

Environmental and Social Review Summary

Jamaica Water Supply Improvement Project

This Environmental and Social Review Summary (ESRS) is prepared by MIGA staff and disclosed in advance of the MIGA Board consideration of the proposed issuance of a Contract of Guarantee. Its purpose is to enhance the transparency of MIGA's activities. This document should not be construed as presuming the outcome of the decision by the MIGA Board of Directors. Board dates are estimates only.

Any documentation which is attached to this ESRS has been prepared by the project sponsor, and authorization has been given for public release. MIGA has reviewed the attached documentation as provided by the applicant, and considers it of adequate quality to be released to the public, but does not endorse the content.

Country:	Jamaica
Sector:	Infrastructure
Project Enterprise(s):	The Bank of Nova Scotia Jamaica Limited and the National Water Commission of Jamaica; Vinci Construction Grands Projets (VCGP); BNP Paribas
Environmental Category:	B
Date ESRS Disclosed:	October 20, 2009
Status:	Due Diligence

A. Project Description

The Jamaica Water Supply Improvement Project (JWSIP) entails a US\$198.5 million refurbishment and expansion program aimed at addressing the perennial water supply constraints affecting the greater Kingston Metropolitan, Ocho Rios, and broader rural parish areas of Jamaica. It is being sponsored and implemented by the National Water Commission (NWC) of Jamaica, a state owned enterprise created under the 1980 National Water Commission Act, and overseen by the Jamaica Ministry of Housing and Water. To facilitate the JWSIP financing, the NWC has segmented the works into two categories ("A" & "B"), which will be implemented concurrently, using the same Engineering Procurement and Construction (EPC) Contractor, Vinci Construction Grands Projets (VCGP) of France, but financed by separate entities. Category A program activities (US\$83.5 million estimated cost) will be financed by BNP Paribas and VCGP, while Category B activities (US\$115 million estimated cost) will be exclusively financed by the Bank of Nova Scotia (BNS) via a shareholder loan financing arrangement with its Jamaica based affiliate, the Bank of Nova Scotia Jamaica Limited (BNSJ).

Category A program activities include: replacement of Rio Cobre pipeline (6 km from Bog Walk to Flat Bridge), refurbishment of the Constant Spring water treatment plant, refurbishment of Seaview water treatment plant, construction of Halls Green Wells (including 2 wells, a pipeline and a new reservoir), and the purchase of some 70,000 water meters. Category B program activities include: Rio Cobre pipeline (12 Km from Content District to Ferry Booster Station), pipeline connection from Ferry to Red Hills, leak repairs and network improvement at Forest Hills/Red Hills, and construction of new water treatment plant at Content District.

B. Environmental and Social Categorization

This project for the improvement and construction of wells, pipelines, a reservoir and treatment plants is Category B under MIGA's social and environmental review procedures because the impacts are site-specific, limited in number, and mitigation measures are readily identifiable. Based on information provided by the sponsor the key environmental and social issues are: soil and water resources, air and noise emissions, waste disposal and management, occupational health and safety, worker relations, community health and safety and land acquisition. An environmental and social due diligence site visit will be undertaken prior to Board presentation. The ESRS will be revised based on the mission's findings and conclusions.

C. Applicable Standards

While all Performance Standards are applicable to this investment, our current information indicates that the investment will have impacts which must be managed in a manner consistent with the following Performance Standards:

- PS1: Social and Environmental Assessment and Management System
- PS2: Labor and Working Conditions
- PS3: Pollution Prevention and Abatement
- PS4: Community Health, Safety and Security
- PS5: Land Acquisition and Involuntary Resettlement

There are no ecologically sensitive areas within close proximity of the project sites, therefore PS6 (Biodiversity Conservation and Sustainable Natural Management) does not apply. No national heritage sites or cultural buildings of any significance are to be found at or near the sites neither for the proposed works nor within the road reserves as is confirmed by the Jamaica Heritage Trust. MIGA does not expect the project to have any impact on cultural heritage, therefore PS8 (Cultural Heritage) does not apply. No Indigenous peoples will be affected by this project, therefore PS7 (Indigenous Peoples) does not apply.

