Symposium 2: Medical Relief in the Digital Era

Drones in Disaster Management and Humanitarian Action: A Case Study in The Aftermath of Nepal Earthquake 2015

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ABSTRACT

Nepal ranks 6th, 11th and 30th in the list of countries vulnerable in terms of risk from climate change, earthquake and flood respectively. Frequent multi-disasters in a difficult terrain makes disaster management a challenge, and up-to-date geo-information plays a critical role in proper disaster management. Unmanned Aerial Vehicle (UAV) enables quicker geoinformation collection compared to traditional surveying methods, hence leading to efficient disaster management. UAVs were introduced in Nepal in the aftermath of the April 2015 Earthquake. An unprecedented number of small and lightweight UAVs were flown over highly damaged areas and heritage sites by journalists and humanitarian responders to assist in immediate rescue, relief, and reconstruction efforts. However, risks to national security by the unregulated use of drones was realized by the Government of Nepal and the Ministry of Home Affairs, and hence they released a guideline that controlled the use of UAVs through a thoroughly difficult permission procedure. This vastly limited the use of drones in Nepal and increasing adoption of the technology for humanitarian causes also slowed down rapidly. However, increasing demand has recently led to a revised Drone Flight Guidelines 2075 that now provides authority to local governments to grant permissions through easier processes for lightweight drones thus encouraging good usages of drones. This paper attempts to identify, analyze and document the social applications of Drone technology in Nepal and highlights the specific use of Drones in post-earthquake reconstruction of damaged buildings, hydropower projects, landslide mapping, aerial surveillance during disasters, rescue efforts, delivery of medicines and health supplies in rural areas and many more. It also reflects the change in perception of the government towards drone technology.