55<sup>th</sup> session of the Scientific and Technical Sub-Committee Vietna, 29 January – 9 February 2018

# Italian engagement in capacity-building activities in Africa



Gabriella Arrigo Head of International Relations Unit Italian Space Agency (ASI)

agenzia spazia



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3 GOOD HEALTH

4 QUALITY

5 GENDER

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# **Capacity building in Africa: a priority for Italy**

**10** REDUCED INEQUALITIES

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9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 11 SUSTAINABLE CITIES 12 RESPONSIBLE CONSUMPTION

Capacity building in Africa as key to attain Africa's self-reliance In the long term, capacity building allows to find indigenous solution to African issues

6 CLEAN WATER AND SANITATION

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Thematic priority 7 Capacity-building for the twenty-first century



8 DECENT WORK AND ECONOMIC GROWTH



13 CLIMATE ACTION

15 LIFE ON LAND

16 PEACE, JUSTICE AND STRONG 17 PARTNERSHIPS FOR THE GOALS

14 LIFE BELOW WATER

55<sup>th</sup> session of the STSC - Vienna, 29 January – 9 February 20



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3 GOOD HEALTH AND WELL-BEING

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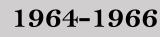
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6 CLEAN WATER AND SANITATION

7 AFFORDABLE A

# The Broglio Space Center in Malindi (Kenya): 50 years of history

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9 INDUSTRY, INNOVATION 10 REDUCED INEQUALITIES

8 DECENT WORK AND ECONOMIC GROWTH

Foundation and completion of the **San Marco** equatorial space facility in Malindi (Kenya):

13 CLIMATE ACTION

15 LIFE ON LAND

16 PEACE, JUSTICE AND STRONG INSTITUTIONS 17 PARTNERSHIPS FOR THE GOALS

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14 LIFE BELOW WATER

• 3 sea platforms

11 SUSTAINABLE CITIES 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

• a ground segment on the Kenyan coast

1967-1988

27 launches of satellites perfomed in collaboration with NASA.

**Today** Ground control activities and data receiving for international missions.



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3 GOOD HEALTH AND WELL-BEIN

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## **Italian capacity-building activities for Kenyans**

8 DECENT WORK AND ECONOMIC GROWTH

Deepening of the bilateral relations and growing of the awareness that it is a **source of mutual scientific, technical and economic benefits** 

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6 CLEAN WATER AND SANITATIO

Education and training are a priority of the cooperation ASI in charge of:

 providing scholarships and fellowships for Kenyan nationals

13 CLIMATE

14 LIFE BELOW WATER 5 UIFE ON LAND 16 PEACE, JUSTICE AND STRONG

17 PARTNERSHIPS

- **promote joint application** for international initiatives and funding programs
- promote joint research projects



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3 GOOD HEALTH AND WELL-BEING

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## Italy and Kenya Joint programs and activities

10 REDUCED INEQUALITIES

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**Collaboration between** Sapienza University of Rome and University of Nairobi

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6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

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8 DECENT WORK AND ECONOMIC GROWTH

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Joint research projects:

• **SBAM** (System Implementation and Capacity Building for Satellite-Based Agricultural Monitoring and Crop Statistics in Kenya project)

13 CLIMATE

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16 PEACE, JUSTICE AND STRONG

17 PARTNERSHIPS FOR THE GOALS

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15 LIFE ON LAND

14 LIFE BELOW WATER

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• **IKUNS** (Italian-Kenyan University Satellite project)

#### 2017

Joint International Post-Graduate Course in **Space Mission Design and Management** 



3 GOOD HEALTH

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## **1KUNS** and the UN/Japan "KiboCUBE" Program

10 REDUCED INEQUALITIES

8 ECONOMIC GROWTH

6 CLEAN WATER AND SANITATIO

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University of Nairobi selected with a proposal for a "**1st Kenyan University Nano-Satellite (1KUNS)** Precursor Flight", **supported by ASI and Sapienza University of Rome** 

14 LIFE BELOW WATER

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15 LIFE ON LAND 17 PARTNERSHIPS

13 CLIMATE ACTION

# **19 January 2018 1KUNS handed over to JAXA** and ready to fly to the ISS and to be released from there into earth orbit

th session of the STSC - Vienna, 29 January – 9 February 2018



2° International Space Forum at Ministerial Level AFRICAN CHAPTER

> **13 February 2018** -Space Science and Academia for sustainable development in Africa

> > $55^{\text{th}}$  session of the STSC - Vienna, 29 January – 9 February 2018



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4 QUALITY

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#### 1<sup>st</sup> International Space Forum (ISF) - Trento, 2016

10 REDUCED INEQUALITIES



The 1<sup>st</sup> ISF was jointly organized by the Italian Space Agency (ASI) International Astronautical Federation (IAF) and International Academy of Astronautics (IAA)

