Practical Application of Aerial Survey for Disaster Risk Management in Vietnam

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SUMMARY

Vietnam is one of the most disaster prone countries in the world. Its geography and topography make it particularly vulnerable to typhoons, tropical storms, floods, storm surge, landslides and coastal erosion. Trends in the damage statistics indicate that while the impact on the number of human lives lost may be decreasing, the economic cost is increasing. These trends are consistent with a rapidly developing nation where improved awareness and response saves lives but continued development in vulnerable areas results in greater economic losses. Without improvements in disaster risk management, current trends are likely to continue and be exacerbated by the ongoing influences of climate change. Access to broad scale consistent and accurate spatial data is essential for the detailed assessment of disaster risk – particularly flooding, storm surge and sea level rise. With only limited resources available, it is critical that investment to mitigate impact and reduce vulnerability is based on a sound assessment of risk, consequences and potential benefit. Further, assessment of future risk shifts due to proposed developments is critical if developing regions are to avoid exacerbating disaster impacts and, like many developed nations, rueing the planning decisions of the past. Broad scale hydraulic modelling and diaster risk mapping in central and southern Vietnam are two activities currently being implemented under the World Bank funded Natural Disaster Risk Management Project (NDRMP). In addition to loan funds and counterpart contributions, the project also receives considerable donor support from the governments of Australia, the Netherlands and Japan. This presentation will discuss the practical application of spatial data in the assessment and management of disaster risk. Based on experiences with flood modelling and risk mapping in previous and ongoing projects in central Vietnam, the author will discuss the traps and pitfalls of using locally obtained information as well as the potential benefits which could be realised from improvements in technology. The author's personal experience shows that the need for large quantities of consistent and accurate topographic data over broad areas of relatively flat terrain challenges conventional methods for survey data acquisition in Vietnam and the region. Aerial survey, though not without its own challenges, promises many benefits. While improvements in data are always welcome, improved national capacity is at the heart of the issue for substantial uptake and future sustainability.

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