Annex 1.

Project Design Matrix for the Integrated Sediment-Related Disaster Management Project for Volcanic Areas (ISDM)

Project name : The Integrated Sediment-Related Disaster Management Project for Volcanic Areas | Duration : 5 Years from April 1, 2001 | Version 1.30

Project Area : Four Model Project Areas mentioned below | Target group : Residents in the Volcanic Areas | Date: July 27, 2001

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Super Goal Damage by volcanic sediment-related disasters to human lives, assets and environment in volcanic areas in Indonesia is reduced.			
Overall Goal Integrated sediment-related disaster mitigation measures are implemented in hazardous areas.	1) No. of the projects implemented according to the model established in the model area 2) Variety of disaster mitigation measures participated by trainees / counterparts. 3) No./status of disaster prevention committees and voluntary evacuation drills by the villagers and opinions of residents	Report from Ministry of Settlement and Regional Infrastructure (MSRI) Report from MSRI The results of social survey, questionnaire, site inspection	Government policy on disaster mitigation measures does not change drastically.
Project Purpose Engineers involved in disaster mitigation and local residents become able to plan and implement disaster mitigation measures to reduce the impacts of sediment-related disasters on villages in volcanic areas	1) Technical guidelines for integrated sediment-related disaster mitigation measures are established and disseminated 2) No. of the trainees assigned to the disaster management project or related section 3) Status of peoples' awareness on disaster mitigation in model areas	Report from MSRI Report from MSRI The results of social survey, questionnaire, site inspection	Budgets for disaster mitigation projects allocated properly.
Outputs 1 Planning and implementation methodologies of sediment-related disaster mitigation measures are established through the cooperation between engineers on disaster mitigation and local residents . (Establish integrated sediment-related disaster management model)	1) Status of utilising hazard maps 2) Status of utilising disaster prevention and evacuation criteria 3) Comparison of existing sediment-related disaster mitigation works and integrated disaster mitigation from the view of cost-effectiveness and cost-benefit 4) Status of damage and robberies of facilities and materials of sediment-related disaster mitigation works 5) No. of unharmed people, properties and regions. 6) Results and No. of public hearings related to model works in model areas	Report from the Project Report from the Project Reference materials of MSRI, STC, and the project The results of site inspection The results of survey, questionnaire, site inspection Report from the Project and the model sites	Trained sediment-related disaster mitigation works engineers keep working.
2 Methodology to establish local organisations and systems for promoting disaster mitigation measures are established. (Establish local organisations and systems for disaster	1) Results and No. of working committee meetings held, and theme of discussion, effectiveness for information exchange 2) No. of seminars on disaster mitigation measures 3) Status of acceptance of evacuation routes/places by the local residents	Report from the Project and the model sites Report from the Project and the model sites The results of survey, questionnaire, site inspection	
3 Engineers to implement appropriate countermeasures on disaster mitigation measures are trained. (Train engineers in disaster mitigation)	1) Technical criteria for disaster mitigation 2) No. of engineers qualified under the criteria above 3) Status of activities of trainees at their offices	Finished criteria Report from the Project Report from the Project	
4 Training programs for engineers involved in sediment-related disaster mitigation are established. (Establish training programs for engineers)	1) No. of lecturers assigned to the training courses 2) Status of training facilities 3) Status of curriculum and training materials	Report from the Project Report from the Project Finished works	

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Activities	**INPUT**				
1 (Establish integrated sediment-related disaster management model)	The Government of Japan		The Government of Indonesia		
(1) Conduct site survey on model areas to obtain detailed data on local conditions.	1 Long-term Experts		1. Counterparts		C/Ps are assigned properly.
(2) Hold meetings to exchange views on disaster mitigation measures.	1) Chief Advisor	60 M/M	(1) Project Manager	60 M/M	
(3) Establish systems to escape from sediment-related disasters	2) Coordinator	60 M/M	(2) C/P Sediment-related	360 M/M	
3-1 Develop hazard maps	3) Sediment-related disaster	60 M/M	(3) C/P Regional disaster	360 M/M	No large-scale sediment-related disaster occur during the implementation of the model projects
3-2 Establish observation system on hazardous points	4) Regional disaster mitigation	60 M/M	(4) C/P Disaster information	360 M/M	
3-3 Develop criteria on precautions and escape	5) Disaster information	60 M/M	(5) C/P Sabo planning	120 M/M	
3-4 Develop methodology of precautions and escape	6) Sabo planning	60 M/M	(6) Counterparts for the model sites 5 C/Ps per site	300M/M × 4 sites	
(4) Plan and implement disaster mitigation measures with the cooperation of local residents, NGOs, and local consultants * 1					
4-1 Plan and establish the management system for sediment gathering.	2 Short-term Experts	As required	2. Facilities		Budget for STC is allocated as planned.
4-2 Plan and implement measures for conservation of hill slopes.	3 Equipment		2-1 Office and work space for Japanese experts		
4-3 Plan and implement measures for conservation of river banks.	4 C/P Training		2-2 Space necessary for installation of the donated equipment		
(5) Establish management system for local residents to manage established sediment-related disaster mitigation facilities.	5 Facilities		2-3 Experimentation fields, laboratories and training rooms		
(6) Develop guidelines for implementing integrated sediment-related disaster mitigation measures.			2-4 Land, buildings, facilities and equipment necessary for the Project		
2 (Establish local organisations and systems for disaster mitigation)			3. Local Cost		
(1) Establish the working committee for disaster mitigation to be composed of local residents, NGOs, engineers of central/local governments.			Project implementation and management costs		
(2) Hold seminars on disaster mitigation for local residents and school teachers.					
3 (Train engineers in disaster mitigation)					
(1) Train engineers through model works at model sites					
(2) Train engineers through the training programs established at Sabo Technical Centre.					**Preconditions**
(3) Develop criteria for qualified engineers in disaster mitigation.					Model projects are accepted by local residents
4 (Establish training programs for engineers)					
(1) Establish training courses to distribute the concept of integrated sediment-related disaster mitigation measures with the cooperation of Gadjah Mada Univ.					
(2) Develop curriculum of the training.	* 1				
(3) Develop training materials of the training.	**The model areas for conducting planning and designing of integrated sediment-related disaster mitigation measures are:**				
(4) Secure lecturers for the training courses					
(5) Establish the system to monitor the result of the training.	1) Mt. Merapi Model area, 2) Mt. Agung Model area, 3) Palu Model area, 4) West Sumatra Model Area				
5 Related activities (Database development, others)	**The model areas for implementing model works of integrated sediment-related disaster mitigation measures are:**				
(1) Collect and analyse information on sediment-related disasters in Indonesia.					
(2) Develop database system.	1) Mt. Merapi Model Area, 2) Mt. Agung Model Area				
(3) Establish management and maintenance system for the database.					
(4) Develop Internet Homepage to publicise the Project outputs.					
(5) Advise for reconstruction of devastated areas					