Africa – Space & Sustainable Development

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About SSTL

- UK based company, founded in 1985
- World's leading supplier of small satellite missions
- 34 satellites launched to-date, 8 more in production
- Global customer base:
  - Europe, N&S America, Africa, Asia
- Supplier of Europe's 1st Galileo Satellite, GIOVE-A

African Space Successes

- Africa already benefits from use of Space
  - African communications infrastructure supported by telecommunications satellites
  - Growing use of Earth observation data for a range of environmental, meteorological and agricultural applications
  - Several African states already taken steps to becoming space-faring nations e.g. S Africa, Egypt, Morocco, Algeria, Nigeria
- African Participation in DMC
  - Unique international collaboration of 6 countries
  - AlSat-1, NigeriaSat-1, NigeriaSat-2, NigeriaSat-X

Case Study: Algeria

- 1st African nation to procure its own EO space asset when it joined the Disaster Monitoring Constellation (DMC) in 2002
- Successful SSTL training programme ran in parallel with satellite development
- Mission led to creation of Algerian space agency
- Applications include:
  - Disaster management (Earthquake, Flood, Fire)
  - Desertification and water management
  - Urban planning
  - Mapping
  - Agriculture/Vegetation monitoring
  - Pest monitoring e.g. Locust migrations

Case Study: Nigeria

- Joined Disaster Monitoring Constellation (DMC) in 2003
- Successful SSTL training programme ran in parallel with satellite development
  - 50 Nigerian engineers trained over 8 years
- Follow-on programmes implemented by NASRDA in areas of

telecommunications, data continuity of DMC, high resolution imaging
- 2nd Nigerian DMC satellite built by Nigerian engineers

Direct Benefits of Space Programme

- Essential information for environment, agriculture, mapping, disaster management applications
  - More efficient land use management
  - Better response to emergencies
  - Environmental resource management

- Creation of 'downstream' industry making use of data from space
  - Helping to create a knowledge-based economy

Economic Benefits

- Capacity Development – training future generations of African engineers capable of applying space solutions to "real world" problems in Africa

- Creation of hi-tech jobs for:
  - Economic growth and diversity
  - As a "beacon" for students to study science, technology, engineering & mathematics (STEM)
  - To provide attractive and interesting jobs encouraging engineers to not emigrate

Role of the EU

- The EU could support current African initiatives
  - Supporting training programmes
  - Supporting exploitation of existing assets
  - Avoid overlap with indigenous African space programmes
- The EU could encourage more African nations to make use of Space
  - Publicising benefits of space
  - Financial support?

Conclusions

- **SSTL is enabling African nations to benefit from space:**
  - training programmes for engineers
  - capacity building for the future
  - creating essential operational capability

  - *Under African management & control*

- **As an aid to sustainable development of Africa**