EMERGENCY MAPPING OF MEETHOTAMULLA GARBAGE DUMP COLLAPSE

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An unexpected collapse of Meethotamulla Garbage dump has occurred on 14th April 2017 at about 1500 hrs. This caused 32 deaths and complete destruction of about ninety buildings / structures and displaced about 1750 persons. This paper presents technologies and methodologies used to create emergency maps for rescue missions, methods for mitigation of further collapse and methods of monitoring and remedial actions to stabilize the dump site to prevent future collapses. The whole process was sub divide in to four steps as follows. • Locate the positions of the houses precisely in order to make necessary attempts to rescue trapped persons pinned under the dump slide. • Identification of danger zones and evacuate residents and properties to prevent from possible collapses in future. • Make necessary actions to monitor and stabilise the dump site. • Identification of ownership of the damaged properties in order to pay compensation and other relief measures. The first priority was to locate the houses buried under garbage slide. As about 35m height column of garbage along the south-east ridge of the garbage dump has collapsed on to the houses which were built closer to the foot of the garbage dump. It was very difficult to get reliable and consistent location of the houses buried under the dump from the evidence of the eye witnesses who are in panic status. This presentation describes the methodology and tools utilised to pinpoint the locations of the buildings buried under the garbage. The stability of the garbage dump which was not collapsed to be envisage. The technology used to monitor the possible movement of the garbage dump is also described in this presentation. The ownership of the area under the danger circle is to be investigated for payment of compensation and relief distribution. A land information system was also created in order to achieve the above task. This paper present wide spectrum of technologies such as Lidar imagery, Point clouds from drones and precise positioning using continuously operated reference systems in detail.