Disaster Impact Analysis: Environmental Considerations?

Topic: 814B Special session: Disaster Impact Analysis
Author: Yasuhide OKUYAMA

Disaster, as the consequences of a natural hazard, poses a wide range of impacts in the human society and economy. Ever increasing severity and intensity of natural hazards also threaten the environment where the human society and economy relies on the natural resources and the ecosystem where we live in. The current emphasis of disaster impact analysis has been on the socio-economic aspects; however, the social and economic activities are certainly interlinked with and are influenced from the changes in the surrounding environment. The natural environment is closely linked with both society and economy, or vise versa. And, the interrelationships between the natural environment and the economy through natural resources, quality of life, pollutions, regulations, among other things, have been studied in numerous ways, especially in the context of climate change. By the same token, disaster is tightly interwoven with the natural environment and the economy in the disaster management context. And, the impacts of disaster on the economy have been studied on many different aspects, ranging from microeconomic issue of supply chain management to macroeconomic concern of financing reconstruction projects. In contrast, little attention has been paid to the integrative analysis among these three constituents, â€œparticularly at the local levelsâ€• (Tran and Shaw, 2007). In this paper, the framework for extending disaster impact analysis to include the impacts on and from the natural environment is examined. The potential uses of the ECLAC methodology for the input data and of the environmentally extended social ac-counting matrix for the estimation methodology are reviewed and discussed, and the future directions are suggested.