



UNISPACE+50

*The High Level Forum: Space as a Driver for Socio-Economic Sustainable
Development*



United Nations/United Arab Emirates, 20-24 November, 2016

UNITED NATIONS/KENYA CONFERENCE ON WILDLIFE MANAGEMENT AND BIODIVERSITY PROTECTION

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Overview of the Presentation

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Introduction



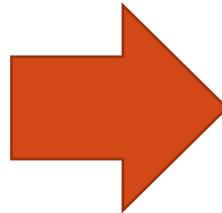
The Kenya National Commission for Science, Technology and Innovation (NACOSTI) was established by Science, Technology and Innovation Act, 2013

MANDATE

The National Commission for Science, Technology and Innovation (NACOSTI) is the lead government agency on all matters relating to scientific and technological activities and research necessary for proper development of the country.

The ST&I Act, 2013 provides a framework for a coordinated approach to the management of a knowledge-based economy to achieve the aspirations of the Kenya Vision 2030 & compliance with the Constitution of Kenya, 2010

The Act is meant to facilitate the advice, promotion, coordination and regulation of the progress of Science, Technology and Innovation (ST&I) in the Country.



Earth & Space Science Schedule

Has the mandate to:

- Provide evidence-based policy advice to the Government on space related research
- Promote research in space science activities & programmes
- Coordinate research in space science activities & programmes
- Ensure compliance by space sciences related researchers and research institutions for purposes of improving R & D for national social-economic development in Kenya



United Nations/Kenya Conference on Space Technology and Applications for Wildlife Management and Protecting Biodiversity



27-30 JUNE 2016, UNITED NATIONS OFFICE AT NAIROBI, NAIROBI, KENYA

Organized by the United Nations Office for Outer Space Affairs

and the Government of the Republic of Kenya

supported by the European Space Agency

and hosted by the United Nations Environment Programme (UNEP)





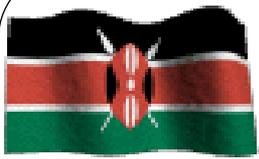
Conference Venue-UNON, Gigiri



UNITED NATIONS OFFICE IN NAIROBI



The United Nations Office in Nairobi (UNON)-the United Nations headquarters in Africa and headquarters of the environment in the world



Space-based Technologies and Applications for Wildlife Management and Biodiversity Protection



The United Nations/Kenya Conference on Wildlife Management and Protecting Biodiversity was held in the auspices of SDG 15 (Life on Land)



Focus: Review existing and planned space-based technologies and applications for Wildlife Management and Protecting Biodiversity towards meeting the relevant targets set out for Sustainable Development Goal 15 and to inform the preparations towards the UNISPACE+50



Relevant Organizations & initiatives



Conference came at a time when several organizations (listed below) implementing relevant initiatives are engaged in exploring means by which space-based technologies and geospatial data can more effectively support their work.

- ❖ United Nations Environment Programme (UNEP)
- ❖ United Nations Office on Drugs and Crime (UNODC)
- ❖ Secretariat of the Convention on Biological Diversity (UNCBD)
- ❖ Secretariat of the Convention on International Trade in Endangered Species (CITES)
- ❖ Lusaka Agreement Task Force (LATF)
- ❖ NGOs and expert communities e.g World Resources Institute (WRI)
- ❖ International Union for Conservation of Nature (IUCN)
- ❖ Wildlife Conservation Society
- ❖ Conservation Remote Sensing group
- ❖ etc

Participants

Drawn from experts, policy/decision-makers directly involved in the planning or implementation of projects related to wildlife management and biodiversity protection (e.g. Wildlife managers and park rangers, national/international space agencies, governmental/NGOs, research institutions, industry, universities/academic institutions. Over 300 participants attended the Conference.

