



Draft Design and Monitoring Framework

Project Number: 37049
August 2008

Indonesia: Integrated Citarum Water Resources Management Investment Program

A design and monitoring framework is an active document, progressively updated and revised as necessary, particularly following any changes in project design and implementation. In accordance with ADB's public communications policy (2005), it is disclosed before appraisal of the project or program. This draft framework may change during processing of the project or program, and the revised version will be disclosed as an appendix to the report and recommendation of the President.

Asian Development Bank

**INTEGRATED CITARUM WATER RESOURCE MANAGEMENT INVESTMENT PROGRAM
PROJECT 1
DESIGN AND MONITORING FRAMEWORK FOR LOAN FUNDED SUB COMPONENTS**

DESIGN SUMMARY		PERFORMANCE	DATA SOURCES	ASSUMPTIONS AND RISKS
IMPACT				
Improved and more integrated water resource management in place, with government and the community working in partnership towards a shared vision (to be fully achieved if all the “roadmap” interventions are completed successfully)		<ul style="list-style-type: none"> To have appropriate and effective institutional arrangements in place for integrated water resource management in the basin <i>[Note that assistance to put those arrangements in place will be provided through an ADB grant to fund a technical assistance that will run in parallel with Project 1]</i> To have effective partnerships between government agencies at national, provincial and district level in place to implement planned water and land management activities to be funded under the MFF loan To have comprehensive and accessible databases in place to provide decision-makers, water managers and technical experts with the best information to undertake their responsibilities for water resource management 	<ul style="list-style-type: none"> Legislation and policy documents released by GOI Minutes of meetings of the Water Resources Council and other key organisations in the management of the water resource of the CRB Progress and final reports of individual projects funded under the loan Survey of communities meant to benefit from activities funded under the loan Published information on available databases related to water, land and related resources 	<ul style="list-style-type: none"> Institutional arrangements to be put in place under new legislation provides a robust framework for IWRM and clearly separates resource management and development/operational responsibilities The government agencies at national, provincial and district level have the resolve to involve the community meaningfully in all stages of water resource planning and management The community is willing to participate effectively in all stages of water resource planning and management Agencies are truly willing to share information for the benefit of all valid users
OUTCOMES				
1	Improved reliability of water supply to Jakarta and irrigation areas supplied by West Tarum Canal	<ul style="list-style-type: none"> Bulk water supplied to Jakarta at an agreed rate (to be decided at beginning of design) Bulk water supplied to West Tarum Canal Irrigation Area at an agreed rate (to be decided at beginning of design) 	<ul style="list-style-type: none"> Flow records held by PJT II 	<ul style="list-style-type: none"> Construction of WTC rehabilitation works is carried out according to plans and specifications
2	Improved water use efficiency and increased yields for rice irrigation in three districts in the Citarum River Basin	<ul style="list-style-type: none"> Water use for rice production in project areas reduced by 45% Rice yields increased by 45% in project areas 	<ul style="list-style-type: none"> Production records held by Department of Agriculture 	<ul style="list-style-type: none"> Continued support by GOI for adoption of SRI Continued support by farmers for adoption of SRI SRI roll-out is carried out effectively

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3	Significant increase in the number of community- and NGO-driven initiatives for improved water and catchment management in the Citarum River Basin	<ul style="list-style-type: none"> The number of successful community- and NGO-driven initiatives for improved water and catchment management increased 	<ul style="list-style-type: none"> Project final reports Post-project survey 	<ul style="list-style-type: none"> GOI continues to support the “bottom-up” approach to implementing initiatives for improved water and catchment management Appropriate funding mechanisms can be put in place to allow loan funds to flow to qualifying communities to implement their action plans A sufficient number of communities are willing to participate
4	Improved water quality in the waterways and reservoirs of the Citarum River Basin	<ul style="list-style-type: none"> Average values for key water quality parameters at nominated points in the basin reduced to acceptable levels (compared to Indonesian WQ standards), or at least 50% of present levels, if that cannot be achieved. 	<ul style="list-style-type: none"> Water quality monitoring records routinely collected 	<ul style="list-style-type: none"> A good water quantity / quality model for the basin can be developed Actions that have the greatest impact in improving water quality can be identified The actions identified for amelioration of degraded water quality can be successfully implemented

