## Indonesia

# Madiun River Urgent Flood Control Project



Madiun River

#### Outline of Loan Agreement

Loan Amount / Disbursed Amount Loan Agreement

February 1985

Interest rate 3.5% p.a.

6,400 million yen / 5,936 million yen

**Terms & Conditions** 

Repayment period 30 years (Grace period 10 years)

Final Disbursement Date

July 1995

### **Project Outline**

The project aimed to prevent flood damage to Madiun City and surrounding areas via the implementation of river improvement works on Madiun River, a tributary of Solo River, which flows through the center of Java.

#### **Results and Evaluation**

Starting upstream at a point approx. 28km from where the Madiun and Solo rivers merge to a point 57km down river, the project covered excavation, embankment, and revetment work, and bridge construction/improvement, on a section measuring approx. 29km, with work being completed in July 1995. Prior to project implementation, Madiun City suffered chronic flood damage every year, however, the project contributed significant decreases in flood damage, from a pre-project flood area of 12,000 hectares to 1,000 hectares during the 2 year return-period flooding of 1998. Respondents in the interview survey of residents cited reductions in damage to their homes, assets, and person, and fewer roads being cordoned off to traffic, in addition to being freed from the fear of flood damage and attaining livelihood stability. The project is thus evaluated to have improved land use in Madiun City and its environs, increased employment, and contributed to improved standards of living. Problems with erosion of embankments due to riverbed degradation have arisen in recent years, there are plans to implement rehabilitation of embankments under Japan's ODA loan, based on the results of a Special Assistance for Project Sustainability (SAPS) study conducted by JBIC (2001).

Attention is currently focused on plans to strengthen the river maintenance system as a whole, inclusive of Solo River, Porong River, and regulations covering the sand taking.