Risk impact analysis on the investment of drinking water supply system development using project risk management

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Abstrak

The development of a water supply system requires a high investment cost, and financial, environmental, and institutional aspects need to be considered. As major projects involving many stakeholders, drinking water supply projects become vulnerable to risks. A risk-based analysis is required to reduce the likelihood of failure in both the operational and financial aspects of such projects. This study describes the process of risk management planning for a drinking water supply system construction project in South Bali. The case study is based on the project risk management method with the value at risk to calculate the impact of risks in project investment. The purpose of this study is to obtain a financial risk model that maps potential risk factors and calculates the financial impact of risks on the project. This is used to create alternative strategies to reduce the impact of risks on investment made during the development of the project. The analysis showed that of the three priority risk factors, production capacity has the greatest influence on the net present value of the project.