



**COSPAR PSW
&
ISWAT**

ISWI – The Way Forward

Joining forces with other international organizations and initiatives

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**GLOBAL
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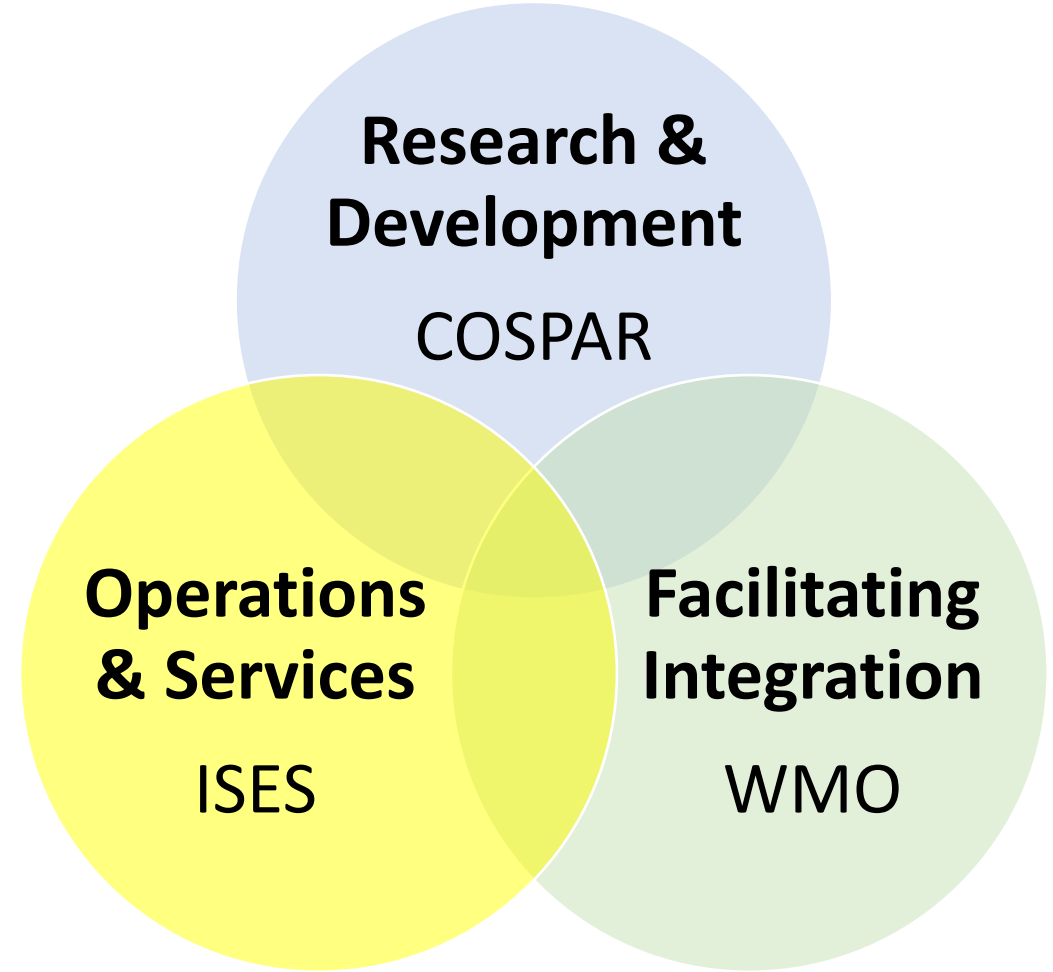
WMO-ISES-COSPAR Coordination

- Effective coordination essential to maximize return on investments and to avoid duplication of effort
- In 2022, UN COPUOS published a recommendation for the WMO, ISES and COSPAR to lead efforts to improve the global coordination of space weather activities in consultation and collaboration with other relevant actors and international organizations
- WMO, ISES and COSPAR Coordination Team (WICCT) has met in Coimbra in Sept 2022 and established a framework for working in partnership



The Coimbra Declaration

- Agreed on core expertises of the three organizations
- Agreed to define collaboratively the **overarching activities** in the overlapping areas
- Agreed to organize a **Space Weather International Coordination Forum** to engage other international organizations



Examples of themes under overlapping activities:

- Capacity building for equality in space weather activities
 - Research-to-Operations, Operationst-to-Research

Space Weather International Coordination Forum

(Nov 17 2023, Geneva)

Anticipated outcomes include:

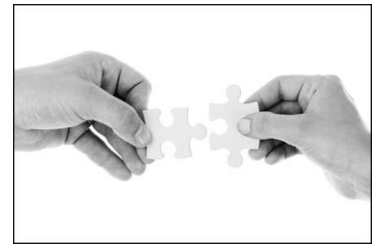
- An outline of the international space weather landscape identifying **primary expertise of each organization** represented in the Forum (including ISWI)
- Plans for interfacing with organizations representing major user groups
- Approach to alignments with national strategic planning activities and funding programs
- Plans for pilot projects to demonstrate the value of collaboration and coordination