ASIA

Japan
Thailand
India
Viet Nam
Jordan

SOUTH AMERICA

Uruguay
Mexico

International &
Regional space
organizations

EUROPE

France Germany
Netherlands Austria
Italy
Antigua
Barbuda Hungary
Australia

AFRICA

Uganda
Congo
United of Tanzania
Zambia
Liberia Ethiopia
Cameroon
South Africa
Nigeria

OTHERS

ESA
UNEP
UNODC UNOOSA
UNDP INTERPOL
CITES
World Bank
LATF



**Group Photo:
United Nations/Kenya Conference on Wildlife management and Protecting
Biodiversity, 27 -30 June, 2016 Nairobi, Kenya**



Main objectives



The Conference objectives were to:

- ❖ Present experiences with existing and planned state-of-the-art space technologies and applications that provide solutions for wildlife management (flora and fauna) and for protecting biodiversity,
 - ❑ including biodiversity assessments
 - ❑ ecosystem and wildlife habitat management
 - ❑ wildlife monitoring and tracking, as well as for addressing wildlife crime, by documenting and preventing poaching
- ❖ Bring together and connect the stakeholders involved in relevant initiatives, including those with mandates responsibilities;
- ❖ Present capacity building opportunities to implement space-based solutions
- ❖ Discuss opportunities for cooperation
- ❖ Consider relevant legal and regulatory aspects
- ❖ Develop observations and recommendations for the best way forward in using space based solutions for wildlife management and protecting biodiversity.

Conference Programme



Opening Session

- ❖ **Remarks:** UNEP, UNOOSA, ESA were made before the official opening.
- ❖ **Official opening:** Prof. Judi Wakhungu, the Cabinet Secretary, Kenya Ministry of Environment and Natural Resources (MENR).
- ❖ **Key note addresses (2):**
 - ❑ Wildlife Management and Biodiversity: the issues and Protecting biodiversity
 - ❑ Ecosystems by representatives of Kenya Wildlife Service (KWS) and UNEP respectively.
- ❖ **Conference introductions:** UNOOSA and the Principal Secretary, MENR

Opening Session



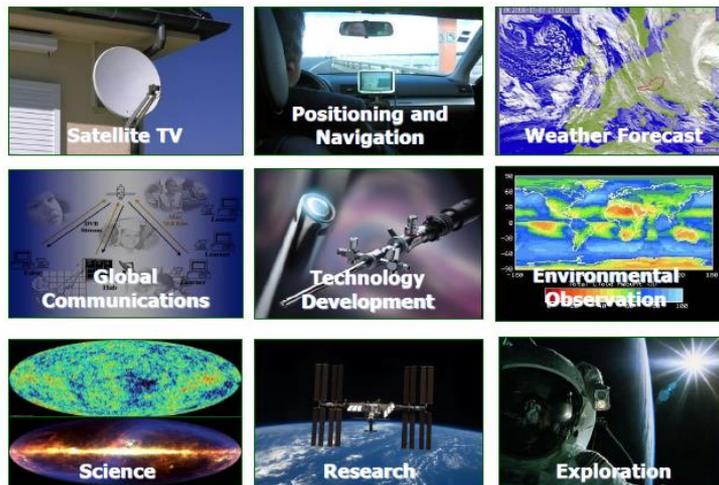
- ❖ **Plenary sessions:** These were organized in nine Sessions under the following themes:
 - ❑ *Session 1: Wildlife Management and Protecting Biodiversity: Issues and Space Technology Solutions (6)*
 - ❑ *Session 2: Biodiversity Assessment (7)*
 - ❑ *Session 3: Ecosystem and Wildlife Habitat Management (6)*
 - ❑ *Session 4: Wildlife Monitoring and Tracking for Law enforcement (6)*
 - ❑ *Session 5: Addressing Wildlife Crime (6)*
 - ❑ *Session 6: Legal , Governance and Policy challenges in Information Sharing for Wildlife Management (5)*
 - ❑ *Session 7: Capacity Building, Awareness Raising and Outreach (6)*
 - ❑ *Session 8: International Experiences and Cooperation Opportunities (6)*
 - ❑ *Session 9: Observations and Recommendations and the Way Forward (Round Table discussion and conference review by all participants)*
- ❖ Discussions on the themes were all linked to 2030 Agenda for Sustainable Development under SDG15 and to inform the preparations towards UNISPACE+50.



