

RISK ASSESSMENT AND RISK MANAGEMENT PLAN

A. Risk Assessments

1. The program processing team from the Asian Development Bank (ADB) carried out institutional, procurement, and financial assessments of the executing and implementing agencies recommended for the program. The assessment findings are as follows.

Risk Description	Risk Assessment	Mitigation Measures or Risk Management Plan
Governance	Low	Administrative systems and practices well established, including procurement and financial management Separate PMU headed by a program director who is also the managing director of KNNL (the executing agency), and dedicated staff for day-to-day management. PIOs under the executing agency will be dedicated units in the field for project implementation.
Limited capacity of AC-IWRM	Medium–High	Up-front actions completed to define policy, planning, and institutional framework with AC-IWRM Extensive support to be provided by international and national sector experts Initial procurement activities will be supported by consultants from PSCs PSCs will provide procurement support. ADB will provide capacity enhancement support through its regular training programs.
Slow procurement caused by limited financial and approval powers	Medium	Program director is the managing director of KNNL and has approval authority for all procurement of works, goods, and services following recommendation of technical sub-committee. e-Procurement mandatory for all procurements estimated above \$4,000; ADB assessment of e-Procurement for ICB, NCB, and shopping procedures under way Advance procurement and consultant engagement based on agreed procurement plan Implementation support to be provided for pre-project activities
Potential for corruption and low quality of works	Medium	Existing grievance redress mechanism will be enhanced and integrated with the MIS to be established Interface with MIS database to provide links for disclosure of key documentation and other related program information through KNNL website for public viewing Review by visiting ADB missions and senior officials of state government Asset verification to be carried out by internal auditor and recorded in the MIS
Poor time and quality management of contractors	Medium–Low	Practical bid pricing based on market rates; price adjustment mechanism during implementation Procurement of civil works limited to one single large package Goods and services procurements will follow ADB's Procurement Guidelines (2013, as amended from time to time), and will be based on prior approval unless otherwise communicated in accordance with an agreed procurement plan. Sound construction management following ADB standard bid documents (including FIDIC provisions) Mobilization of PSCs to support stringent quality monitoring and management using modern technologies Participation of PIO engineers to monitor construction quality
Limited WUCS participation in project activities	Medium	Sufficient awareness and motivation campaigns with the support of experienced staff and NGOs trained by consultants Initial focus on highly vulnerable areas and demonstration of program quality
Limited application of		Special training programs both by ADB and PSCs will be done at regular

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safeguards by a) KNNL b) WUCSs	Medium High	intervals to improve knowledge and application of safeguard measures by KNNL staff, PIO engineers, and contractors. Extensive information, education, and communication activities will be carried out in the field to improve awareness of WUCS members.
Sustainability of program infrastructure	High	Asset inventory and MIS for infrastructure performance monitoring and maintenance planning will be established. Progressive increase of maintenance fund allocation by SGOK in public infrastructures (ongoing and to continue) Improved technical management of O&M of assets established at field level, with higher transparency and accountability Utilization of available state government and/or Government of India funds for routine maintenance works WUCS capacity building in O&M Increased application of IWRM practices in operation of assets established under the MFF and other schemes
Unavailability of timely fund flow	Medium–Low	SGOK to ensure timely release of project and counterpart funds to KNNL's Personal Deposit Account for transfer to dedicated project bank account. Establishment of dedicated project bank account to ensure timely payments to contractors, suppliers, service providers and implementing agencies. Transfer of approved budgetary allocations to Personal Deposit Account within 15 days of receipt of request for funds
Varying performance in financial and procurement management	Low	KNNL's MIS system to be upgraded to real time-based operational system linked to chief accounts officer of SGOK and PIO offices through Karnataka State Wide Area Network ^a Specially assigned finance and accounts staff for the project in PMU, implementing agencies, and PIO offices Sufficient training of finance and administrative staff by consultants and MIS service provider Advance training on financial management, procurement, and performance monitoring for PMU, implementing agency, and PIO staff
Accounting and audit capacities	Low	SGOK's approved accounting regulations will be followed in addition to maintenance of accounts and records as required by ADB Establishment of MIS for improvement of financial management, to enhance accounting standards and capacities in KNNL, AC-IWRM, and PIO offices Sound internal and external auditing mechanism; the external auditing mechanism will follow the audit standards issued by the Institute of Chartered Accountants of India and the Office of the Comptroller and Auditor General of India Independent firms will be hired to carry out internal and external audits under agreed terms of reference with ADB.
Overall Risk Rating	Medium	

