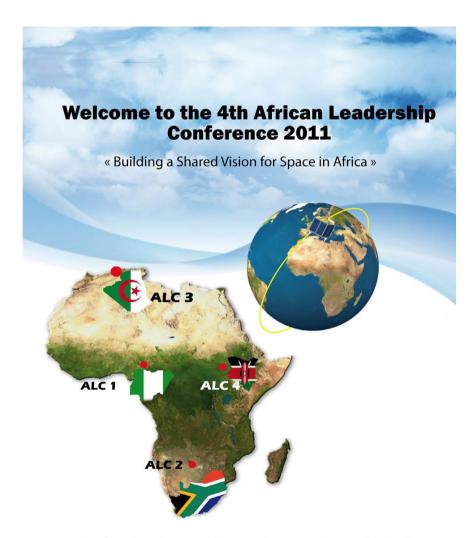


Space Technology Development in Africa

Werner Balogh
United Nations Office for Outer Space Affairs

4th African Leadership Conference on Space Science and Technology for Sustainable Development "Building a Shared Vision for Space in Africa" Mombasa, Kenya, 26-28 September 2011

Contents



White Sands Beach Hotel - Mombasa, KENYA, 26-28 September, 2011

- Objectives
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objectives

Objectives

- To include observations and recommendations relevant to capacity building in space technology development for Africa in the "Mombasa Declaration"
- To provide guidance on how the recommendations contained in the "Mombasa Declaration" can be implemented, for example by preparing a "Plan of Implementation"

Programme

Day 1 – 26 September 2011

Session 3: Space Technology Development in Africa (Chair: Werner Balogh, Rapporteur: Danielle Wood)

| Time | Title | Speaker |
|-------|--|------------------|
| 14:15 | Session Introduction | Werner Balogh |
| 14:30 | Africa's Technology Futures | Dirk Swart |
| 14:50 | Small Satellites for Capacity Building in Space Technology Development | Rainer Sandau |
| 15:10 | CubeSat | Jordi Puig-Suari |
| 15:30 | Collaborative Nano-satellite Programmes for Socio-economic Development in Africa | Robert van Zyl |
| 15:50 | What We Can Do for Capacity Building in Space Science and Technology in Africa | Rei Kawashima |
| 16:00 | CANEUS | Milind Pimprikar |
| 16:10 | United Nations Basic Space Technology Initiative | Werner Balogh |
| 16:30 | Tea/Coffee Break | |

Day 1 – 26 September 2011

 Following the end of the day establish a working group to meet in the evening after 7 PM to prepare a draft on possible observations and recommendations

Day 2 – 27 September 2011

Session 9: Space Systems and Engineering in Africa

(Chair: TBD, Rapporteur: TBD)

| Time | Title | Speaker |
|-------|---|--------------|
| 15:45 | SunSpace Experience with Sumbandilsat | Ron Olivier |
| 16:10 | Nigerian Experience in Space Systems and Engineering | Femi Agboola |
| 16:35 | Discussions on the Status of Aerospace Engineering in Africa and the Way Forward | All |
| 17:00 | Finalization of Recommendations | All |
| 17:30 | End of Session | |

Day 3 – 28 September 2011

Session 9: Space Technology and Space Law

| (Chair: Niklas | Hedman, | Rapporteur: | TBD) |
|----------------|---------|-------------|------|
|----------------|---------|-------------|------|

| Time | Title | Speaker |
|-------------|---|------------------|
| 09:00 | Responsibility, liability and registration under the space law treaties | Armel Kerrest |
| 09:30 | International law and domestic legal systems: Space law in Nigeria and South Africa | Tare Brisibe |
| 10:00 | Space debris mitigation and space law | Sergio Marchisio |
| 10:30 | Discussion on recommendations | All |
| 11:00 | End of Session | |
| Followed by | Observations and Recommendations Mombasa Declaration | All |

(Draft) Mombasa Declaration – Relevant Parts

- (a) For protection of Africa's natural environment and the collective management of the continent's resources, action should be taken:
 - a. To develop and implement the African Resource Management Constellation;
 - b. To make maximum use of existing capabilities in worldwide satellite coverage;

(Draft) Mombasa Declaration – Relevant Parts

- (c) For the development of Africa's human capital resources in space science and technology, action should be taken to:
 - a. To improve access to high-level education and training in space science and technology on the continent;
 - b. To acknowledge and harness the expertise already present on the African continent through the development of a comprehensive database of African space science and technology experts;
 - c. To align with existing human capital development initiatives of the African Union;
 - d. To utilize existing training centres in Africa and to promote greater cooperation among education and training institutions to develop appropriate training programmes in space science and technology that respond to Africa's needs;
 - e. To promote knowledge sharing through regional space conferences and through scholarly interaction among African institutions;
 - f. To support the existing networks and associations of space professionals in Africa;

(Draft) Mombasa Declaration – Relevant Parts

- (a) For the advancement of scientific knowledge of outer space and to protect the space environment for future generations, action should be taken:
 - a. To improve intra-African cooperative activities in such areas as astronomy, space physics, the study of near-Earth objects and to encourage participation of African institutions in global lunar and planetary exploration efforts;
 - b. To protect the near-Earth space environment through responsible actions in outer space, including the implementation of the UN COPUOS Space Debris Mitigation Guidelines of the United Nations Committee on the Peaceful Uses of outer Space, and other established international best practices in this regard;
 - c. To ensure that the activities of African States do not introduce electromagnetic interference that may disrupt space applications or interfere with Earth observation in certain bands or ground-based astronomical activities;

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