

Economic Aspects of Disaster Prevention
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Synopsis

Natural disaster events cannot be avoided, but the effect and damage resulting from such phenomenon can be minimised. This paper looks at ways to minimise the economic costs and losses resulting from such disasters. The paper draws on experiences in Indonesia, PNG, Philippines, and Australia to provide valuable lessons from natural disasters, such as earthquake, fire, cyclone and volcanic eruption.

The paper looks at economic benefits of steps taken in the design and construction stages of a project to minimise the effect of such natural disasters. The cost of additional requirements at this stage are small – often less than 1-2% of the capital cost – and yet the benefits are immense.. A major mining facility in PNG was able to continue operation, without stoppage, or significant damage through two major earthquakes of 7.3 and 6.8 on the Richter scale. Mining and process facilities suffered minimal damage and were able to immediately recommence operation after a cyclone with winds of 120 mph – almost 200 kph hit the area in N. W. Australia.

The paper also draws on experiences from the restructuring necessary resulting from a major earthquake of 7.5 on the Richter scale and resulting tidal wave in Flores in 1992 which killed over 3000 people and damaged many roads,, and buildings. Over 200 km of road restructuring, and 340 schools and 170 health clinics were replaced, with many more requiring repair. Research on the results and damage from the earthquake, and in the rectification and repair resulted in techniques being developed for replacement, with recommended building practices being introduced in the region, including a far more extensive use of local materials, including bamboo. The paper looks at lessons learned, and economic aspects resulting from those lessons.

Finally the paper presents details of the recently formed Disaster Management Facility within the World Bank

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