

# United Nations Office for Outer Space Affairs

## International cooperation in case of an asteroid impact hazard

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UNITED NATIONS  
Office for Outer Space Affairs

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## Main programmes and platforms

- ❑ **Secretariat to COPUOS**
- ❑ **Works with MS, IGOs, NGOs (space-related)**
- ❑ **Programme on Space Applications**
- ❑ **UN-wide coordination - UN-Space**
- ❑ **UN Register of Space Objects**
- ❑ **UN-SPIDER and its network** - disaster risk reduction
- ❑ **International Committee on Global Navigation Satellite Systems (ICG)**
- ❑ **Planetary-defence related:** Secretariat to the Space Mission Planning Advisory Group (SMPAG), cooperation with the International Asteroid Warning Network (IAWN)



- ❑ **More info:**  
**[www.unoosa.org](http://www.unoosa.org)**



# IAWN, SMPAG:

Mechanisms for strengthening international collaboration against an asteroid impact



Given the global significance of asteroid impacts, **COPUOS in 2013** established the **International Asteroid Warning Network (IAWN)** and the **Space Mission Planning Advisory Group (SMPAG) in 2013**

## AIM

- ❑ to coordinate and focus the efforts of institutions of the member countries in the effort to guard against this cosmic hazard and strengthen an international response to a potential NEO impact hazard

## UNGA resolution

- ❑ **The establishment of the IAWN and SMPAG** was noted with satisfaction by the General Assembly **in its resolution 70/82**, reiterating **the importance of information-sharing in discovering, monitoring and physically characterizing potentially hazardous** NEOs to ensure that all countries, **in particular developing countries with limited capacity** in predicting and mitigating a near-Earth object impact, **are aware of potential threats**, and emphasizing the need for capacity-building for **effective emergency response** and disaster management in the event of a near-Earth object impact.

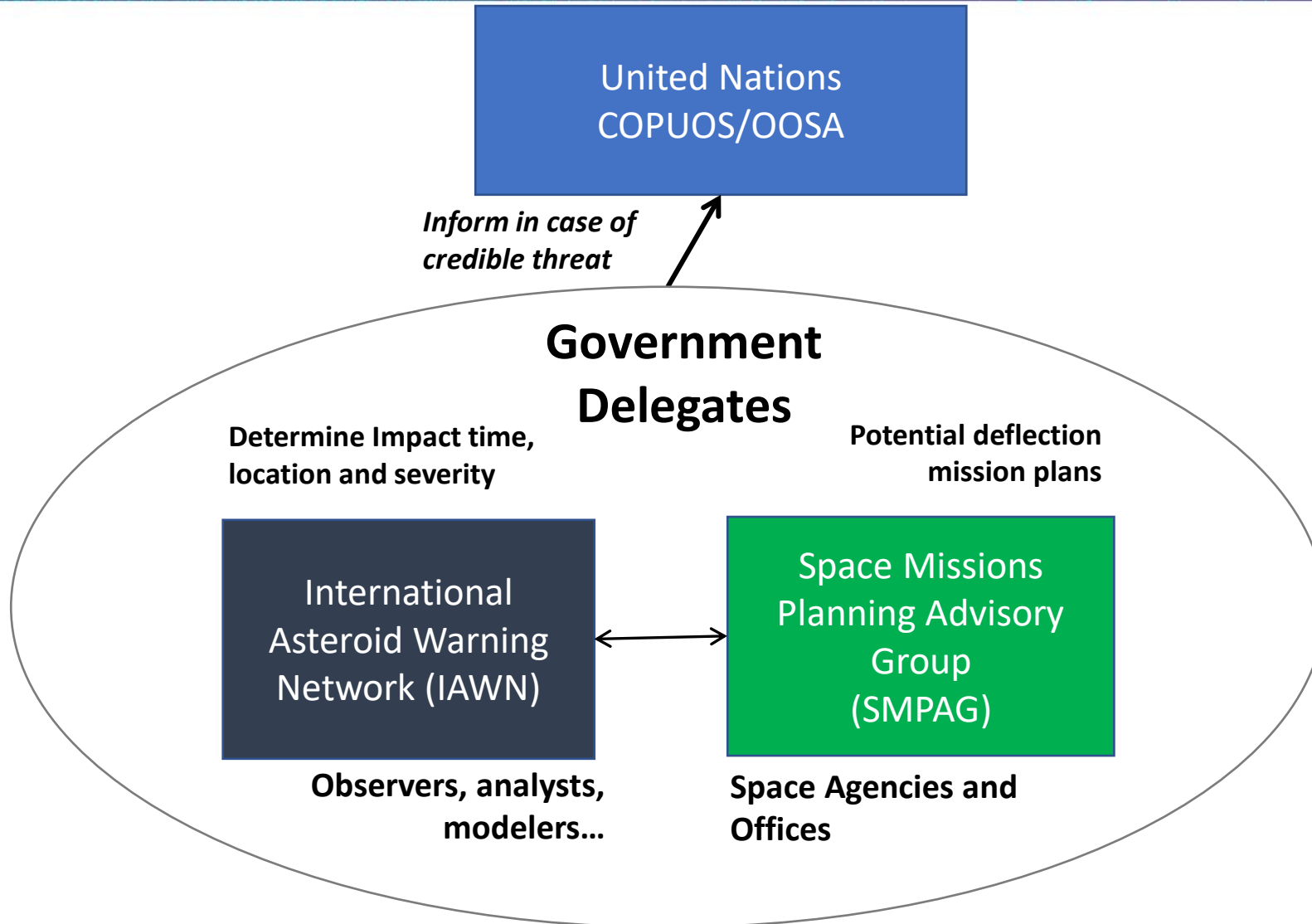


# UN and cooperation related to NEOs and PD - Some history



- **1995:** UN International Conference on NEOs at the UN Headquarters in New York, organized by UNOOSA
- **1999: UNISPACE III** results in one of the recommendations **to improve international coordination of activities related to near-Earth objects**
- **2001: As a result of UNISPACE III, COPUOS Action Team on NEOs is established**
- **2013: UN General Assembly** in its resolution 68/75 welcomes **Recommendations of the Action Team on Near-Earth Objects for an international response to the near-Earth object impact threat**, which lead to the establishment of **IAWN and SMPAG**
- **2016: UN General Assembly resolution 71/90** grants **UNOOSA** role as the secretariat to **SMPAG** and declares **30 June International Asteroid Day**

