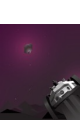


# SMPAG status

- presented at the IAWN meeting Oct 2023

D. Koschny, SMPAG chair

Oct 2023



## ❑ SMPAG = Space Mission Planning Advisory Group

## ❑ From the terms of reference:

### 1. Purpose

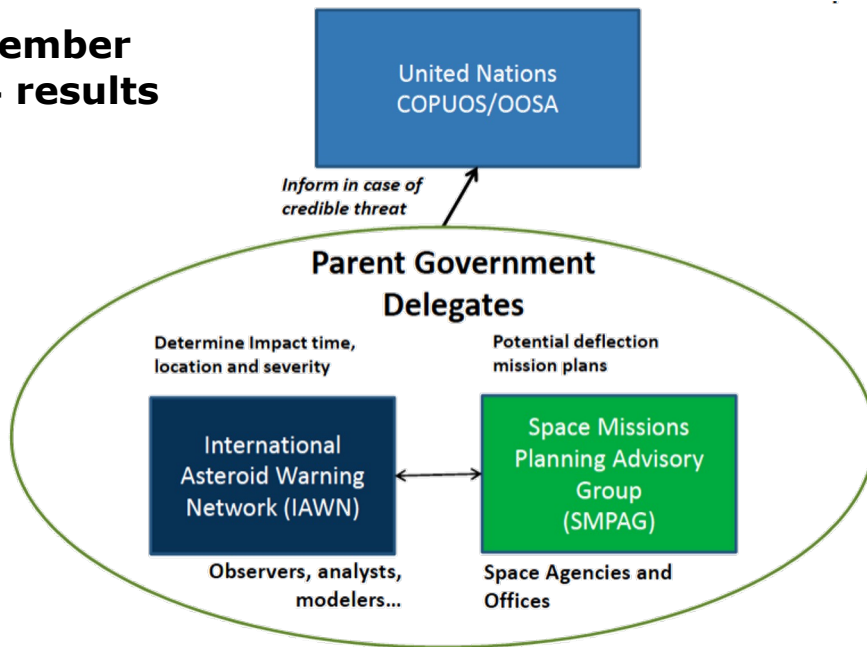
The purpose of the SMPAG is to prepare for an international response to a NEO impact threat through the exchange of information, development of options for collaborative research and mission opportunities, and NEO threat mitigation planning activities.

### 4. Membership

Membership is open to all national space agencies or governmental or inter-governmental entities that coordinate and fund space activities and are capable of contributing to or carrying out a space-based NEO mitigation campaign.

In the absence of a national space agency, a State Member of the United Nations may designate another space-related entity as its representative that has been endorsed by that government's internal processes.

- ❑ 'Action Team 14' (AT14) created after the Unispace 99 conference – task: Define how we should deal with the asteroid impact threat
- ❑ 2008 – 2013: Definition phase – meetings in the margin of UN COPUOS STSC and UN COPUOS meetings
- ❑ 'NEO Working Group' of Member States discussed the AT14 results and produced a final recommendation
- ❑ The conclusion:
  - presented Feb 2014
  - adopted Oct 2014 by the General Assy
- ❑ Criteria to become active:
  - $t \leq 50$  years
  - $P > 1 \%$
  - $d > 50$  m (26 mag)



COPUOS = Committee of Peaceful Uses of Outer Space  
STSC = Scientific and Technical Sub-Committee (of COPUOS)

# Where to find information

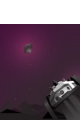


All documents and minutes are available via the web page:

<https://www.smpag.net>

The screenshot shows the SMPAG website interface. At the top, there are navigation tabs for 'SCIENCE MISSIONS', 'EUROPEAN SPACE AGENCY', and 'SCIENCE & TECHNOLOGY'. The main header features the 'smpag' logo and the ESA logo. Below the header, a breadcrumb trail reads 'SMPAG » Documents and presentations'. The main content area is titled 'DOCUMENTS AND PRESENTATIONS' and includes a sub-section 'GENERAL DOCUMENTS'. This section is organized into categories: 'Plans' (SMPAG-PL-001 - Workplan V2.0, SMPAG-PL-001/2.0), 'Reports' (SMPAG-RP-001 - Roadmap of relevant research for planetary defense, SMPAG-RP-001/4.0, 02 Mar 2023; SMPAG-RP-002 - Draft report on work package 5.5, SMPAG-RP-002/D.0, 2018 Oct 10; SMPAG-RP-003 - Status report on work package 5.1 from workplan "Recommended criteria & thresholds for action for a potential NEO impact threat", SMPAG-RP-003/1.0, 2018 Oct 18; SMPAG-RP-004 - Report by the SMPAG Ad-Hoc Working Group on Legal Issues to SMPAG, SMPAG-RP-004/1.0, 2020 Apr 08), and 'Other' (Terms of reference for the ad-hoc legal working group, as agreed by the SMPAG #09 meeting on 11 Oct 2017). There are also sections for 'PRESENTATIONS FROM THE SMPAG MEETING #21 (10/11 OCT 2023)' and 'PRESENTATIONS FROM THE SMPAG MEETING #20 (08/09 FEB 2023)'. A left-hand navigation menu lists meetings from #01 to #21 with their respective dates.

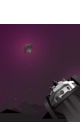




# Members and current activities



- ❑ **18 member delegations** (see [https://www.smpag.net/smpag\\_members](https://www.smpag.net/smpag_members))
- ❑ **7 observers**
- ❑ **1 ex-officio member (IAWN)**
- ❑ **A few 'in the pipeline'**
- ❑ **SMPAG hypothetical asteroid impact exercise ongoing**
  - Prepared and coordinated by the Italian Space Agency ASI
  - Three 'sprints' – first one done, see report at meeting #21
  - Monthly meetings ongoing
- ❑ **Planetary Defense Conference 2023 – how would SMPAG react to the presented simulated asteroid threat scenario? – was well received.**



# Workplan items

- See: [https://www.cosmos.esa.int/documents/336356/336472/SMPAG-PL-002\\_2\\_0\\_Workplan\\_2019\\_09-01+%283%29.pdf](https://www.cosmos.esa.int/documents/336356/336472/SMPAG-PL-002_2_0_Workplan_2019_09-01+%283%29.pdf)
  - Criteria and thresholds for impact threat response actions (done)
  - Mitigation mission types and technologies to be considered (work ongoing)
  - Mapping of threat scenarios to mission types (work ongoing)
  - Reference missions for different NEO threat scenarios (work ongoing)
  - A plan for SMPAG action in case of a credible threat (work ongoing)
  - Communication guidelines in case of a credible threat
  - Produce a 'road map' for future work on planetary defence (working doc available)
  - Consequences, including failure, of NEO mitigation space missions (work ongoing)
  - Criteria for deflection targeting (work ongoing)
  - Study of the nuclear device option
  - Toolbox for a characterisation payload (working doc available)