DESIGN SUMMARY		PERFORMANCE	DATA SOURCES	ASSUMPTIONS AND RISKS
OUTPUTS				
Sub-Project 3.1: Rehabilitation of West Tarum Canal				
	Detailed engineering design	<ul style="list-style-type: none"> Detailed engineering design successfully completed, meeting required standards 	<ul style="list-style-type: none"> Final DED report and drawings 	<ul style="list-style-type: none"> Consultants undertake the design competently
	Construction contractors selected by tendering	<ul style="list-style-type: none"> Fair and equitable selection process and successful contractors selected on merit 	<ul style="list-style-type: none"> Tendering process records 	<ul style="list-style-type: none"> There is the intention of GOI to make the selection process fair and equitable
	Construction of improvement works	<ul style="list-style-type: none"> West Tarum Canal restored to its design capacity Water quality improved through exclusion of inflows of polluted water from crossing stream through construction of siphons Water control structures restored to full operational status Environmental impacts minimised, and in particular through proper disposal of dredged material 	<ul style="list-style-type: none"> Project completion report(s) Post-completion surveys of water quality parameters along the canal Measurement of canal flow rates 	<ul style="list-style-type: none"> Construction of improvement works is carried out on time, within budget and to specified quality standards All necessary environmental safeguards are identified and implemented
	Associated activities	<ul style="list-style-type: none"> Social disruption for those living along the canal minimised, and in particular access to water supply and sanitation maintained and improved if necessary Capacity of PJT II and its staff strengthened to a level where WTC can be effectively and efficiently maintained 	<ul style="list-style-type: none"> Post-completion survey of local communities 	<ul style="list-style-type: none"> Social safeguards are adequate and appropriate to local communities

	Project Management	<ul style="list-style-type: none"> • Project completed on time and on budget to the agreed standard of quality 	<ul style="list-style-type: none"> • Project completion report(s) 	<ul style="list-style-type: none"> • Consultants and local counterparts undertake the management of the project competently
<p>Main Activities:</p> <ul style="list-style-type: none"> • Procurement of DED/Construction Supervision Consultant • Detailed engineering design • Prequalification of contractors • Tendering, selection of contractors and contract negotiation • Mobilization, pre-construction survey and setting out • Construction supervision • Removal and disposal of sediments from the canal bed, strengthening of embankments • Separation of Cikarang and Bekasi river flows from the main canal through construction of by-passes (inverted siphons) • Capacity building of PJT II for improved management and operation of WTC • Implementation of stakeholder-driven selection process of water supply and sanitation options for riparian communities along West Tarum Canal 				<p>Financed by MFF Base Cost: USD 53.26 million</p>

DESIGN SUMMARY	PERFORMANCE	DATA SOURCES	ASSUMPTIONS AND RISKS
OUTPUTS			
Sub-Project 1.3: Detailed Engineering Design for Upgrading of Bandung Water Source and Other Uses by Inter-Basin Transfer			
Detailed engineering design	<ul style="list-style-type: none"> Detailed engineering design successfully completed, meeting required standards for: <ul style="list-style-type: none"> Construction of Cibutarua Weir Construction of Santosa Reservoir on the Cilaki River Construction of a 4.5 km diversion tunnel Construction of a reservoir upstream of Tamiang Cangkir Weir, needed to compensate irrigation downstream of Cibutarua Weir 	<ul style="list-style-type: none"> Final DED report and drawings 	<ul style="list-style-type: none"> Consultants undertake the design competently
Construction contractors selected by tendering	<ul style="list-style-type: none"> Fair and equitable selection process and successful contractors selected on merit 	<ul style="list-style-type: none"> Tendering process records 	<ul style="list-style-type: none"> There is the intention of GOI to make the selection process fair and equitable
Associated activities	<ul style="list-style-type: none"> Social disruption for those living along the targeted areas minimised, and in particular access to water supply and sanitation maintained and improved if necessary Environmental impacts minimised, and in particular through proper disposal of dredged material Development of an inter-district agreement regarding cost allocation and ongoing financial arrangements for diverted water 	<ul style="list-style-type: none"> Post-completion survey of local communities Inter-district agreement 	<ul style="list-style-type: none"> Social safeguards are adequate and appropriate to local communities All necessary environmental safeguards are identified and implemented The “donor” district is agreeable to the inter-basin transfer at a fair and reasonable cost
Project Management	<ul style="list-style-type: none"> Project completed on time and on budget to the agreed standard of quality 	<ul style="list-style-type: none"> Project completion report(s) 	<ul style="list-style-type: none"> Consultants and local counterparts undertake the management of the project competently
Main Activities: <ul style="list-style-type: none"> Procurement of DED/Construction Supervision Consultant Detailed engineering design Prequalification of contractors Development of an inter-district agreement regarding cost allocation and ongoing financial arrangements for diverted water 			Financed by MFF Base Cost: USD 4.34 million

