

SUMMARY OF PROJECT PERFORMANCE

A. Background

1. The current project is co-financed by ADB, World Bank, the Government of Australia through the Pacific Regional Infrastructure Facility (PRIF) and the government.¹ There is strong development coordination between the co-financiers and the government. The ongoing project co-financing is currently \$57.45 million. ADB approved a loan in the amount of SDR 7,621,000 (\$12 million) on 20 December 2010 (footnote 2). The ADB loan agreement was signed on 17 March 2011 and became effective on 26 August 2011. The World Bank and PRIF approved grants of \$20 million and \$5.79 million respectively on 1 March 2011.² The World Bank grant agreement was signed on 5 May 2011 and the PRIF grant agreement was signed on 30 May 2011. In March 2015 the World Bank (\$6.97 million) and PRIF (\$7 million) provided additional financing \$6.97 million and \$7 million respectively. Meanwhile, the government's contribution increased from \$1.05 million to \$5.69 million. The ongoing project originally intended to (i) the rehabilitate, reconstruct and strengthen the existing road network in South Tarawa; road repairs at localized areas; as well as providing seal for priority unsealed urban feeder roads; and (ii) provide training for community-based enterprises for road maintenance. The principal outputs of the project are rehabilitation 32.5 km of main roads and 8 km of feeder roads.³

B. Performance of the Project

2. Overall project performance since effectiveness is satisfactory despite the initial delays caused from a prolonged bidding process for civil works. Since the civil works contract was awarded in March 2013 all major risks have been and continue to be effectively managed. The project has been extended twice. The first extension was approved on 24 April 2013 to extend the loan closing date from 30 October 2013 to 30 June 2015; the second extension was approved on 5 May 2015 to extend the loan closing date from 30 June 2015 to 31 August 2016 to ensure the physical works would be completed.

3. The project has been consistently performing well over the past 12 months.

(i) Delivery of expected outputs.

- Output 1: The project intends to rehabilitate and upgrade 32.5 km of paved roads and 8 km of unpaved feeder roads. Currently good progress has been achieved with approximately a total of 13.1 km paved roads and 3 km of feeder roads completed. As at the end of August 2015, physical progress of the civil works stands at 56% completed against 89% of time elapsed. The following activities have been completed: i) coastal protection and paving along 1.9 km of the airport road; ii) 11.2 km of asphalt paving on the main road; iii) 16 km of kerbing; and iv) 4.5 km of U-drains. Due to the failure of the armoring of Betio Causeway, and the need for the causeway to undergo a

¹ ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Loan Republic of Kiribati: Road Rehabilitation Project*. Manila.

² On 31 January 2011, the World Bank increased its financing from \$16 million to \$20 million. In addition the Government of Australia via PRIF also increased its financing from \$4.61 million to \$5.79 million as a result of including additional 5.0 km of paved road and 2.0 km of unpaved road.

³ On 31 January 2011 the Regional Director of SPSO approved the additional project scope change that increased the length of main road by 5.0 km and feeder road by 2.0 km. The additional main roads are (i) from Tanea to the northern end of Buota island (2.5kms) and (ii) completion of the loop road to the south of the airport in the Temaiku area (2.5kms).

major rehabilitation, the causeway pavement works (2.8 km) have been removed from the contract.⁴ Overall 40% of surfacing and pavement works have been completed and ancillary activities (e.g. footpaths, speed humps, street lighting, road signage, etc.) are ongoing. In addition, the road sector reforms are also progressing well with the completion of the road safety action plan, review of the traffic legislation and the micro-enterprise initiatives targeted to improve maintenance contracts after the project is completed.

- Output 2: The contractor has employed personnel (microenterprise) teams to perform routine road maintenance. The microenterprise teams have had training and manuals provided. It is expected that at least 3 teams will be formally established during the defects liability period by 2016. MPWU current maintenance expenditure for resourcing should ensure ongoing implementation of microenterprises.
 - Output 3: The MPWU recruited a Technical Advisor to ensure efficient project implementation. In addition, the KFSU ensures project coordination and fiduciary and procurement support. Works are expected to remain on track and essentially all physical works are planned to be completed by March 2016.
- (ii) **Satisfactory implementation progress.** Procurement contracts have been awarded and under implementation. Contract administration relating to the ongoing civil works contract is administered by the World Bank and jointly funded by the co-financers. ADB provides full contract administration of the design and supervision consultant contract which is solely financed by ADB. Overall contract administration is carried out routinely and monitored during administration review missions. The contract for the design and supervision consultant was awarded on 2 December 2010 for \$2.15 million. As of September 2015 the total contract amount is \$4.43 million due to variations related to additional design inputs, additional staff inputs for construction supervision and environmental monitoring. The contract for civil works was awarded 12 February 2012 for A\$48.2 million. ADB original contract to support the overall financing was \$7.59 million; this was revised in May 2015 to \$5.09 million due to a reallocation required to ensure sufficient funds to cover any further cost increases to the consultants cost as ADB was financing 100% of the consultant costs. The ADB loan disbursements are currently at 74% (\$8.33 million).
- (iii) **Satisfactory compliance with safeguard policy requirements.** There is satisfactory compliance with the World Bank, ADB and national safeguard policy requirements and plans and no major issues to date. The environmental license for civil works was issued by the Ministry for Environment, Land and Agriculture Development (MELAD) in November 2012 and the project's environmental management plan (EMP), from the approved initial environment examination, is routinely updated and disclosed, the latest update being in October 2014. The contractor also has a Contractor's EMP (CEMP, version N) that is used to monitor

