

WORKING GROUP ON SPACE AND GLOBAL HEALTH

Questionnaire on the use of space science and technology for global health

1. Contact Person

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2. Questionnaire

2.1. Please describe existing or planned formal cooperative agreements and other institutional arrangements (Memorandums of Understanding, Letter of Agreement, Frameworks of Collaboration, etc.) between the health sector and other sectors directly involved in space activities at the national level.

The Paraguayan Space Agency (AEP) is working closely with the Ministry of Health, specifically with the National Malaria Eradication Service (SENEPA¹) that deals with all vector-transmitted diseases. The main objective of this collaboration is to provide tools for better decision-making using satellite data and Geographic Information Systems (GIS) learning from the best practices and lessons learned of other countries.

This collaboration between AEP, Pacific University² and the Center of Geomatic Studies³ make possible that GIS students develop projects to solve real health-related problems.

The plan is to sign a Memorandum of Understanding between AEP and the Ministry of Health, in December 2020, after a presentation of first results in Dengue Disease.

2.2. Please provide recommendations regarding the establishment of a dedicated platform of effective coordination among United Nations Entities, other international organizations and relevant actors on space and global health issues.

The sharing of information and knowledge is crucial to solving not only health but also other needs; it will be constructive to have a centralized portal to have shared data and to provide access to capacity building, this is vital because we are sharing the



¹ <https://www.mspbs.gov.py/senepa>

² <https://www.upacifico.edu.py/>

³ <https://centgeo.com/>

almost same challenges in all countries. There are best practices and lessons-learned that represents a valuable knowledge-base to improve the government response. Some countries had an excellent response, i.e. in the CoVid-19 pandemic that can help to understand better and to respond better to a health crisis.

2.3. Please describe existing or planned policy-enabled environmental and governance mechanism for removing barriers to the effective use of space-based technologies in support of global health.

We do not have information on this subject.

2.4. Please describe existing or planned policies on open data sharing and participatory approaches to developing and improving access to geospatial information relevant to global health.

The Ministry of Health⁴ has an open-data policy, and that is how we make possible the collaboration between the academia, Government and private sectors. The AEP is promoting the strengthen in the government capacities to use more actively and effectively geospatial data.

2.5. Please provide existing or planned efforts related to the geotagging of all assets relevant to health systems, including health information systems.

We do not have information on this subject.

2.6. Please describe existing or planned 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.

AEP is actively exploring possibilities with other Space Agencies like CONAE, CONIDA, ESA, NASA, ROSCOSMOS, NSPO and with other organizations like UNOOSA, GEO, AmeriGEO and others, to provide data and capacity building. In 2019 we activated two times the International Charter for Space and Major Disasters.

2.7. Please describe existing or planned mechanism to engage educational institutions and other capacity-building mechanisms in motivating young health professionals to

⁴ <https://www.mspbs.gov.py/index.php>



acquire skills and abilities required to efficiently use advantages provided by space technology, science and applications at an early stage in their careers.

Paraguay joined the NASA GLOBE program in the year 2000, engaging students and teachers to promote science, there are more than 120 schools involved, this initiative is promoted by civil society organizations, the country Coordinator is Dr Antonieta Rojas de Arias, President of the Scientific Society of Paraguay.

2.8. Please provide existing or planned mechanism to better integrate space-derived data and information into decision-making processes related to global health, and to harmonize and share such data.

AEP and other institutions of the Paraguayan Government are starting to use more actively space derived data and information, the Ministry of Health has a portal on CoVid-19⁵ and the initiative mentioned in the response 2.1 is to improve the decision-making in other epidemics with an open data policy.

2.9. Please describe how space technology and applications are integrated into health-related emergency planning and management and disaster management plans

From 2019 AEP is working with the National Emergency Secretariat⁶ and helping to provide better data and tools for decision-making using the international cooperation actively, from 2020 started to collaborate with the Ministry of Health also to provide space-related tools to improve the response in Dengue disease as a first step. For 2021 the plan is to extend to other vector-transmitted conditions like Zika, Chikungunya, Leishmaniasis, Chagas and others.

2.10. Please describe key activities, reference documents and plans relevant to the topic "Space for global health."

The described initiatives are in development, the results we are planning to publish next year, the Charter activations are in the charter portal, and the planned activities for 2021 will be published as well when the results are available.



⁵ <https://www.mspbs.gov.py/monitoreo-fases-covid19.html>

⁶ <https://www.sen.gov.py/index.php/noticias/reunion-de-intercambio-tecnico-con-la-nasa>

2.11. Please provide an overview of existing and planned practices and initiatives in the current uses of space (technology, applications, practices and initiatives) in support of global health and identify gaps, if any, in the following areas:

2.11.1. Telemedicine and Telehealth: The National Government has a program called digital agenda⁷ that will improve access to telemedicine and telehealth.

2.11.2. Tele-epidemiology and environmental health: response 2.1 gives an approach on this subject.

2.11.3. Space life sciences: No plans at the moment

2.11.4. Disaster and health emergency management: The activation of the International Charter on Space and Major Disasters was a beginning in working with emergency response and humanitarian aid.

2.11.5. Other: as we mentioned above, some initiatives have been developed and executed with the help of schools like the NASA GLOBE program for many years, that involves students, teachers, scientist and citizens to promote science and learning about the environment⁸.



⁷ <https://www.mitic.gov.py/agenda-digital/portada>

⁸ www.nasa.gov/solve/feature/globe