

34th IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)
Space Assets and Disaster Management (4)

Author: Dr. Yvan Zolo
Space Generation Advisory Council (SGAC), South Africa, yvanzolovie@gmail.com

Mr. Charles-aimé Nzeussi Mbouendeu
International Space University (ISU), France, nzeussicharles@gmail.com

HARNESSING THE POTENTIAL OF SPACE AND SPACE TECHNOLOGIES FOR GLOBAL
SURGERY IN LOW- AND MIDDLE-INCOME COUNTRIES**Abstract**

Surgical systems in Low and Middle-Income Countries (LMICs) are often plagued with numerous challenges. The Lancet Commission on Global Surgery engaged experts across the global health community to identify the significant issues related to the equitable delivery of quality surgical care in areas of conflict, disaster, and in high-income settings as well as define the best strategies for the provision of surgical care with a focus on health systems in LMICs. It was found that LMICs have the least infrastructural and human capacity for surgical care delivery worldwide, while most of the Global Surgical disease burden is found in LMICs. Moreover, a significant proportion of the surgical procedures needed to save lives and prevent disabilities are found in LMICs, where most patients face catastrophic health expenditures due to surgical care payments each year. Global surgery attempts to improve the provision of safe, timely, and affordable surgical care with an emphasis on resource-limited settings and communities affected by crises/disasters. Multiple initiatives to strengthen surgical systems in LMICs have seen the day across the globe, powered by high-income countries. This help from high-income countries often comes with a couple of constraints and conditions. Recently, Space and Space Technologies are experiencing a fast and robust integration into the sustainable development of LMICs across the globe. This has led to the creation of national, sub-regional, and even regional space agencies/societies to help coordinate the development of the Space sector in LMICs. Most of the activities done by these Space agencies/organizations are centered around developing locally relevant solutions to local problems. This approach has led LMICs to launch nanosatellites that are cost-effective permitting these countries to effectively meet objectives that were once out of reach due to the cost of traditional satellites. We have witnessed LMICs taking over their destiny without any significant “assistance” (stewardship or meddling) from high-income countries. Surgical systems in LMICs could benefit from this revolution. It is paramount for LMICs to incorporate Global surgery as one of the fields requiring attention by their Space programs, as is the case with agriculture, maritime domain surveillance, and even wildlife protection. Involving Global surgery experts from LMICs in the elaboration of Space policies and Space programs to ensure the effective utilization of Space technologies in improving access to safe, timely, affordable, and quality surgical care is a sure way to strengthen surgical systems sustainably in LMICs.