Background Note 6 for

UN Workshop on Building Capacity and Scaling up Adoption of STI4SDGs Roadmaps in Africa

Oct. 12-13, 2023, in Addis Ababa, Ethiopia; co-organized by DESA, ECA, and EC/JRC.

Proposal on Harnessing Big Earth Data Technology to Implement the STI4SDG Roadmaps in Africa

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Introduction

In response to the STI4SDG in Africa Roadmaps Initiative and the launch of the Coalition on Science, Technology, and Innovation for Africa's Development, and as a contribution to the Workshop on Building Capacity and Scaling up STI Actions and Adoption of Countries' STI4SDGs Roadmaps in Africa in Addis Ababa, the International Research Center of Big Data for Sustainable Development Goals (CBAS) is convening a roundtable on "Strengthening Capacities to Access and Use Relevant Open Data - Big Earth Data for SDGs". The session is jointly organized by the International Science Council (ISC), the World Federation of Engineering Organizations (WFEO), International Centre on Space Technologies for Natural and Cultural Heritage under the auspices of UNESCO (HIST) and the CAST-UN Consultative Committee on Disaster Risk Reduction (CCDRR).

As a technical and scientific contribution to this Workshop, CBAS would like to propose the following action plan for leveraging Big Earth Data in the implementation of the Science, Technology, and Innovation (STI) roadmap for the Sustainable Development Goals (SDGs) in Africa for consideration by the co-organizers the workshop: DESA, ECA, and EC/JRC. This action plan aims to harness the power of Big Earth Data for the implementation of the SDGs in Africa. By focusing on the development, sharing, and application of Big Earth Data, we aim to fill data gaps, empower researchers, train young students, and accelerate S&T progress toward achieving the SDGs in Africa. It is imperative that we make the best use of cutting-edge technologies to address the region's unique challenges and unlock its vast potential for sustainable development in Africa.

Action Plan:

1. **Enhancing Big Earth Data Acquisition and Analysis:**
   - Forge strategic partnerships with international and national space agencies and organizations to improve the acquisition and analysis of Big Earth Data.
   - Call for more funding opportunities for research projects focused on harnessing Big Earth Data for SDG-related assessments, monitoring, and solutions tailored to the African contexts.
2. **Developing an Efficient Big Earth Data Sharing and Application System:**
   - Invest in the development of a robust and user-friendly Big Earth Data sharing and application system, ensuring accessibility to a wide range of stakeholders.
   - Facilitate collaboration between data providers, researchers, and policymakers to enable the seamless use of Big Earth Data in decision-making processes.
3. **Capacity Building and Innovation in Big Earth Data:**
   - Launch capacity building programs, workshops, and training initiatives to equip African researchers, including youth and diaspora communities, with advanced skills in utilizing Big Earth Data for SDG assessments.
   - Promote innovation in Big Earth Data analysis and visualization for improved SDG monitoring and reporting.
   - Provide training and educational programs for young talents and facilitate various events to promote the use of SDGSAT-1 and the Big Data Platform, as well as foster entrepreneurship for the SDGs in Africa.
4. **Showcasing Best Practices in Big Earth Data Applications:**
   - Highlight successful case studies of Big Earth Data applications in Africa, such as desert locust monitoring, groundwater storage assessment, cropland water-use efficiency assessment, land cover dynamics mapping, etc.
   - Showcase the infrastructure and tools developed by organizations such as CBAS, including the Big Earth Data online platform and the SDGSAT-1 satellite.
5. **Strengthening Collaborations for Big Earth Data Initiatives:**
   - Foster collaborations between CBAS, African countries, international funders, and UN DESA to promote the use of Big Earth Data to advance the SDGs in Africa.
   - Explore joint projects, knowledge sharing, technical assistance, and capacity building programs to accelerate the adoption of Big Earth Data.