

STSC Working Group on Space for Global Health

Informal Session
20 April 2021, 13:00-15:00 CEST

Agenda of the informal session of the WG

- Round table of introductions
- Scope of work of the WG
- Workplan for 2021
- Current status of the work
- Review of recommendations

Scope of the work of the WG on SGH

- Report of the First Meeting of the expert group on space and global health held on 5 February 2015, Annex I, Space Activities and Global Health, Discussion paper
- Update on the scope of the work of the expert group - mandated by the EG and reviewed by EG at its meeting in 2017: Applications of Space Technologies to Global Health: Scoping Review

SPACE AND GLOBAL HEALTH

		<i>Individual health</i>	<i>Individual and Communities</i>		<i>Population Health</i>	
Key HEALTH activities		Medical practice	Health services	Medical Research	Prevention and control of infectious and chronic diseases	Global Health Security
Key Space Activities		Tele-Medicine	Tele-Health	Health Sciences	Tele-epidemiology	Disaster Management
Satellite Activities	Tele-communications	<ul style="list-style-type: none"> ▪ Specialist ▪ Second opinion ▪ Remote monitoring ▪ Tele-diagnostic ▪ Tele-consultation ▪ Peer to peer ▪ Tele-Robotic 	<ul style="list-style-type: none"> ▪ Professional training ▪ Community health worker training ▪ Community health education ▪ Tele-education ▪ Peer-to-peer training 	<ul style="list-style-type: none"> ▪ Knowledge transfer 	<ul style="list-style-type: none"> ▪ Data dissemination through centres of expertise ▪ Water levels & water borne diseases ▪ Emergency communication for outbreak/pandemic management 	<ul style="list-style-type: none"> ▪ Flexible and deployable capacities ▪ Strategic planning, coordination and communication among relief workers; coordination sites; experts; individuals
	Global Navigation Space Systems & GIS	<ul style="list-style-type: none"> ▪ Routing Medical Emergencies 	<ul style="list-style-type: none"> ▪ Contextual information on site ▪ Health services optimization 		<ul style="list-style-type: none"> ▪ Geographic occurrences of diseases ▪ Location of sources of infection/pollution ▪ Tracking animals as disease sentinels 	<ul style="list-style-type: none"> ▪ Detailed site information ▪ Response worker location coordination
	Remote sensing of the Earth and Atmosphere				<ul style="list-style-type: none"> ▪ Tracking disease and risk factors ▪ Vector-borne diseases (malaria) ▪ Air-born disease, including dust, air pollution (ex: Asthma) ▪ Waterborne diseases (ex: Cholera) ▪ Food security 	<ul style="list-style-type: none"> ▪ Disaster mapping (before and after) ▪ Planning and response ▪ Emergency tele-epidemiology
Human Space Flight	Space Life Science			<ul style="list-style-type: none"> ▪ Knowledge of the human body (ex: aging) ▪ Infection prevention 		
	Technology Development	<ul style="list-style-type: none"> ▪ Digital Applications 		<ul style="list-style-type: none"> ▪ Point of care medicine 		

2021 workplan of the WG on SGH

- Review the draft set of recommendations presented by the Chair of the Working Group on current uses of space (technology, applications, practices and initiatives) in support of global health.
- The Chair of the Working Group to submit a first draft of the report of the Working Group to the Subcommittee and a corresponding draft resolution to be submitted to the General Assembly.

Current status of the work: contributions to the questionnaire

- Contributions to the questionnaire
 - **A/AC.105/C.1/119** Australia, Germany, Japan, Mexico, Paraguay and Turkey
 - **A/AC.105/C.1/119/Add.1** Hungary, India, Committee on Space Research, Economic and Social Commission for Asia and the Pacific, and Space Generation Advisory Council
 - **A/AC.105/C.1/119/Add.2** Argentina, Colombia, Egypt, Malaysia, Peru, Saudi Arabia, International Telecommunication Union and United Nations Environment Programme
 - **A/AC.105/C.1/119/Add.3** Bolivia and Bulgaria
 - **A/AC.105/C.1/117** Algeria, Australia, Japan, Philippines, Thailand and the European Union
 - **A/AC.105/C.1/117/Add.1** Russian Federation and Switzerland
 - **A/AC.105/C.1/117/Add.2** Canada

Current status of the work: analysis of responses received – overall assessment 1/2

- Draft combined analysis, note by the Secretariat
 - Document [A/AC.105/C.1/2021/CRP.7](#) (in English only)
- Overall assessment:
 - richness and diversity of policies, experiences and practices in the use of space science and technology for global health, some of which have been particularly highlighted during the COVID-19 pandemic.
 - variability of implementations and the need for further collaboration at various levels, including policy development, capacity building, implementation and scaling-up of tools and practices.
 - knowledge about policies, experiences and practices remains scattered and cannot easily be shared and reused.