DESIGN SUMMARY	PERFORMANCE	DATA SOURCES	ASSUMPTIONS AND RISKS
OUTPUTS			
Sub-Project 3.2: Improved Soil and Water Management			
Identification and appraisal of target areas	<ul style="list-style-type: none"> Appropriate target irrigation areas identified, according to demand-responsive criteria, and appraised accurately 	<ul style="list-style-type: none"> Appraisal reports 	<ul style="list-style-type: none"> Sufficient irrigators are willing to participate in the SRI roll-out
Capacity building	<ul style="list-style-type: none"> Capacity of trainers and farmers to implement SRI raised to the appropriate level through effective training 	<ul style="list-style-type: none"> Reports on training Surveys of people trained 	<ul style="list-style-type: none"> Enough potential trainers are available and willing to participate Farmers are enthusiastic enough to undertake training and apply the lesson learned
Progressive implementation of SRI	<ul style="list-style-type: none"> Program for progressive implementation adhered to Procurement and distribution of supplies undertaken according to agreed timetable 	<ul style="list-style-type: none"> Progress reports Project completion report 	<ul style="list-style-type: none"> Continued support by GOI for adoption of SRI Continued support by farmers for adoption of SRI Adequate supply of organic fertilizer and other supplies
Management, monitoring and reporting	<ul style="list-style-type: none"> Timely monitoring and reporting carried out 	<ul style="list-style-type: none"> Project progress reports 	<ul style="list-style-type: none"> Sufficient numbers of local project managers are available Project management is effectively undertaken
Main Activities: <ul style="list-style-type: none"> Participatory Rural Appraisal for 3 districts and 16 sub-districts Training of Trainers for 150 groups of farmers Training for 3,000 farmers Implementation of SRI in 3,000 Ha Farmer empowerment for 150 groups of farmers Production of organic fertilizer – distribution of 150 units Acquisition and distribution of livestock (450 cows) Acquisition and distribution of 30,300 kg of selected seeds Monitoring and reporting 			Financed by MFF Base Cost: USD 4.75 million

DESIGN SUMMARY	PERFORMANCE	DATA SOURCES	ASSUMPTIONS AND RISKS	
OUTPUTS				
Sub-Project 3.3: Support for Community- and NGO-Driven Initiatives for Improved Water Supply and Sanitation				
	Capacity building and planning	<ul style="list-style-type: none"> Capacity of participating communities (and particularly the community implementation teams) enhanced to a level that enables effective development and implementation of action plans Action plans developed in participating communities that will lead to improved water and catchment management and can be implemented locally Appropriate financing mechanism that will enable participating communities to have access to sufficient funds for implementation of their action plans 	<ul style="list-style-type: none"> Project reports Survey of participating communities Feedback from trainers 	<ul style="list-style-type: none"> Continued support by GOI for the community-based approach Continued support by people in local communities Appropriate financing mechanism can be developed and agreed to by GOI
	Implementation and ongoing support	<ul style="list-style-type: none"> Action plans implemented successfully within agreed time and budget 	<ul style="list-style-type: none"> Project completion reports 	<ul style="list-style-type: none"> Continued support by people in local communities and contribution of labour and other in-kind inputs Funding is made available in a timely manner and is used wisely in accordance with the agreed action plans

