a broader objective to draw in long-term finance from local investors to finance the project under the Maximizing Finance for Development (MFD) approach[10]. Under the approach, the project and broader ongoing engagement aim to promote capital market solutions to crowd-in local financiers into infrastructure PPP projects to create a fiscally sustainable way to finance PPPs.

[10] The Maximizing Finance for Development (MFD) approach is the World Bank Group's approach to systematically leverage all sources of finance, expertise, and solutions to support developing countries' sustainable growth, in line with the Sustainable Development Goals (SDGs).

In line with this approach, the project structure and the preparatory documents included specific incentives for the provision of local currency financing for the project, such as the provision of the availability payment model and positive scoring for bidders who indicate a lower proportion of the availability payment indexed to foreign currencies. Additionally, the World Bank's International Development Association (IDA) Payment Guarantee and possible Loan Guarantee to backstop the availability payment of the GoK for the project improved the attractiveness of the project to local institutional investors.

3. Communicating the government's strong commitment towards the project to the market participants and incorporating their feedback to enhance project bankability

The project received strong commitment from the Government of Kenya, due to the project's alignment with the national and sectoral plans, as well as its categorisation under the first-mover PPP program. The government's strong commitment to the project is manifested in the support mechanisms and risk management practices promoted under the project structure. The central PPP Unit and the project agency (KeNHA) undertook active market engagement during the feasibility and procurement stages, which helped them identify the key areas of concern with respect to project structure and risk allocation. The inputs received during the early stages, related to the technical, financial, key risk allocation and legal aspects of the project, were also communicated through separate one-on-one Competitive Dialogues (CD) with each bidder during the bidding process.

Two specific areas of government intervention include the management of foreign exchange risk and toll collection risk, which were critical to drive investor participation. The government provided upfront support to undertake local currency inflation risk, exchange rate risk and local currency interest rate risk on the roads PPP projects through the payment mechanism in the concession agreements. Being one of the earliest toll road projects in the country, the project also had substantial toll risks. The local investors who were consulted flagged concerns associated with the enforcement of toll collections and the general demand risks. To address these concerns, the Government of Kenya established a multiple level structure for supporting debt repayment: i) a ring-fenced National Toll Fund will be created to collect the tolling revenue from road PPP projects; ii) the deficit between the toll revenue and service payments shall be filled by the GoK; and iii) the World Bank's IDA and payment guarantee. The government also made it clear that it was committed to levying the toll on users and no free alternative routes would be offered.

4. Standardisation of project preparation processes to rationalise project preparation costs, and use of parameters for assessing project design options

The Ministry of Transport, Infrastructure, Housing and Urban Development, through its first-mover road PPP program, identified five strategic priority road sector projects. One of the objectives for choosing various projects under a single program was to standardise project preparation to enhance public sector capacity and rationalise project preparation costs. Therefore, all the projects were structured as availability projects with no transfer of revenue risk to the private party. Further, a standardised risk allocation and tender documents were prepared with the necessary project-specific variations.

During the feasibility stage, the international consultant undertook a comparative assessment of around twelve alternative alignments through subjective parameters including lifecycle cost, engineering challenges, resettlement impact, environmental sensitivity, and land acquisition need. The alignments were given scores based on each of the parameters as follows: 0-10: Low; 10-20: Medium; 20-30: High; and 30-40: Very High. The alignment with the maximum aggregate score and that which offers the lowest land acquisition was considered for the final design.