

Stages of Reconstruction after an Earthquake and Expenditure of Funds

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1. Verification of a hypothesis

As early as 1977, KATES and PIJAWKA postulated that reconstruction following a disaster lasts about ten years and can be divided into four typical stages, each approximately ten times longer than the previous one. Derived deductively from the examples of San Francisco 1906, Alaska 1964, Rapid City 1972, and Managua 1972 the model was based either on a historical disaster or rather recent ones where only half of the time in question had elapsed. Only Alaska met the prerequisites of the hypothesis in full scale. We therefore tried to test KATES' model against the reality we found during our research in Friuli/Italy between 1976 and 1988, after the devastating earthquakes of May 6, 1976 and September 15 of the same year.

To our knowledge Friuli is the first greater disaster in history where KATES' four stages can be tested empirically. In Friuli 70 to 80 per cent of all funds dedicated to reconstruction were pooled by the emergency commissioner ("Segreteria straordinaria") with a precise accounting day by day, village by village and person by person: Rumors of fraud in previous disasters made this bookkeeping a challenge for the authorities in charge of the Friuli earthquake. Therefore the spending of funds exactly mirrors the reconstruction, because everybody who received compensation had to prove his title by his progress in restoration work. A building finished in the rough could claim 50 per cent of the compensation money, the ready building 100 per cent. If we define the four stages in order to measure them, stage one means emergency measures, stage two a functioning society (though under difficult conditions), stage three the physical reconstruction of the vital spheres of housing and workplaces, and stage four the complementary construction activities from sidewalk-paving to church building. The money spent on all these different expenditures in time makes it possible to quantify in a realistic perspective what happened in Friuli between 1976 and 1988.