



Draft Design and Monitoring Framework

Project Number: INO 35183
November 2005

INO: Sustainable Aquaculture Development for Food Security and Poverty Reduction Project

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

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>Impact Reduced poverty and increased food security in seven rural districts.</p>	<ul style="list-style-type: none"> • Food and non-food expenditures and fish consumption (about Rp155,000 in 2004) increased by 20% by Year 6. • Incomes of 20,000 poor households will increase to above the poverty line. 	<ul style="list-style-type: none"> • Survey of poverty indicators including income and nutrition levels. • Stakeholder workshops • BPS expenditure for consumption statistics • BPS national socioeconomic survey statistics 	<ul style="list-style-type: none"> • The Government policies and strategies remain consistent in support rural areas and poverty reduction.
<p>Outcome Increased fish production through sustainable aquaculture development.</p>	<ul style="list-style-type: none"> • Production, productivity, and range of products for all types of aquaculture operations increased from 2005 levels by at least 30% by Year 6. • Income (about Rp320,000 in 2004) of fish farmer households and communities increased by 20% by Year 6. • About 30,000 jobs created by the Project by Year 6. 	<ul style="list-style-type: none"> • Production and marketing surveys and assessment • Project benefit monitoring and evaluation (PBME) survey • Socioeconomic and other human development indicator surveys and assessments • <i>Dinas Perikanan</i> district and village statistics 	<ul style="list-style-type: none"> • Climatic conditions are normal and there is no occurrence of widespread fish disease. • The macroeconomic environment and market conditions remain stable.
<p>Outputs Component 1: Aquaculture Production Enhancement</p> <p>1.1 Communities organized for community-managed aquaculture enterprises, culture-based fisheries and livelihood. Social infrastructure and services provided to target communities and women beneficiaries.</p>	<ul style="list-style-type: none"> • About 70% of target poor men and women beneficiaries (100,000 persons) organized, trained, and participating in community-managed aquaculture enterprises. • Total of 50% of women including 20% of poor women trained and engaged in profitable micro-enterprise activities. • Total of 50 water supply facilities provided, resulting in 30% increase of households with access to potable water supply by Year 6. • Total of 50 km of access roads constructed or improved by Year 6. • Total of 5,000 community members participated in 	<ul style="list-style-type: none"> • PBME survey • <i>Dinas Perikanan</i> district and village statistics • BPS provincial and district statistics • PIU annual work plans and accomplishments • Site survey records 	<ul style="list-style-type: none"> • Communities are willing to be organized and trained. • Ownership of facilities and maintenance responsibilities are agreed upon and allocated among concerned communities.

<p>1.2 Various aquaculture production systems rehabilitated and improved.</p> <p>1.3 Aquaculture production of freshwater, brackish-water, and marine fish and other aquatic species increased. Culture-based fisheries developed.</p>	<p>gender sensitivity and shared training.</p> <ul style="list-style-type: none"> • Total of 600 ha of freshwater fishponds rehabilitated and 1,500 fish cages newly constructed by Year 6. • Total of 50 fish hatcheries and 300 small-scale hatcheries set up by Year 6. • Total of 1,500 ha of brackish-water fishponds improved by Year 6. • Total of 1,500 mari-culture cages or seaweed rafts established by Year 6. <ul style="list-style-type: none"> • Production of freshwater fish increased by about 30% by Year 6. • Production of brackish-water fish and shrimp increased by about 30% by Year 6. • Production of mari-culture products increased by about 30% by Year 6. • Exports of ornamental fish increased by 50,000 pieces by Year 6. • A total of 25,000 fish farmers trained on aquaculture production enhancement by Year 6. • Total of 25 demonstration models or a total of about 500 units, covering various types of aquaculture production systems and processing facilities, established by Year 6. • Total of 10 effectively managed stock enhancement sites in Buton, Kapuas Hulu and OKI established by Year 6. 		<ul style="list-style-type: none"> • Accessibility to production areas are improved. <ul style="list-style-type: none"> • Appropriate fish culture techniques are widely accepted and applied by fish farmers. • No major disease outbreaks occur. • Environmental policies and regulations are strictly implemented. • Political and policy environment is conducive to increased private investments. • Local governments are willing to provide necessary land and other support for establishment of demonstration models. • Local government, capture fishers, and the local communities agree to cooperate and protect the stock enhancement sites.
<p>Component 2: Aquaculture Support Services</p> <p>2.1. Extension services effectively provided to each target group.</p>	<ul style="list-style-type: none"> • Some 1,500 community groups (<i>kelompok</i>) served by extension workers. • About 50% (about 900) of women's groups (about 1,800 groups) served by 	<ul style="list-style-type: none"> • PBME survey • PIU annual workplans and accomplishments • Site survey records • Market survey • Household survey data 	<p>Incentives for producing better quality products are sustained.</p>