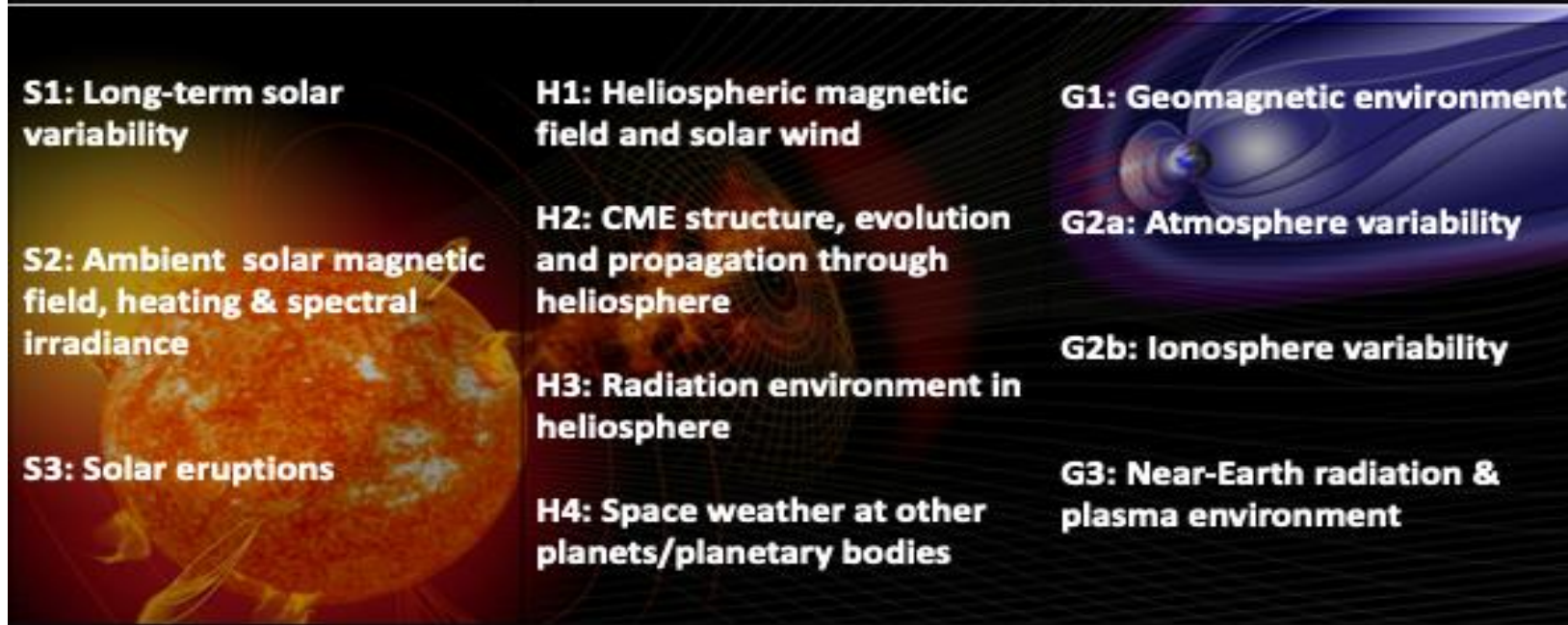
COSPAR/PSW ISWAT

International Space Weather Action Teams



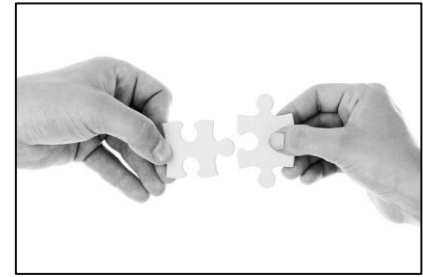
- ISWAT was established by international community members ***with a sense of urgency*** to enable ***Space Weather Without Borders***
 - to join forces and to act beyond domain-focused communities and beyond other borders
 - to build a platform for effective self-organized collaborations addressing challenges across the field of space weather
- COSPAR ***Panel on Space Weather (PSW)*** was proposed as a perfect neutral platform for ISWAT
 - ISWAT was introduced in ***COSPAR PSW*** Terms of References in 2018:
<https://iswat-cospar.org/ToR>

Portal to ISWAT Activities: <https://iswat-cospar.org>

<i>S: Space weather origins at the Sun</i>	<i>H: Heliosphere variability</i>	<i>G: Coupled geospace system</i>	<i>Impacts</i>
 <p>S1: Long-term solar variability</p> <p>S2: Ambient solar magnetic field, heating & spectral irradiance</p> <p>S3: Solar eruptions</p>	<p>H1: Heliospheric magnetic field and solar wind</p> <p>H2: CME structure, evolution and propagation through heliosphere</p> <p>H3: Radiation environment in heliosphere</p> <p>H4: Space weather at other planets/planetary bodies</p>	<p>G1: Geomagnetic environment</p> <p>G2a: Atmosphere variability</p> <p>G2b: Ionosphere variability</p> <p>G3: Near-Earth radiation & plasma environment</p>	<p><i>Climate</i></p> <p><i>Electric power systems/GICs</i></p> <p><i>Satellite/debris drag</i></p> <p><i>Navigation/Communications</i></p> <p><i>(Aero)space assets functions</i></p> <p><i>Human exploration</i></p>
<p>Overarching Activities:</p> <p><i>O1: Assessment</i> <i>O2: Information Architecture & Data Utilization</i></p> <p><i>O3: Innovative Solutions</i> <i>O4: Education & Outreach</i></p>			

- **Action Teams** focused on specific space weather projects are the building blocks of ISWAT.
- **Action Teams** are organised into **ISWAT Clusters** by domain (S-H-G), overarching activity (O), physical phenomena, or impact
- > 500 active members, 15 clusters, 56 Action Teams, 300 affiliations (Status: June 2023)

Opportunities for ISWAT-ISWI Partnership



- Multiply efforts and resources. Facilitate efficient sharing of information. Coordinate activities.
- Improve synergy between modeling and observational data. Preparation of model-input-ready, validation-ready, assimilation-ready certified datasets.
- Opportunities for collaborative model validations
- Opportunities for ISWAT support of ISWI educational activities.
- Bring Capacity building to a new level. Establish ISWI action teams inside ISWAT framework. Doors are open for upcoming generation of leads from all over the world. Active participation in existing teams and establishing new teams are encouraged.