⁴ The government has held discussions with the Government of Japan to fund the Betio causeway redevelopment at a cost of approximately A\$30 million. The contractor performed paving for 0.4 km of the Betio causeway, and had done minor repairs to keep the length of the causeway accessible. The contractor is scheduled to do bridge deck repair works.

compliance. Environmental monitoring reports are regularly submitted and disclosed. The contractor also had other manuals and plans in respect of occupational health and safety, quality assurance, traffic management, and general construction methodology. The contractor's health and safety performance was found to be best practice. The contractor also engaged the Kiribati Family Health Association to conduct a HIV/AIDS education campaign for its employees. In addition, resettlement monitoring reports have been provided and indicated no major issues. The most recent report was disclosed in September 2015.

- (iv) **Successful management of risks.** The project has managed and mitigated the risks identified during processing and implementation to date. As such, the successful implementation of the project is not threatened by major risks. Nonetheless, due to the project's size and complexity for the small country, and the number of other large infrastructure investments being undertaken concurrently risks are still considered high. The work suspension which affected the project from 27 February 2015 to 20 April 2015 due to health and safety concerns following cable strikes has been addressed. Measures adopted include stringent safety procedures, and mobilization of an electrical resource team to ensure a safe working environment. Risks are further reviewed during administration review missions.
- (v) **On track rating.** The project is currently rated on track in the project performance rating.

C. Cost Overruns and Financing Gaps

4. The key reasons for additional financing is caused by underestimated costs, delays and other implementation issues, inflation in costs of materials, increased oil prices, exchange rate fluctuations and increased transportation costs. The appraised cost estimate for the ongoing project's civil works was \$29.5 million. In 2012 the consulting engineers prepared the detailed designs, the bidding documents and estimated the value of the civil works contract would be \$34.4 million. At the time of bid closing four bidders responded with bid prices ranging between A\$49.6 million to A\$64.5 million (or 17% to 36% above the engineers estimate)—the minimum bid price was A\$15.2 million over the cost estimate. The analysis of the possible causes of the deviation from the cost estimation to the final contract price include (i) \$9.53 million caused by the exchange rate fluctuation of US\$ against A\$ and inflation since cost estimation in 2010; (ii) \$7.46 million were attributed to additional works needed but not envisioned in the original budget at the time of appraisal. The additional works included additional roads of approximately 5 km from Tanea to Buota and the Temaiku loop road; and upgrading of an additional 2 km of feeder roads; and replacement of approximately 7 km of water supply transmission main between Teoraereke and Betio;⁵ and (iii) \$3.76 million attributed to the civil work general and mobilization costs due to remoteness. The underestimation was due to a lack of historical precedent for a project of such magnitude in Kiribati from which one could draw lessons for estimating costs. Comparisons with recent similar projects in the Pacific region, showed the project cost as an outlier. Preliminary and general costs, which include mobilization and insurance, provide an indicator of the risks a contractor assigns to the project. In contracts in the Pacific that were awarded around the same time (in Samoa, Papua New Guinea and Tonga),

⁵ On 31 January 2011 the Regional Director of SPSO approved the additional project scope change that increased the length of main road by 5.0 km and feeder road by 2.0 km.

general costs represented on average 10% of the total contract price. By comparison, the four civil works bids were 28% to 30% higher than the cost estimate. This is indicative of the high risks the market placed on the remote and inaccessible country and hardship of the work site.

5. The final award for the project's main civil works contract was for A\$48.2 million (equivalent to \$50.2 million) on 12 February 2013.⁶ The civil works contract awarded on 12 February 2013 was valued at A\$48.2 million (or \$50.1 million). The funding gap was identified in late 2012 upon completion of the civil works bidding. The original project budget \$34.44 million had indicated \$29.1 million (inclusive of \$3.8 million in contingencies) allocated to civil works. The financing gap for the civil works contract was \$21 million. The World Bank's additional financing provided \$13.97 million and government indicated it would increase its contribution by \$4.64 million from \$1.05 million to \$5.69 million. The overall additional financing amount in March 2015 was \$18.61 to address the original financing gap. Currently, the financing gap for the civil works contract is approximately \$2.4 million. In addition, there are cost overruns of approximately A\$7.55 million (\$5.35 million). The consulting engineers have prepared the assessment taking into account costs to completion such as the actual and potential contract variations, claims, currency fluctuations and extension of time. The cost overruns and the project financing gap needs to be addressed to allow the project to be completed and to ensure the project development objectives are met.