AC-IWRM = Advanced Centre for Integrated Water Resources Management, ADB = Asian Development Bank, FIDIC = Fédération Internationale des Ingénieurs-Conseils (International Federation of Consulting Engineers), ICB = international competitive bidding, IWRM = integrated water resources management, KNNL = Karnataka Neeravari Nigam Limited, MFF = multitranches financing facility, MIS = management information system, NCB = national competitive bidding, NGO = nongovernment organization, O&M = operation and maintenance, PIO = project implementation office, PMU = program management unit, PSC = program support consultant, WUCS = water users cooperative society.

^a PIO – project implementation offices (these will be offices of KNNL which are based in the subproject area)

Source: Project preparatory technical assistance consultants.

B. Risk Management Plan

1. Program Management Unit

2. Karnataka Neeravari Nigam Limited (KNNL) is a well established and adequately staffed institution with experience in procurement, financial management, disbursement, technical support, and program implementation. It has the capacity to implement large infrastructure development programs, as evidenced in 2008 with a single contract award for \$200 million.¹

3. Since this is the first externally financed project to be implemented by KNNL, the implementing arrangements for the program include a program management unit (PMU) to be established in KNNL, which will be adequately staffed by KNNL and program support consultants (PSCs). The managing director of KNNL will be the program director. For financial management, an additional deputy finance manager and accounts officer, with two accounts assistants (from KNNL, other departments or contracted), will be retained as full-time staff. PSCs and ADB (through the India Resident Mission) will provide capacity building support to PMU and implementing agency staff on ADB's procurement and financial management procedures.

2. Advanced Centre for Integrated Water Resources Management

4. The Advanced Centre for Integrated Water Resources Management (AC-IWRM), established in 2012, will be the implementing agency for output 1. It will provide expert advice and guidance to the state on promoting IWRM practices. International and national specialists will provide support to the AC-IWRM through the program. Procurement activities are minimal—direct engagement of IWRM consultants (individual international and national consultants) and goods (office equipment, etc.) using shopping. The PSC procurement specialist and regular ADB training programs will provide the AC-IWRM sufficient training and capacity building on procurement.

C. Summary Risk Assessment and Management Plan

5. Procurement risks are medium and limited to capacity building in the application of ADB's Procurement Guidelines (2013, as amended from time to time), with e-procurement the default mode of procurement for all contracts valued above \$4,000 equivalent by the state. The e-procurement system has been instrumental in substantially increasing bidder participation, decreasing bid premium, and sharply reducing the time required for the bidding cycle. ADB has reviewed the e-procurement system for compliance with requirements and has provided its approval and will accordingly adopt under the program (subject to findings).²

6. The financial management system will be upgraded across the executing and implementing agencies to a real time-based system, which will enhance monitoring and audit processes. Fund flow arrangements are demarcated to provide clarity in the budget allocations provided by the state government for the program each fiscal year. All payments, barring small payments for community works and petty expenses, will be done through electronic bank transfers for contractors and service providers. All accounts and contract processes are to be reviewed by internal and external auditors, in accordance with the agreed terms of reference with KNNL.

¹ The three works of upper Bhadra project entrusted on a turn key contract basis were invited for tendering on 22 December 2006 and works were awarded by October 2008.

² More details are in the eProcurement Assessment Report (accessible from the list of linked documents in Appendix 2 of the RRP).