

Applications of space technologies to global health: a scoping review

Meeting of the expert group on Space and Global Health

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Methods

Domain A : remote sensing

Domain B : GNSS

Domain C : Satellite
Communication

Domain D : Manned Space
Flights



1. Search per domain on two search engines



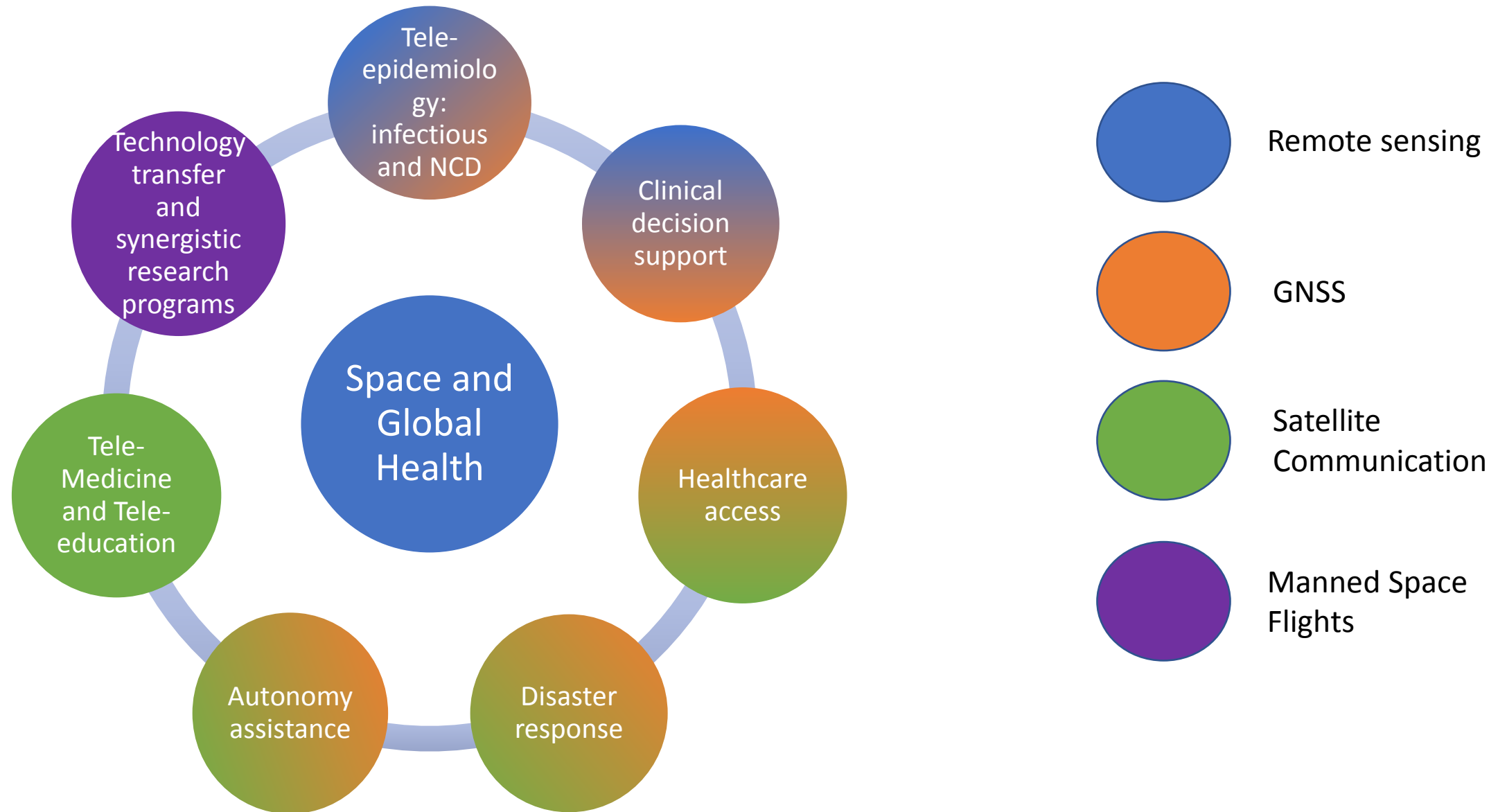
2. Gathering of stakeholders insights through
questionnaires

Stakeholder Identification
and description
Identification of key themes
per Domain

Development in the
Results section

Synthesis, challenges,
opportunities in the
Discussion section

Main themes per domain



Challenges and opportunities 1/2

- Remote sensing
 - Low availability of remote sensing systems in LMIC
 - Need measurement of direct health outcomes
 - Spatial and temporal resolution not always sufficient
 - Sustainability to be assessed
- GNSS
 - High dependency on power supply
 - Good signal (acquisition and persistence) needed

Challenges and opportunities 2/2

- Telemedicine and tele-education
 - Latency, especially for tele-surgery
 - Proof of the efficacy on direct health outcomes are still needed
 - Sustainability
- Manned-space flights
 - Lack of scientific publications
 - Lack of synergistic research programs between space and health sectors
- Overall
 - Lack of awareness of potential synergies between space and global health
 - Lack of space-associated knowledge and skills of health workers and conversely

Stakeholders Insights

- Questionnaire: thanks to NASA (Prof. Faruque), JAXA (Hajime Shinomiya), CNES (Dr. Alain Duverdier) for their answers
- Comments from the expert group:
 - Imprecisions and information gaps about the stakeholders analysis
 - More details needed about the disaster response
 - Strengthening of the human space flight part

Next steps

- Integration of the stakeholders insights (current and upcoming) into the manuscript
- Addition of the methods section, and of an abstract
- Submission for publication

Thank you for your attention and
contributions