Current status of the work: analysis of responses received – overall assessment 2/2

- Gaps identified for the use of space science and technology in support of global health include:
 - Insufficient international, inter-agency, inter-organizational and interdisciplinary collaboration between health and space domains.
 - Insufficient awareness of existing space-based technologies and how they can be used in practice.
 - Insufficient competence of health workers in the use of digital technologies and information systems including those enabled by space science and technology.
 - A limited uptake of information technology in medical organizations.
 - A lack of data-sharing standards.
 - A lack of regulatory frameworks for the use of space data for decision-making purposes.
 - A limited access to data or obstacles to use the data for decision-making purposes.
 - Insufficient tools that actively use space-based technologies for forecasting and managing health-related issues.

Current status of the work: draft recommendations

- Draft recommendations, a combined list from two documents:
 - Recommendations listed in the final report on thematic priority 5: Strengthened space cooperation for global health (A/AC.105/1172)
 - Recommendations listed in the progress report by the Co-Chairs of the Expert Group on Space and Global Health on the fourth meeting of the Expert Group (A/AC.105/C.1/2018/CRP.17)
- Recommendations being implemented are removed from the combined list
- 15 updated recommendations are proposed

Draft recommendations - outline

- Policy development for strengthened collaboration between the space and global health sectors
- Policy development for strengthened data accessibility and sharing
- Development and implementation of applications of space solutions for global health
- Knowledge management and sharing
- Capacity building activities
- Regular review of the workplan

Policy development for strengthened collaboration

- **Recommendation 1:** Encourage United Nations entities, intergovernmental organizations and national Governments to pursue effective coordination in all key space activities relevant to global health (telecommunications, GNSS, remote sensing and GIS, and space life science and technology development).
- **Recommendation 2:** Encourage formal cooperative agreements between health authorities and space authorities at the national level.
- **Recommendation 3:** Encourage Member States to establish policy-enabled environment and governance mechanisms, with due consideration of legal and ethical issues, for removing barriers to the effective use of space-based technologies, including telemedicine solutions.

Policy development for strengthened data accessibility and sharing

- **Recommendation 4:** Encourage Member States to promote open data-sharing policies and participatory approaches to developing and improving access to all geospatial information relevant to global health, whenever possible.
- **Recommendation 5:** Encourage Member States to enable organizational and technical interoperability to facilitate the development and implementation of space-based science and technology in the health sector.

Development and implementation of applications of space solutions for global health

- **Recommendation 6:** United Nations entities and intergovernmental organizations should support the wider development and application of space solutions for global health and public health needs of Member States. This could be achieved by encouraging the implementation of a broader range of space solutions for sustainable development and could include public-private partnerships.
- **Recommendation 7:** Member States and participating entities are encouraged to advance their efforts related to the geotagging of all assets relevant to health systems, including health information systems, and make them available to further the attainment of health goals.
- **Recommendation 8:** Member States are encouraged to conduct appropriate drills and exercises to benchmark their operational preparedness and response capacities and capabilities for appropriate use of space technologies in responding to global health events.

Knowledge management and sharing

- **Recommendation 9:** Establish a dedicated platform for effective coordination among UN entities, other international organizations and relevant actors, on space and global health issues.
- **Recommendation 10:** Monitor and compile all key activities, reference documents and plans relevant to Space for Global Health activities by UN entities, including those of WHO and other international organizations, member States of the Committee as well as, as far as possible, non-governmental organizations and other nongovernmental actors. This annual compilation of activities will serve as a reference to identify and discuss gaps and opportunities and will be shared broadly in an effort to raise awareness and promote cooperation among relevant actors in this domain.
- **Recommendation 11:** Develop an engagement strategy to analyze and assess current actors' roles and interests in the domain of Space and Global Health. This engagement strategy is expected to be used to help to promote synergy, complementarity, cooperation and coordination among all actors.