In addition, the World Bank Group General Environment Health and Safety (EHS) Guidelines (for construction activities), and Guidelines for Water and Sanitation (for plant operations) apply to this project.

D. Key Documents and Scope of MIGA Review

MIGA has reviewed the following documents:

- Draft Interim Environmental Impact Assessment: Category A- Jamaican Water Supply Improvement Project: Pipeline Works (Replacement of the Rio Cobre Pipeline Section Through Gorges to Flat Bridge), National Water Commission, August 19, 2009
- Draft Interim Environmental Impact Assessment: Category A- Jamaican Water Supply Improvement Project: Halls Green Project (Wells, Reservoir, Pipelines), National Water Commission, August 19, 2009
- Draft Interim Environmental Impact Assessment: Category B- Jamaican Water Supply Improvement Project: Pipeline Works (Replacement of the Rio Cobre Pipeline, Ferry to Rockpond Tank <Upper Red Hills> Water Supply, Forest Hills/Red Hills Water Distribution Network Rehabilitation), National Water Commission, August 2009.
- Draft Interim Environmental Impact Assessment: Category B- Jamaican Water Supply Improvement Project: Construction of the New (Rio Cobre) Water Treatment Plant in Content District St. Catherine, National Water Commission, September 2, 2009
- List of Licensed Quarries – Saint Catherine Parish Council and Kingston Saint Andrew Corporation, September 30, 2009
- Summary of land acquisition – prepared by NWC sent to MIGA on October 2009.
- E-mail exchanges and conference call with prospective guarantee holders and NWC on labor issues and land acquisition.

MIGA's review of this project consisted of evaluating the environmental and social information submitted by VINCI and the National Water Commission, including NWC/VINCI's responses to inquiries posed by MIGA's social and environmental specialists. The submission of the finalized environmental impact assessments to MIGA will be required prior to the commencement of physical works.

E. Key Issues and Mitigation

Social and Environmental Assessment and Management Systems

The Engineering Procurement and Construction (EPC) Contractor, Vinci Construction of France is responsible for the physical/construction works for both Category A and B program activities. Vinci maintains an environmental management system that complies with the requirements of ISO 9001:2000 quality standard, ILO OSH:2001 safety standard and ISO 14001:2004 for environmental standards. Their system is certified each year by

AFAQ-AFNOR Certification. To reinforce Vinci's commitment to health and safety, it has been VCA (Contractors' Safety Checklist) certified since 1999.

The investment is expected to have no significant adverse social impacts. The key environmental issues are soil and water resources, air and noise emissions, waste disposal and management, occupational health and safety, and worker relations. Based on MIGA's review of the interim environmental assessments the investment is expected to comply with MIGA's social and environmental policies and standards. Where applicable, finalized environmental assessments and environmental management plans will be submitted to MIGA prior to the commencement of relevant physical works in accordance with national as well as MIGA's procedures for environmental and social sustainability and disclosure policies.

Water treatment plant operations including the operations and maintenance of the wells and reservoir will be subject to review by the Ministry of Health for water quality issues and the National Environment and Planning Agency (NEPA) for any point discharges. Environmental management plans for plant operations will be prepared to address wastewater, hazardous chemicals, air emissions and ecological impacts.

Labour and Working Conditions

Vinci (the contractor) is committed to complying with MIGA's PS2, the Jamaican Labour Law in ensuring workers' health and safety as well as in managing worker relationships. Information presented to MIGA indicates that Vinci's human resources policy and labour practices are in compliance with the Government of Jamaica's standards and requirements. The main principles include: fair and consistent treatment of all employees; operating as an equal opportunity employer and does not discriminate against nationality, race, religion, age, gender and culture; and freedom of association.

The National Labour Law covers the following areas: working conditions; working hours; salary and compensation; statutory deductions; paid national holidays; overtime compensation; insurance; vacation, sickness, bereavement, maternity etc; safety and welfare. The Ministry of Labour and Social Security has an International Labour Agency/Information Office which manages relations with ILO, the Organization of American States and the United Nations Development Programme and other international organizations concerned with labour matters. This office is also responsible for preparing periodic reports on labour matters to these organizations and addressing ILO recommendations. Most of the ILO conventions were ratified by Jamaica.

