

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)  
Tools and Technology in Support of Integrated Applications (2)

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CLIMATE LINKS: A TERRESTRIAL CLIMATE DATA COLLECTION NETWORK  
COMPLEMENTING SATELLITE OBSERVATIONS**Abstract**

The increase in the number of satellites dedicated to studying climate variables and the establishment of international programs such as the Global Earth Observation System of Systems show that space infrastructure plays a key role in understanding the mechanisms and effects of climate change. Although increasing amounts of climate data are being collected from space, there remains a lack of in situ data collection to correlate and validate the satellite-collected data. The reason for this deficiency is that traditional methods of terrestrial data collection are often expensive and time consuming. This report envisions a comprehensive system of sensory devices for proficient users in the scientific community and non-specialized users in the public to address the above-mentioned shortcomings. The main focus is to establish requirements for a pilot study in Nigeria using stationary data collection devices (the ‘Green-Boxes’) for the systematic collection of precise and accurate data of ten essential climate variables. This integrated system includes all components required for collection, management, and distribution of the sensory data to appropriate users such as scientists and the general public. This paper presents recommendations for the system architecture and implementation plan, as well as discusses social and political impacts and legal consideration during the pilot project in Nigeria.