



Indonesia

13 Padang Area Flood Control Project (2)

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The project's objective was to alleviate flood damage in municipal areas of Padang City in Sumatra by implementing river improvements and developing drainage channels, and thereby contribute to social development and economic growth in the region.

Loan Amount/Disbursed Amount: 4,859 million yen/4,811 million yen

Loan Agreement: December 1995

Terms and Conditions: Interest rate, 2.3%; Repayment period, 30 years (grace period, 10 years); General untied

Final Disbursement Date: December 2001

External Evaluator: Takuya Okada (KRI International Corp.)

Field Survey: July 2003



Evaluation Result

The improvements to major rivers, tributaries and municipal drainage channels, and the development of drainage channels (revetments, covered conduits, etc.) were conducted almost as planned, and the project period and costs were also basically as planned. The river improvements (main rivers now capable of handling floods with a 25-year return probability*¹) and drainage channel development (handling floods with a 5-year return probability*¹) resulted in no external overflow*² during the torrential rains of February 2003 although a flow rate of 600m³/s - equivalent to the scale of a 25-year return probability - was recorded in the Airdingin River. This suggests that the flood control effects of the project have been sufficiently realized. In the beneficiary survey, more than 60% of respondents stated that "damage to household effects and furniture has decreased", and more than 50% that "there is less destruction of property", confirming that there have been significant reductions in flood damage. This project together with the Phase 1 project has benefited approximately 820 thousand people (the population of Padang City) (Sakai City in Osaka has a population of 790 thousand). Reduced flood damage is promoting increased housing investment and expansions to useable land areas in the region

covered by the project. Between 1995-2001, GRDP (gross regional domestic product) in Padang City increased by an average of 3.4% annually, exceeding the national average of 1.2%. In addition, beneficiaries pointed to "higher asset values" and "improved living standards" as impacts of the project. There are no problems in the technical capacity, operation and maintenance system, or financial condition of the Directorate General of Water Resources, Ministry of Public Works: the project's executing agency.

*¹ Floods on a scale that occurs roughly once every 25 years (5 years)

*² Water from rivers inundates areas where there are no revetments, etc.

Third-Party Evaluator's Opinion

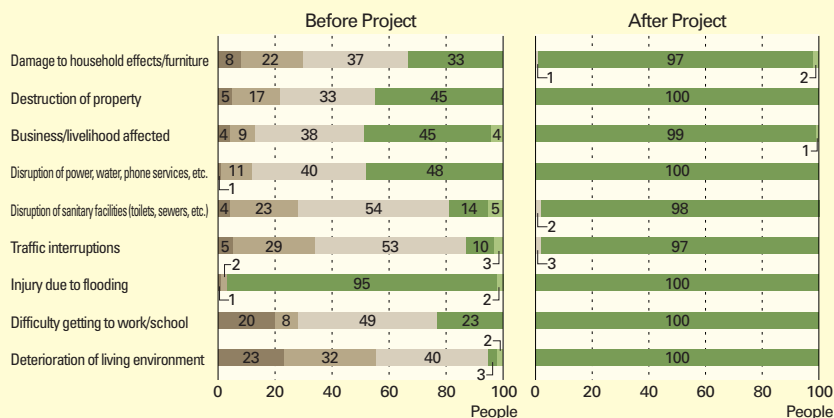
In general the Padang Area Flood Control project is very much effective in containing the external overflow due to over-topping from the rivers. Lesson learned is that funds for operation and maintenance should be taken into consideration in the future as well as how to integrate one project with the existing related structures, the synchronization of the O&M management system.

Third-Party Evaluator: Mr. Kusumo Martoredjo

Obtained a post graduate diploma in economics from University of Indonesia. Presently holds the post of President Director, PT. Catur Yasa and the post of Chairman, the Indonesia-Japan Economic Committee. Specializes in overall economics and business.

Comparison of Flood Damage: Before/After Project (Beneficiary Survey)

■ Major damage (major damage sustained; recovery difficult) ■ Moderate damage (recovery possible at reasonable cost/within reasonable timeframe)
■ Minor damage (recovery possible through own efforts/within short timeframe) ■ No damage ■ No response



Beneficiaries (residents living near the Lolong drainage channel)



Improvements to the drainage channel have put a stop to flood damage (due to over-topping)