Vinci's hiring process includes transparent stages of application, interview, selection, discussion of remuneration, induction and training. In keeping with the local culture temporary site workers will be hired from the local project areas. Once the construction is completed, NWC will be responsible for the operations of this water project, including labour and working relations, in compliance with national standards and MIGA's Performance Standards.

Pollution Prevention and Abatement

The overall level of environmental risks associated with the investment program is judged to be low.

Vegetation/soil loss. The clearance and loss of areas of vegetation and faunal habitat will be minimal. An inspection of the proposed routes of the pipelines seems to indicate that very little vegetation will be destroyed or damaged along the routes and the secondary roads. The overall impact on vegetation will be minimal. In terms of soil loss, the interim EIAs seem to indicate that most soils in which or on which construction takes place, are already disturbed. The environmental impact of the construction activities is considered minimal. The required building materials potentially including stone, sand, marl, concrete blocks, steel and timber will be obtained from licensed quarries in the Kingston, St Andrew and St Catherine Parishes area.

Noise/Air emissions. During the course of the clearance and site preparation works, noise and dust will be generated due to the use of machinery and motorized equipment. The relatively short term nature and small scale nature of the works suggest that noise and dust levels will not be excessive or cause any major long term nuisances. The works will however, present a short term nuisance to the public and to owners adjacent to some of the project sites. In accordance with the proposed environmental management plans, several mitigation measures will be put in place to minimize and manage the negative impacts i.e. mufflers on exhausts, standard restrictions to hours of site works, water sprays, precautions taken for materials transportation, etc.

Waste management. Very little vegetation wastes will be generated during the clearing of works. The wastes generated by the works would largely be inorganic and not predicted to be excessive. Wastes will be disposed of at the existing licensed landfill site. To ensure that wastes are properly disposed of, the project sponsor will ensure that reputable truckers are engaged and conduct spot checks to verify that waste disposal is carried out in accordance with the requirements of NEPA and other agencies.

The operations of the water treatment plants will be subject to review by the Ministry of Health and Environment for water quality issues and NEPA for any point discharges. Environmental management plans for plant operations will be prepared and will include appropriate measures to avoid contamination of the nearby Rio Cobre from chemicals and materials associated with plant operations. Environmental management plans for plant operations will be prepared to address wastewater, hazardous chemicals, air emissions and ecological impacts. The plans will also include modalities for environmental monitoring as well as measures that address occupational health and safety issues.

Community Health, Safety & Security

For all new construction, including the new water treatment plant and the Halls Green wells and reservoir, the contractor (Vinci) will install a security system around the site (fences and armed security guards) during the entire construction period. For the other construction sites taking place on land owned by NWC (including SeaView WTP and Constant Spring WTP), the contractor will use the NWC's existing security

systems and armed guards, in addition to employing their own security to protect its equipment within the NWC's properties.

When works take place on open roads, equipment and vehicles will be brought together to one single protected place during the night to ensure both community and workers' safety. The investors are committed to construct and operate this project in compliance with MIGA's PS4 as well as the national laws and requirements related to community health and safety. It is expected that the project will improve community health in general by providing better and more reliable potable water supply.

Land Acquisition & Involuntary Resettlement

The NWC, as a government entity, has a mandate to negotiate property prices with affected owners. If land required by the project cannot be acquired through negotiations with project affected people, the NWC has the right to initiate compulsory land acquisition through the Land Acquisition Act of Jamaica - provided that general public will benefit from the subject matter project. The Land Acquisition Act of Jamaica requires compensation to be paid be established by independent evaluators.

The NWC reported that negotiations have been in progress for some time between them and the relevant land owners. At present time it is fully expected that the few concerned sites will be acquired through amicably settled negotiations with purchase agreements setting out the terms of payment as mutually agreed. As a last resort, if negotiations fail and the timetable for the completion of the totality of the project is likely to be seriously compromised, then the NWC would proceed in accordance with the provisions and regulations of the Land Acquisition Act.