<p>2.2. Financial capacity of target beneficiaries improved.</p> <p>2.3. Fish post-harvest and processing facilities and farmer-capability improved.</p> <p>2.4. Markets for aquaculture products expanded and promotion and distribution of aquaculture products improved.</p> <p>2.5. Fish Health and Environmental management in support of aquaculture production improved.</p> <p>2.6. Effective applied research conducted.</p>	<p>extension workers.</p> <ul style="list-style-type: none"> • At least 300 fisheries extension activities conducted in all Project sites by Year 6. • At least 50% of Project beneficiaries assisted in gaining access to various financing schemes. • Fish post-harvest and economic losses reduced by 30%. • Value of cultured fish and other aquatic products increased by 20%. • Sales of cultured fish increased by about 30% by Year 6. • Market information, including price information, for fish and other cultured commodities effectively disseminated to target beneficiaries. • Water quality in aquaculture production areas improved in all Project districts. • Water quality and fish disease laboratories established and functional at Project sites. • A total 700 ha of mangrove are reforested by Year 6. • Silvofishery practices adopted by participating fish farmers in Langkat, Karawang, and OKI. • Applied researches in aquaculture (e.g., broodstock development, seed production, and feed development), ecological assessment studies and other special studies conducted by suitable research and academic institutions. 	<ul style="list-style-type: none"> • <i>Dinas Perikanan</i> district and village statistics • Project environmental monitoring through PBME survey • Reports of formal and informal financial institutions • Research reports 	<ul style="list-style-type: none"> • Fish/shrimp quality control regulations are well-enforced. • Quality of water supply is improved. • Local universities and other national and regional research institutions are interested to collaborate with the Project in the conduct of aquaculture research and special studies.
<p>Component 3: Institutional Strengthening and Project Management</p>			

<p>3.1. Capacity of DGA, district fisheries services (DFS), and other cooperating government agencies strengthened to provide adequate support to the sector.</p>	<ul style="list-style-type: none"> • Effectiveness of DGA and DFS in coordinating, monitoring, supporting and administering the sector improved. • Total of 45 technical fisheries personnel trained in aquaculture, environment, and related fields. • Total of 70 extension officers (community-based and DFS staff) provided with training and transport equipment • Five aquaculture technical, centers upgraded, renovated, or newly established. 	<ul style="list-style-type: none"> • Independent assessment of the performance of DGA and the district fisheries services by the private sector, NGOs, and fish farmers' associations • Number of tests conducted by water quality and fish health laboratories and filed stations • PMO and PIU records and reports 	<ul style="list-style-type: none"> • Government policy on the role of DGA in aquaculture development is well-defined and its mandate strengthened. • Trained government staff remains in service and are placed in positions where their expertise is used effectively.
<p>3.2. Policies and regulations for aquaculture and related activities strengthened</p>	<ul style="list-style-type: none"> • Policies and regulations related to sustainable aquaculture, environmental management, license and user fees, and economic rent drafted by DGA, concerned district fisheries services and other responsible parties. 	<ul style="list-style-type: none"> • DGA and DFS records • District Government records • PMO and PIU progress reports 	<ul style="list-style-type: none"> • Stakeholders are fully involved in the formulation of aquaculture policies and regulations.
<p>3.3 Aquaculture information organized and regularly disseminated to end-users.</p>	<ul style="list-style-type: none"> • Computer-based AIS developed and installed at DGA and linked to the participating districts and to concerned offices. • Aquaculture-related information materials produced and distributed. • Up to date and consistent information presented in published materials. 	<ul style="list-style-type: none"> • PMO progress reports • PIU quarterly progress reports • DGA/DFS statistics • DGA/DFS annual reports • PMO and PIU quarterly progress reports 	<ul style="list-style-type: none"> • Concerned central and local officials and technical personnel cooperate to supply DGA with local aquaculture data on a timely basis.
<p>3.4. Project activities and interventions implemented in a timely and efficient manner.</p>	<ul style="list-style-type: none"> • PMO and PIUs established in DGA and 7 Project districts. • PMO/PIUs adequately staffed and equipped with necessary facilities. • Actual annual Project implementation achievements consistent with predetermined or planned implementation targets for each year. • Funds budgeted for Project disbursed and utilized timely. 	<ul style="list-style-type: none"> • PMO and PIU quarterly progress reports • PMO annual review of Project • Mid-term Project review 	<ul style="list-style-type: none"> • Government counterpart funds and loan funds channeled through the national treasury are disbursed on a timely basis. • Project beneficiaries are able to provide counterpart funding, mainly in the form of labor. • Loan and counterpart funds are actually budgeted and disbursed by Government for investment in planned interventions throughout project implementation.

