



UNITED NATIONS
Office for Outer Space Affairs



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7th IAA Planetary Defense Conference

Seeking Synergies for Planetary Defense During COVID-19 Lessons Learned

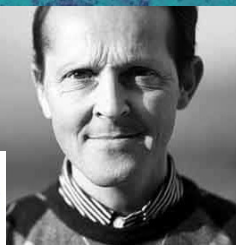
This work wishes to provide insights about the importance of exploring the synergies between 1. Missions, new technologies, 2. Inter-agency cooperation, 3. Raising awareness and Communicating to the general public for Planetary Defense (PD). Here we are also exploring the current global crisis due to COVID-19 pandemic that has shaken the world and disrupted many dynamics within PD. **Can we make use of the global response to the pandemic and can the lessons learned in terms of readiness, cooperation (synergies) and national and international coordination be applied to a global response to an asteroid impact threat? Our experts (From the communication, technical, education and young professional perspective) are sharing with us their expertise, insights, observations and the lessons learned during this global crisis, aiming to increase our chances for a successful deflection and/or mitigation/Impact management campaign to protect Earth from asteroids in the years to come.**



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SGAC is a global NGO and network which aims to represent university students and young space professionals ages 18-35 to the United Nations, space agencies, industry, and academia. Through its broad network of volunteers from more than 150 countries SGAC and it's Near Earth Object (NEO) Project Group highlights the crucial impact that international conferences, campaigns, competitions and observing international days hold that could result in more awareness and can lead to strengthening the global cooperation efforts of all international space organisations for Planetary Defense. SGAC during the pandemic situation has not only brought more creative and effective ways to connect with it's network of more than 15,000 members all over the globe but also organize initiatives like webinars, events and virtual Space Generation Congress that invited participants from more than 53 different countries. In response to pandemic situation, the SGAC Near Earth Object (NEO) Project Group for the first time organized and invited online applications for a NEO themed poster competition. This competition provided the space community another way to be more involved and learn about the importance of global cooperation for mitigating asteroid impact threats.

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The pandemic shows us that for very low probability risks with potentially high and global consequences, which is the case of a pandemic or an asteroid impact, it is crucial to be prepared before we need it! The organization of a global response is very complex and includes many very different aspects, and dealing with them in urgency and without global coordination, causes huge problems as we experience currently. Fortunately, regarding the impact risk, we don't have an identified threat, the impact frequency plays in our favor, and we can be prepared with feasible and reasonable means, which we are currently implementing. So, this is very positive and leaves us time to be prepared before we need it, and we are actually doing the necessary steps in all the different aspects (science, technology, politics). They are three main areas: predicting, preventing, and organizing a global coordination regarding legal aspects and the decision making-process. All these three areas are currently addressed, thanks to actual observations, modeling, deflection tests and working groups endorsed by the United Nations. So, my experience is that we are showing a great example as we do what is needed to be ready before we need it. The road is still long before we control this risk at the expected level, but we'll get there thanks to this international effort.

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The COVID-19 pandemic and the accompanying infodemic are being studied intensively by researchers specializing in science, health, and risk communication. These studies offer useful guidance for the planetary defense community in developing plans for communications in the event of an actual asteroid impact threat to Earth. The pandemic/infodemic also have revealed that even if good plans are in place to deal with a crisis, those plans may not be implemented. The International Asteroid Warning Network (IAWN) has conducted three tests – like fire drills – of its system for finding, tracking, and characterizing objects on an impact course with Earth (no known asteroid is on an impact course with Earth for the next 100 years), and it has worked very well. In the case of a real impact threat, it will be important to avoid politicizing messages.

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TC on NEO's

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The global crisis due to COVID-19 disrupted many dynamics within planetary defense (PD) and showed us that in case of a disaster with global consequences, synergy, Inter-agency and international collaboration are vital. This is an opportunity to learn some valuable lessons that could be apply to PD from looking at the things that have gone wrong and right, to develop a unifying language to be better prepared, to have a less fragmented response to an impact threat and to strengthening the relation with decision-makers. During this time, I dedicated myself to create and lead virtual educational, research and communication initiatives for global cooperation and created platforms where other professional, young professional and the general public can get more involved in PD efforts. Our IAF TC on NEO's primary objective is to raise awareness among the global space community, about the ongoing work within the PD community (incl. IAWN, SMPAG, UNOOSA).The TC also addresses other Near Earth Object (NEO) related topics such as asteroid mining, capacity building for decision makers and communication with the general public. Many of our members participated in virtual events, meetings and continue with their PD activities such as detecting, monitoring and working on missions to mitigate NEO's.

Resources: Learn more about PD efforts **via organizations:** Asteroid Day, UN-SPIDER, Planetary Society, B612 Foundation, NASA (PDCO), IAWN, SMPAG, UNOOSA, IAF TC on NEO's. **Resources: Via PD conferences:** AGU, IGU, PDC, COSPAR, METEOR.

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