Information presented to MIGA confirmed that acquisition of land for already identified sites do not require physical resettlement and economic displacement. Currently about 4000 m2 of privately owned land is required for the construction of Halls Green wells (two wells, a pipeline, and a new reservoir), the pipeline connection from Ferry to Red Hills, three pumping stations, and a new 15 MGD Water Treatment Plant at Content District. In total five owners will be affected and land is expected to be acquired through negotiations with all five owners. If negotiations fail, project investors committed to acquire land through fair and appropriate compensation.

Site locations for pumping stations are still under technical review and there are numerous technically acceptable alternative sites available for each of the 3 pumping stations and the final sites will be chosen to ensure that there will be no displacement of people, no disturbance of livelihood, and no commercial activity on land. However, if any of the project sites will require physical and economic displacement, the project affected people will be compensated in compliance with MIGA's PS5 requirements as well as the National Land Acquisition Act. Other project work (including pipeline works and refurbishment of facilities) will be carried out within existing public roads right-of-way and NWC properties.

Biodiversity Conservation & Sustainable Natural Resource Management

Jamaica, like most islands, is characterized by rich biodiversity. While none of the proposed sites are located in protected areas or ecologically sensitive areas, the interim EIAs indicate that ecological surveys for two of the sites will be conducted for the revision of the EIA. One would be carried out along the route for the proposed pipeline between the intake and the new treatment plant at Rio Cobre and the sites for the intake and water treatment plant prior to the commencement of construction. The other will be carried out along the route of the proposed Ferry to Rockpond works. Lists of flora and fauna will be observed, presented and potential impacts assessed. Additional surveys deemed necessary by NEPA will also be conducted prior to the start of any construction works. This information will be included in the revised EIAs to be approved by NEPA in accordance with national and MIGA's policies.

Cultural Heritage

No national heritage sites or cultural buildings of any significance are to be found at or near the sites neither for the proposed works nor within the road reserves as is confirmed by the Jamaica Heritage Trust. However, the investors commit that in case of chance finds mitigation measures are designed and implemented consistent with relevant national laws and PS8.

F. Environmental Permitting Process and Community Engagement

Through the Natural Resources Conservation (Permits and Licences) Regulations of the Natural Resources Conservation Authority (NRCA) Act 1991, the NRCA may require that some environmental impact assessments (EIA) be developed for certain components of the project before a decision to issue a Permit or License is made. When required, a final EIA report of the proposed development will be reviewed by the NRCA. Accordingly, the EIA report will be reviewed by the relevant government review agencies and interested members of the public. The report is available for public inspections at the following locations: public library closest to the project site, at the local offices of the consultant or developer, the NEPA Documentation Centre, 11 Caledonia Ave., Kingston, Jamaica. Any comments can be made within 30 days of the publication of the notice of disclosure. The project sponsor has held preliminary discussions with NEPA on the interim EIAs. When required, the relevant EIAs will be finalized before construction.

Applications have been made to the Water Resources Authority (WRA) for the abstraction of water for the Rio Cobre Water Treatment Plant. For the Halls Green Wells, the raw water analysis is in process and the WRA application will be done as soon as possible. Granting of a permit/license is subject to abstract and water use conditions for a given time period. Granting of a permit/license for new surface or ground water sources is made pending an advertisement of intention in a daily newspaper.

Based on the requirements of the EPC contracts, initial activities will concentrate on ensuring that the first critical construction permit/license for the new water treatment

plant will be obtained at the end of the 5th months after the issue of the Order to Commence to the Contractor. Other required permits and licenses will be obtained prior to the start of the construction on site in accordance with the Contract program.

G. Availability of Documentation

The draft interim EIAs are available electronically as PDF attachments to this ESRS: [Halls Green](#); [Rio Cobre WTP](#); [Pipeline Works A](#); and [Pipeline Works B](#). It is also available for viewing at the following locations:

- Public library closest to the project site.
- At the local offices of the National Water Commission.
- NEPA Documentation Centre, 11 Caledonia Ave., Kingston, Jamaica.