	Management, monitoring and reporting	<ul style="list-style-type: none"> Project completed on time and on budget to the agreed standard of quality 	<ul style="list-style-type: none"> Project completion reports 	<ul style="list-style-type: none"> Sufficient numbers of local project managers are available Project management is effectively undertaken
<p>Main Activities:</p> <ul style="list-style-type: none"> Identification of potential NGOs who can facilitate community participation in all project cycles Socialization and awareness-raising, assessment of community needs Selection of communities based on socioeconomic and health criteria and other indicators Confirmation of community commitment and willingness to participate Formation of community implementation teams Community problem identification and analysis of technical options Provision of skills training based on communities' priorities, assets and needs to generate income and employment opportunities Provision of access to capital and markets to directly implement skills acquired Formulation of community action plans and proposals Disbursement of funds and construction of approved schemes O&M of completed schemes, and socialization and training support on hygiene behavioural change Facilitate the implementation of identified health, water and sanitation related projects/programs 				<p>Financed by MFF Base Cost: USD 5.06 million</p>

DESIGN SUMMARY	PERFORMANCE	DATA SOURCES	ASSUMPTIONS AND RISKS	
OUTPUTS				
Sub-Project 4.1: Development and Implementation of a Basin River Quality Improvement Strategy and Action Plans				
	Capacity building and planning	<ul style="list-style-type: none"> Environmental agencies at all levels, universities and research organizations have the capacity to undertake water quality management activities within their mandate Community awareness and understanding of water quality issues, and how they can contribute to improved water quality, is raised Multi-agency/stakeholder planning and coordination system for water quality management in place under the Water Resources Council 	<ul style="list-style-type: none"> GOI publications related to water quality records (several agencies) Post-project survey of organisations and the community Records (including minutes of meetings) held by the Water Resources Council 	<ul style="list-style-type: none"> Organisations with the mandate to implement the action plans undertake their responsibilities effectively and coordinate amongst each other Local project managers are made available to manage the various activities of the project Project management is effectively undertaken
	River Water Quality Improvement Strategy and action plans	<ul style="list-style-type: none"> Basin-wide River Quality Improvement Strategy developed, promulgated and being effectively implemented through action plans Water quality management action plans - combining cooperation, regulatory and incentive instruments – in place and being implemented effectively 	<ul style="list-style-type: none"> Action plans at District level Project completion report 	<ul style="list-style-type: none"> Responsibilities for implementing the action plans are clearly assigned, and sufficient GOI funds are made available Responsibilities for implementing the RWQIS are clearly assigned Organisations with the mandate to implement the RWQIS undertake their responsibilities effectively and coordinate amongst each other
	Policy development	<ul style="list-style-type: none"> Key new policies and procedures for water quality management in place and being implemented effectively 	<ul style="list-style-type: none"> GOI policy documents Records (including minutes of meetings) held by the Water Resources Council 	<ul style="list-style-type: none"> Government agencies at all levels will adopt the new policies and procedures

	Data management	<ul style="list-style-type: none"> • A water quality and pollution source database management system in place and being effectively operated and maintained • An Internet-based WQM information system to link the district environmental agencies with other key agencies • Improved water quality monitoring system in place and being effectively operated and maintained 	<ul style="list-style-type: none"> • Project completion report 	<ul style="list-style-type: none"> • Agencies responsible for water quality monitoring and management will effectively operate and maintain the data systems • Organisations have the desire to improve their capacity for water quality management
	<p>Main Activities:</p> <ul style="list-style-type: none"> • Policies and procedures for water quality management • Improvements to water quality monitoring and data management • Strengthening of organizational capacity • Preparation of basin-wide River Water Quality Improvement Strategy (RWQIS) • Preparation and implementation of area-based pollution sources management action plans 			<p>Financed by MFF Base Cost: USD 3.55 million</p>