Capacity building activities

- **Recommendation 12:** Enhance intersectoral coordination and cooperation for effective international, regional, national and subnational capacity-building activities relevant to the application of space science and technology in the field of global health. Actors engaging in such activities should consider follow-up mechanisms aimed at strengthening the sustainability of the activities.
- **Recommendation 13:** Encourage Member States to engage learning institutions and other capacity-building mechanisms in motivating young health professionals, at an early stage, to acquire space-related skills and abilities.
- **Recommendation 14:** Promote capacity-building events, to be organized by UN entities and other relevant actors, with the objective to further promote awareness and engagement of the important contribution of space science and technology among “One Health” actors. These efforts will aim to broaden the number of organizations and of other actors of the health domain actively engaged in using space science and technology.

Regular review of the workplan

- **Recommendation 15:** Attentive to the broad needs expressed over the years in the field of space and global health and taking into account future evolving needs, the Working Group will be tasked to review its terms of reference and to update its workplan as appropriate.

Next informal meeting of the Working Group

Friday 23 April from 13:00 to 15:00

- Technical presentation by J.D. Polk on lessons learned and example where spaceflight engineering and expertise has helped in the fight against COVID
- Review and discussion of recommendations as to the role and structure of the globally accessible platform, whose establishment was recommended under UNISPACE+50 Thematic Priority 5 (see A/AC.105/1172, para.74 (b)), as well as the plan for its implementation and sustainability.
 - As mandated by the Working Group in 2020 (A/AC.105/1224, Annex III, para 12)

Technical Presentations 1/2

Platform: MS Teams. No Interpretation. 12 Minutes

[Click here to join the Technical Presentations sessions](#)



19 April PM [3] “Australian initiatives in Digital Health during the pandemic crisis and after”, Ms. Chandana Unnithan, **Australia**

20 April PM [4] "Thromboembolism in Space and its Implications on COVID-19 Research on Earth", Mr. Nandu Goswami, **CANEUS International**

21 April AM [1] “Space Technology Applications in India with relevance to COVID-19”, Mr. P. Kunhikrishnan, **India**

21 April AM [2] “Copernicus & COVID 19 - The EU Earth Observation Programme Initiatives”, Ms. Astrid Christina Koch, **European Union**

Technical Presentations 2/2

21 April PM [2] “An evaluation of Earth Observation as a potential tool to forecast and manage resources during the Covid-19 pandemic”, Ms. Rochelle Velho, **SGAC**

22 April PM [4] “Spatial Information Technology and Disease Prevention & Control in China”, Mr. WANG Yong, **China**

23 April AM [3] “Space chemistry and global health: Drug development against COVID-19 in space”, Mr. Gergő Mezőhegyi, **Hungary**

23 April AM [4] "Space medicine for the Earth medicine. 60 years of the first human spaceflight", Mr. Oleg Orlov, **Russian Federation**

23 April PM [4] “Space and Pandemic”, Ms. May-Li Uy, **International Space University**

Formal meetings of the Working Group

interprefy

Wednesday, April 21/ Thursday, April 22, 3pm-5pm [exp. start 4:30pm]

- Presentation and discussion of the work schedule of the space and global health working group during the subcommittee 58th session
- Presentation of the draft list of proposed recommendations of specific topics of interest within the health and space domains that could provide an orientation for analyzing possible existing gaps in national, regional and international capacities in using space science and technology and their applications for global health

Friday, April 23, 3pm-5pm

- Presentation and discussion of the work progress

Wednesday, April 28, 11am-1pm

- Presentation and adoption of the Space and Global Health WG report

STSC session: 19-30 April 2021

	Mon, 19	Tue, 20	Wed, 21	Thu, 22	Fri, 23	Sat / Sun
11:00-13:00			WGW	WG LTS	WG LTS	
13:00-15:00	Informals WG NPS	Informals WG SGH	Informals WG LTS	Informals WG NPS	Informals WG SGH	
15:00-17:00		STSC Plenary Item 15 SGH	Item 15 SGH			
		WG LTS	WG NPS WG SGH	WG NPS WG SGH	WG NPS WG SGH	
	26	27	28	29	30	
11:00-13:00			Reports: WGs NPS SGH , WGW	STSC Report		
	Informals WG LTS					
15:00-17:00		IAF Symposium	Report adoption WG LTS			

THANK YOU