

SYMPOSIUM ON STEPPING STONES TO THE FUTURE: STRATEGIES, ARCHITECTURES,  
CONCEPTS AND TECHNOLOGIES (D3)

Infrastructures and Systems to Enable Ambitious Future Exploration and Utilization of Space (3)

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GLOBAL THREATS AND RESPONSE: ANSWERING THE CALL OF URGENCY AND WHO SHALL  
SAVE HUMANITY?

**Abstract**

A number of natural and man-made disaster situations have exposed the vulnerabilities of an overall response and execution of a protocol that would help humanity respond to a threat of global nature in the recent years. Recent events such as the South East Asian Tsunami in 2004, Hurricane Katrina in the USA, Hurricane Sidr in Bangladesh, etc have proved that emergency response mechanisms have and can fail at an international level. As the threats looming on the environment and subsequent strain on available natural resources intensify, any event that can be characterized by large scale damage to human and/or material loss can benefit from the lessons learnt from such events.

This paper dwells into the subject of ‘who shall save humanity’ in the particular context of a Near Earth Object (NEO) collision. Whilst the above mentioned natural disasters are confined to regional and national effects and after-math, a potential NEO event of the size of over 1 km would affect all of humanity, causing not only loss of human life but also extreme environmental changes that would affect population in other regions with possibly complete extinction of the human race. Whilst advances are being made on the technology front to address the candidate solutions to deflect these threat-bearing NEOs, this paper would concentrate on who potentially would be the decision makers on what action needs to be taken for planetary defense?

Models in place address other global threats such as Climate Change (i.e. Inter governmental Panel on Climate Change), United Nations bodies and its committees as well as neutral international organizations and consortia of various space and governmental agencies all make for candidates worthy of consideration for players who could be the decision makers should such an event arise. This paper reviews organizations that - have been actively pursuing work on defense of the planet against NEO threats - are analogous to other working groups/decision making bodies set up in response of global threats - make candidates based on a criteria where the grant decision making power is proportionate to the risk of human loss in regions and subsequent material as well as environmental loss

Recommendations thus drawn on an inter-disciplinary consortium of agencies that could address the global threat for defending humanity against a NEO collision may also help draw important characteristics desirable on a global emergency response team addressing other threats.