Activities	Inputs
<p>1. Aquaculture Production Enhancement</p> <p>1.1 Social Preparation and Community Empowerment</p> <ul style="list-style-type: none"> • Mobilization and organization of participating communities. • Training of communities and women and men on various aspects of aquaculture production and management, and family/community matters • Construction of community water supply facilities and access road <p>1.2 Fish Production Enhancement</p> <ul style="list-style-type: none"> • Training of fish farmers on improved aquaculture production and management • Establishment of demonstration models for various aquaculture technologies and species • Rehabilitation/improvement of freshwater and brackishwater fishponds • Establishment of mariculture cages and seaweed rafts • Establishment of small-scale hatcheries and nurseries <p>1.3 Community-based Culture-based Fisheries</p> <ul style="list-style-type: none"> • Identification and establishment of fish species and stock enhancement sites • Conduct of fish restocking activities <p>2. Aquaculture Support Services</p> <p>2.1 Extension Service Support and Facilitating Credit Access</p> <ul style="list-style-type: none"> • Hiring and training of community-based extension workers (CEWs) • Conduct of extension services to support aquaculture production • Improving creditworthiness of organized fish farmer groups • Training of fish farmers and women on financial/credit management • Provision of production inputs assistance to poor fishers and fish farmers <p>2.2. Post-harvest Support</p> <ul style="list-style-type: none"> • Establishment of fish post-harvest and processing facilities • Training of fish farmers and women on post-harvest handling and others • Conduct of regular market development and promotion activities • Conduct of fish consumption campaigns and market information dissemination <p>2.3. Fish Health and Environmental Management and Research Support</p> <ul style="list-style-type: none"> • Establishment or upgrading of water quality and fish disease laboratories • Regular monitoring of water quality and conduct of fish disease control • Reforestation of mangrove areas • Conduct various applied research <p>3. Institutional Strengthening and Project Management Support</p> <p>3.1. Capacity Building</p> <ul style="list-style-type: none"> • Training of technical staff of DGA, DFS and other cooperating government agencies in various areas of aquaculture, environment, and related fields • Training of CEWS and DFS staff and provision of extension equipment • Upgrading, renovation, or establishment of aquaculture technical centers • Conduct of workshops and seminars on inter-agency cooperation • Conduct of inter-agency policy dialogues and consultations • Identifying research needs in aquaculture and related fields • Establishment and operation of Aquaculture Information System <p>3.2. Project Management Support</p> <ul style="list-style-type: none"> • Establishment of PMO at the DGA and PIUs in seven Project districts • Staffing of PMO and PIUs and provision of equipment and vehicles • Coordinating and implementing Project activities • Monitoring the use of funds for each Project component in each Project district 	<ul style="list-style-type: none"> • Aquaculture Production enhancement: \$25.8 million • Aquaculture Support Services: \$7.5 million • Institutional Strengthening and Project Management: \$12.0 million • Physical and price contingencies, \$ 7.0 million • LIBOR-based OCR loan: \$10 million • ADF loan: \$30 million • Government counterpart funds: \$11.9 million • Community counterpart funds: \$3.4 million • International consultants: 62 person-month • Domestic consultants: 555 person-month