Presentations (1)



Benefits from Space Activities



Studies Have Shown That Up To 60% of All Economic Activities are Weather Sensitive:
Agriculture and Livestock Development



Agricultural Activities: Tending Coffee



Agricultural Activities: Maize Plantation



Pastoral Activities Maasai Herdsmen



Pastoral Activities: Dairy Farming



The herbivores

Satellite Data Applications



Forest Monitoring



Water Resource Management



Food Safety & Security



Disaster Prevention & Mapping



Fishery & Environmental Conservation



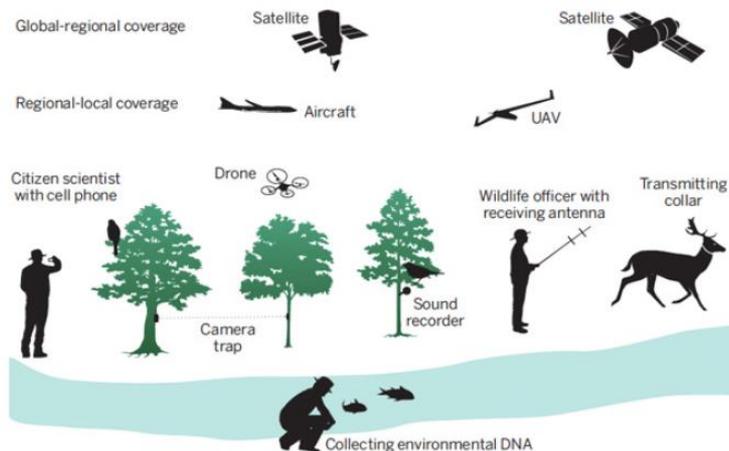
Value-added Products



Presentations (2)



NGOs work with governments throughout the illegal wildlife trade chain



Sensor power: Networking satellite and airborne remote sensing with in situ sensing will allow changes in many elements of biodiversity to be tracked over time.

Image courtesy of SCIENCE.

Vegetation variation wcs
In MFPA

Threat

Panel Discussions

Panel discussions (2) were held on:

Day 1

- ❖ Space technology solutions for Wildlife Management and Biodiversity

Day 2

- ❖ Integrated Solutions for Wildlife and Biodiversity Management- Opportunities and Challenges for Using Space Technology-based Solutions

Exhibitions/Poster sessions



Time was set aside on Day 3 (Wednesday) of the Conference for:

- ❖ Poster Session
- ❖ Special Presentations and Demonstrations (hands-on training exercises)

A total of over 15 Posters were presented varying from:

- ❖ Application of GIS and Remote Sensing in Wildlife Management;
- ❖ Challenges faced by African Institutions in Addressing science-based policy making;
- ❖ Prediction of impact of climate change on carbon storage on agroforestry tree species along the elevation gradients of Mt. Kilimanjaro and Taita Hills;
- ❖ Use of multi-criteria evaluation and expert knowledge in developing protected area zoning plans in Jordan;
- ❖ Bid data, ICT and Space Technologies in Biodiversity Preservation: benefits and Obstacles;
- ❖ Use of application of satellite images in monitoring forest cover dynamics in the South East of Cameroon;
- ❖ Among others

RECEPTION

At the Conference participants were hosted to a reception
UNEP-UNON, Gigiri



Excursion



Entrance to Nairobi National Park
(The only National Park in a Town in the World)

Conference Outcomes

- ❖ Brought together space representatives, policy & decision makers, Academia and wildlife managers to address wildlife and ecosystem monitoring.
- ❖ Case studies demonstrated the wide field of operational space applications.
- ❖ Highlighted opportunities and challenges, particularly in the African region, and addressed possible solutions to the problems.
- ❖ Emphasized the need for the industry to support capacity of African institutions. (linkage between Industry, Academia and Government) was emphasized.
- ❖ Report on the Conference to be shared with the UNCOPOUS.
- ❖ Follow-up on the Conference observations and recommendations by the Government of Kenya through the Ministry of Environment and Natural Resources.

Conclusions & Wayforward

- ❖ The Conference demonstrated several uses of space applications for wildlife management and biodiversity protection.
- ❖ The Conference identified the need for further capacity building, specifically, in the field of geospatial applications.
- ❖ It built networks between representatives of the space community, policy/decision makers, academia, wildlife and biodiversity managers.
- ❖ UNOOSA would make further follow-up on capacity building under the United Nations Programme on Space Applications-based thematic priority on biodiversity and ecosystems.
- ❖ The Conference participants made use of opportunities to network and socialize, and get to know each other.

At the close of the Conference, the Government of Kenya *acknowledged* UNOOSA for the support and considering Kenya as the host of the 1st Conference on Wildlife Management and Biodiversity Protection in Africa

THANKS



<http://www.nacosti.go.ke/>