DESIGN SUMMARY	PERFORMANCE	DATA SOURCES	ASSUMPTIONS AND RISKS
OUTPUTS			
Sub-Project 1.1: Roadmap Management (by the Roadmap Coordination Management Unit)			
Liaison with executing agencies and other relevant stakeholders	<ul style="list-style-type: none"> Executing agencies and other relevant stakeholders well informed about program progress Executing agencies and other relevant stakeholders participating effectively in setting the direction of the program and its projects 	<ul style="list-style-type: none"> Minutes of meetings and workshops with executing agencies and other relevant stakeholders 	<ul style="list-style-type: none"> GOI continues to support the execution of the projects and facilitates stakeholder support for their preparation
Coordination among component projects	<ul style="list-style-type: none"> Projects well coordinated, with opportunities for information exchange maximised, and conflicts among projects minimised 	<ul style="list-style-type: none"> Program status reports Minutes of periodical coordination workshops 	<ul style="list-style-type: none"> There is a willingness by those involved in each of the project under this tranche to cooperate and share information
Identification of the need for and coordination of implementation of minor studies (up to \$400,000 total) to improve knowledge of water issues in CRB	<ul style="list-style-type: none"> Priority information needs identified, and minor studies undertaken on time and within budget that redress those needs 	<ul style="list-style-type: none"> Final reports of studies 	<ul style="list-style-type: none"> Stakeholders provide sufficient information to identify priority knowledge gaps Local organisations can be found to undertake the studies effectively
Information system and communication	<ul style="list-style-type: none"> Information exchange among the implementing agencies, and other basin stakeholders, including communities, civil society organizations (CSOs) and the private sector, will improve performance overall, and minimise wasted effort caused by overlaps 	<ul style="list-style-type: none"> Reports produced 	<ul style="list-style-type: none"> Stakeholder willing to share data
Monitoring and reporting of project performance, including financial management	<ul style="list-style-type: none"> All monitoring and reporting undertaken in accordance with agreed procedures 	<ul style="list-style-type: none"> Reports produced 	<ul style="list-style-type: none"> Monitoring and reporting procedures are agreed in advance and adhered to

Main Activities:

- Coordination among component projects (planning, policy coordination, integrated AWP approval, mid term development plans)
- Support the RCMU and its secretariat operation to National Water Resources Steering Committee
- Funding allocations management
- Identification of the need for and coordination of implementation of minor studies (up to \$400,000 total) to improve knowledge of water issues in CRB (3 to 6 studies)
- Monitoring and reporting of Roadmap implementation performance
- Coordination and synergetic planning between National and Regional Governments, CSOs, communities and private sector on IWRM initiatives
- Roadmap Data and Information System development and management
- Identification and development of private sector investment opportunities
- Roadmap Media communication plan, information dissemination and implementation

Financed by MFF**Base Cost: USD 3.23 million**

Sub-Project 1.2: Program Management (by the Program Coordination Management Unit)

	Coordination and planning	<ul style="list-style-type: none"> Projects well coordinated, with opportunities for information exchange maximised, and conflicts among projects minimised 	<ul style="list-style-type: none"> Program status reports Minutes of periodical coordination workshops 	<ul style="list-style-type: none"> There is a willingness by those involved in each of the project under this tranche to cooperate and share information
	Monitoring and reporting of project performance, including financial management	<ul style="list-style-type: none"> All monitoring and reporting undertaken in accordance with agreed procedures 	<ul style="list-style-type: none"> Reports produced 	<ul style="list-style-type: none"> Monitoring and reporting procedures are agreed in advance and adhered to
	Coordination of preparation for Project 2	<ul style="list-style-type: none"> Procedures for preparation of PFR for Project 2 followed and documentation prepared in accordance with ADB standards 	<ul style="list-style-type: none"> Documentation submitted for approval of Project 2 	<ul style="list-style-type: none"> Consultants, local counterparts and GOI officials work together effective to prepare the documentation ADB requirements are made clear and do not change
	Social and environment safeguards oversight	<ul style="list-style-type: none"> Social disruption for those living in project areas minimised Environmental impacts minimised, and in particular through proper disposal of dredged material 	<ul style="list-style-type: none"> Post-completion survey of local communities 	<ul style="list-style-type: none"> Social safeguards are adequate and appropriate to local communities All necessary environmental safeguards are identified and implemented
<p>Main Activities:</p> <ul style="list-style-type: none"> Coordination and planning among Project 1 subcomponents (integrated short and long term AWP) Development of Data and Information Systems for monitoring and data exchange Monitoring and evaluation of subcomponents (Project 1) performance, including financial management; Social and environment safeguards oversight Media communication plan, information dissemination and implementation Quality Control and Quality Assurance Systems 				<p>Financed by MFF Base Cost: USD 3.36 million</p>