6. The appraised cost estimate for the project's civil works was \$29.5 million. The consulting engineers originally prepared detailed designs and bidding documents and estimated the civil works contract would be valued at \$34.4 million. The final award for the project's main civil works contract was for A\$48.2 million (\$50.2 million).⁷ The analysis of the possible causes of deviation from cost estimation to contract price include (i) \$9.53 million caused by the exchange rate fluctuation of US\$ against A\$ and inflation since cost estimation in 2010; (ii) \$7.46 million were attributed to additional works needed but not envisioned in the original budget at the time of appraisal. The additional works included additional roads of approximately 5 km from Tanea to Buota and the Temaiku loop road; and upgrading of an additional 2 km of feeder roads; and replacement of approximately 7 km of water supply transmission main between Teaoraereke and Betio;⁸ and (iii) \$3.76 million attributed to the civil work general and mobilization costs due to remoteness. The underestimation was due to a lack of historical precedent for a project of such magnitude in Kiribati from which one could draw lessons for estimating costs. The underestimation was primarily due to a lack of historical precedent for a project of such magnitude in Kiribati from which one could draw lessons for estimating costs. Comparisons with recent similar projects in the Pacific region, showed the project cost as an outlier. Preliminary and general costs, which include mobilization and insurance, provide an indicator of the risks a contractor assigns to the project. In contracts in the Pacific that were awarded around the same time (in Samoa, Papua New Guinea and Tonga), general costs represented on average 10% of the total contract price. By comparison, the four civil works bids were 28% to 30% higher than the cost estimate. This is indicative of the high risks the market placed on the remote and inaccessible country and hardship of the work site.

⁶ The bid was denominated 13.00% in A\$, 81.41% in NZ\$ and 5.58% in US\$. The contract was signed on 12 February 2013 and commencement date 1 July 2013. The PCSS created at the time of contract award was for \$7.59 million to align with ADB's allocation of the loan proceeds. The PCSS was later revised to \$5.09 million amended in a minor scope change on 2 May 2015 to reallocate funds to the consulting services as a measure to mitigate potential cost increases for the design and supervision consultant that is 100% funded by ADB.

⁷ The bid was denominated 13% in A\$, 81.41% in NZ\$ and 5.58% in US\$. This is the current contract value as of 24 May 2015. It reflects the contract and time variations to date, currency fluctuations and future price adjustments, and contingencies.

⁸ On 31 January 2011 the Regional Director of SPSO approved the additional project scope change that increased the length of main road by 5.0 km and feeder road by 2.0 km.

7. Furthermore, the isolation of Kiribati made it difficult to estimate how many companies would be interested in bidding for the works, and in the end only four firms submitted bids for the main civil works contract. Bid prices demonstrated that the project's isolated location was neither factored into the original appraisal cost adequately, nor in the project's cost estimate prior to bidding. There was a lack of historical precedent for a project of such magnitude in Kiribati from which one could draw lessons for estimating costs. Comparisons with recent similar projects in the region, identified the project cost as an outlier. Preliminary and general costs, which include mobilization and insurance, provide an indicator of the risks a contractor assigns to the project. In contracts in the Pacific that were awarded around the same time (in Samoa, Papua New Guinea and Tonga), preliminary and general costs represented on average 10% of the total contract price. By comparison, the four KRRP bidders' preliminary and general costs were 28% to 31% of the total costs, indicative of the high risks the market placed on the remote and inaccessible country.

8. While a high standard of technical specification was used during appraisal, higher quantities deemed necessary to sufficiently improve road safety, strengthen environmental protection, and mitigate the risk of delayed future maintenance. The additional quantities included: (i) increased lengths of footpaths and road drainage to improve the pedestrian environment; (ii) more speed humps, curbs, and street lighting—important for the safety of women and children; (iii) a higher standard of pavement to improve durability and reduce future maintenance requirements; (iv) additional drainage in Betio to avoid future road failure problems; (v) extended sections of coastal protection; (vi) replacement of approximately 7 km of water supply transmission main, so as to avoid higher costs—and damage to infrastructure—when water supply system improvements are made in the future; (vii) more extensive improvements to the causeway on either side of the Betio bridge; and, (viii) unexploded ordinance surveys that were required given significant World War II fighting on Betio atoll. These additional quantities were not fully anticipated at appraisal and contributed towards the overall financing gap. Currency fluctuations, inflation in costs of materials, increased oil prices and transportation costs were further contributors to the increased cost.

D. Conclusion

9. The ongoing project is performing well and remains technically, financially and economically viable. The project continues to remain a strong priority of the government to ensure that the works are fully completed. The additional financing will ensure that funds are available for the contractor to physically complete the works. In conclusion the provision of additional financing is warranted.