Paper ID: 25146
oral

25th IAA SYMPOSIUM ON SPACE ACTIVITY AND SOCIETY (E5)
Space Assets and Disaster Management (5)

Author: Mr. Matteo Emanuelli
Institut Supérieur des Sciences et Techniques (INSSET), France

Mr. Niels van der Pas
Delft University of Technology (TU Delft), The Netherlands
Ms. Lauren Lyons
Harvard University, United States
Mr. Shripad Jagdale
International Institute of Space Law (IISL), India
Ms. Behnoosh Meskoob
Istanbul Technical University, Türkiye
Mr. Daniele Paglialunga
Sapienza University of Rome, Italy
Mr. Bruno Sarli
The Graduate University for Advanced Studies (Sokendai), Japan

THE NEAR EARTH OBJECT THREAT: AN EFFECTIVE PUBLIC COMMUNICATION STRATEGY

Abstract

Near Earth Objects (NEOs) have periodically hit Earth throughout its history, and it is a fact that such impacts will continue to occur. Although the risk of serious collisions is extremely small, depending on the NEO size and impact point, the consequences could be catastrophic.

Thanks to increased monitoring efforts, there is a high likelihood of spotting NEO threat years in advance, potentially providing the opportunity for the international community to mitigate or even prevent the possible impact through timely actions. Being able to communicate these actions to the public, manage panic, and prepare for potential impact is critical.

In September 2013, students and young professionals from around the world met in Beijing, China, for the annual Space Generation Congress (SGC). During SGC, the Society Working Group - sponsored by Secure World Foundation (SWF) and composed of 16 people from 10 different countries - discussed how the NEO threat could be best communicated to the public.

Expanding on the foundational work of UN Action Team 14 and SWF, the working group made several recommendations focused on defining an efficient communication and education plan, the role of the media, its benefits and dangers, and the necessary collaboration with emergency response officials and science communicators.

This paper explores in detail these recommendations and categorizes them into temporal strategies - short, medium, and long term actions - depending on the estimated time of impact. With the long term strategy, the pre-impact timeline time is adequate for regional governments to produce local disaster management plans and coordinate education efforts with the media. With the medium term, while circulation of information is also important, these strategies prioritise the most critical issues while decision makers develop contingency plans based on proven disaster management methodologies. Finally, short term strategies rely on immediate actions to disseminate to the general public pre-existing natural calamity preparation and training information.

A "Mercalli-like" scale is used for determining the impact effect and the respective actions to be taken to improve survivability. Recommendations also present practical and efficient educational programs to

train and prepare the public and government for threats. The education proposal targets all parties involved providing at least a basic knowledge about NEO threat, and attempts to explain the concept of impact prediction uncertainty, and how to communicate it in the appropriate context. Case studies are used to provide examples of the application of the communication and education programs proposed.