# Information flow in case of a credible impact hazard



# International Asteroid Warning Network (IAWN)



Website: [iawn.net](http://iawn.net)

- Virtual network linking together the institutions **performing functions such as discovering, monitoring and physically characterizing** the potentially hazardous NEO population.
- Its **work includes**: search-and-characterization of NEOs; emergency management; and communications with the media and general public
- Aims to **serve the global community as the authoritative source of accurate and up-to-date information on NEOs and NEO impact risks** – information available to all countries



# Space Mission Planning Advisory Group (SMPAG)



Website: [smpag.net](http://smpag.net)

- Laying out the **framework, timeline and options** for initiating and executing space mission response activities
- Promoting opportunities for **international collaboration** on research and techniques for NEO deflection
- **Membership open to all national space agencies** or governmental or inter-governmental entities that coordinate and fund space activities and are **capable of contribution to or carrying out a space-based NEO mitigation campaign**

# Space Mission Planning Advisory Group (SMPAG)



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## ❑ Official members with nominated delegations:

AEM (Mexico)

ASI (Italy)

Belpo (Belgium)

CNES (France)

CNSA (China)

Czechia

DLR (Germany)

ESA

FFG (Austria)

ISA (Israel)

AEB (Brazil) - application

JAXA (Japan)

KASI (South Korea)

NASA (USA)

ROSA (Romania)

ROSCOSMOS (Russian  
Federation)

SSAU (Ukraine)

SUPARCO (Pakistan)

UKSA (UK)

IAWN (ex officio)

❑ Permanent Observers: ASE, COSPAR, ESO, IAA, IAU, SWF

❑ Chair: ESA.

❑ UNOOSA is the Secretariat to SMPAG.





## Part B. Implementation plan

### Tools

In implementing the “Space2030” Agenda, Member States could contribute to and benefit from a number of international and regional mechanisms, programmes, projects and platforms that are already in place or are being developed, such as the following:

#### Paragraph 24 (i)

- ❑ **The International Asteroid Warning Network (IAWN) and the Space Mission Planning Advisory Group (SMPAG)**, which are designed to strengthen preparedness for the threat of potential impacts of near-Earth objects through international cooperation and information-sharing.



# UNOOSA webpage - NEOs-related documents



- Since 2014, **SMPAG** and **IAWN** participate in the sessions of the **Scientific and Technical Subcommittee of COPUOS** and **report annually** to the Subcommittee on the progress of their work on planetary defence
- All documents are contained in UNOOSA NEO data base at [www.unoosa.org](http://www.unoosa.org) under **TOPICS/ Our Work/ Near-Earth Objects**

## NEO related activities

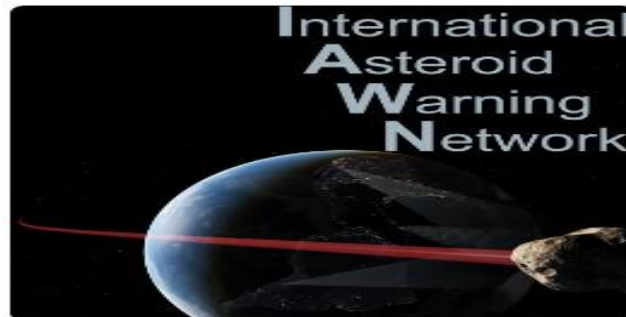
### SMPAG



UNOOSA is an observer and serves as permanent secretariat to SMPAG

[Read more >](#)

### IAWN



UNOOSA cooperates with IAWN in issues related to information dissemination

[Read more >](#)

### INTERNATIONAL ASTEROID DAY



International Asteroid Day is observed annually on 30 June

[Read more >](#)

## Documents

[Doc database: NEO >](#)



# Initiative for UN-designated international year of planetary defence 2029



- One of **the recommendations of the 7<sup>th</sup> IAA Planetary Defense Conference in 2021**, hosted by UNOOSA in cooperation with ESA  
See: <https://www.youtube.com/watch?v=bYbIPDkcsyQ&t=12952s>
- Building upon momentum **of Apophis close-approach in 2029**
- Intended as **an opportunity to raise global understanding of asteroids and comets that might impact our planet in the future** and how we might protect our planet and ensure human security against possible impacts of such natural objects
- Opportunities for international space **cooperation**
  - ❖ **First stepping-stone** in developing **partnerships with IAU, ESO, IAWN, SMPAG,....**
  - ❖ Proposal to be submitted to COPUOS in the near future **for consideration by member States and possible recommendation to the UN General Assembly**



# Upcoming: 8<sup>th</sup> IAA Planetary Defense Conference (PDC)



- **8<sup>th</sup> IAA Planetary Defense Conference, 3-7 April 2023, Vienna, Austria**
- **In cooperation with with the Austrian Academy of Science, the European Space Agency and UNOOSA**
- **Held as hybrid conference at the Vienna International Centre and the Austrian Academy of Sciences**
  - ❖ **Call for Abstracts open: [iaaspace.org](https://iaaspace.org)**
  - ❖ **Registration to open in December**