8 DECENT WORK AND ECONOMIC GROWTH



14 LIFE BELOW WATER

15 LIFE ON LAND

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13 CLIMATE ACTION

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17 PARTNERSHIPS FOR THE GOALS

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**Climate Change** 

6 CLEAN WATER AND SANITATION

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**Big Data Management** 

**Earth Protection** 

55<sup>th</sup> session of the STSC - Vienna, 29 January - 9 February 2018



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3 GOOD HEALTH

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# 2<sup>nd</sup> ISF – Nairobi, 13 February 2018

55<sup>th</sup> session of the STSC - Vienna, 29 January - 9 February 2018

8 ECONOMIC GROWTH 9 AND INFRASTRUCTURE 10 REDUCED

The 2<sup>nd</sup> ISF is jointly organized by the Italian Space Agency (ASI) International Astronautical Federation (IAF) Kenya Space Agency (KSA)

6 CLEAN WATER AND SANITATION

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14 LIFE BELOW WATER

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15 LIFE ON LAND 16 PEACE, JUSTICI AND STRONG 17 PARTNERSHIPS FOR THE GOALS

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**Topics and Keynote speakers** 

11 SUSTAINABLE CITIES 12 RESPONSIBLE AND COMMUNITIES 12 CONSUMPTION AND PRODUCTIO 13 CLIMATE ACTION



**Space Partnerships** 

**Environmental Sustainability** 

Valanathan Munsami (SANSA, African Union representative)

Jan Woerner (ESA Director General)

Simonetta Di Pippo (UNOOSA Director)



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# 2<sup>nd</sup> ISF – Nairobi, 13 February 2018

10 REDUCED INEQUALITIES

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9 INDUSTRY, INNOVATION

• Adoption of the AFRICAN Page, to be added to the Trento Space Statement adopted in 2016

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8 DECENT WORK AND ECONOMIC GROWTH

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6 CLEAN WATER AND SANITATION

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• Contribution to the UNISPACE+50, the UN Agenda 2030 and the Africa Union Agenda 2063



13 CLIMATE ACTION



14 LIFE BELOW WATER

15 LIFE ON LAND

16 PEACE, JUSTICI AND STRONG INSTITUTIONS

INTERNATIONAL SPACE FORUM

AT MINISTERIAL LEVE

17 PARTNERSHIPS FOR THE GOALS

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SUSTAINABLE

GOALS

TRENTO SPACE STATEMENT 1st International Space Forum at Ministerial level Space Science and Academy for global challenges

October 24th, 2016, for the first time Ministries of Science, University and Research, Sun shoul representatives, senate space expects of 35 countries tin, and Europee met in Tranto (Italy), under the surpless of the Int

at, able to support and find adequate solutions for global pr n for the benefit of humanitumi, which requires high level technical and scientiti well as a multidisceptinary and ambituding approach, suitable for internation

work of knowledge supporting the conception, preparation and en

sent: the volume and complexity of Space Syste

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4 QUALITY

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3 GOOD HEALTH

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2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

session of the STSC

1. 18 C. 19 9 4.



January – 9

11 SUSTAINABLE CITIES 12 RESPONSIBLE AND COMMUNITIES 12 CONSUMPTION AND PRODUCTION



#### **International Center for Space Education in Africa at the BSC-1**

10 REDUCED INEQUALITIES

8 DECENT WORK AND ECONOMIC GROWTH

5 GENDER

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The BSC in Malindi, thanks to its high-level technological capabilities and qualified human resources, can contribute to the goals of educating and training young **African leaders** 

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# Mission

Prepare African students and trainees to become the **Space** leaders of future Africa and promote regional, international and inter-continental cooperation, for a peaceful and sustainable development of the African continent

13 CLIMATE ACTION

14 LIFE BELOW WATER

15 LIFE ON LANE **17** PARTNERSHIPS FOR THE GOALS

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3 GOOD HEALTH AND WELL-BEING

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## **International Center for Space Education in Africa at the BSC-2**

10 REDUCED INEQUALITIES

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# **Space Educational Ambition**

5 GENDER

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educating to interdisciplinary space knowledge

6 CLEAN WATER AND SANITATION

- strengthening national identity
- educating individuals and community to cooperation solutions, diversity, gender equity and peace projects

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8 DECENT WORK AND ECONOMIC GROWTH



Open to international support and cooperation to offer the best space capacity building portofolio

16 PEACE, JUSTIC AND STRONG

17 PARTNERSHIPS FOR THE GOALS

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15 LIFE ON LAND

14 LIFE BELOW WATER

13 CLIMATE

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<sup>th</sup> session of the STSC - Vienna, 29 January - 9 February 2018



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3 GOOD HEALTH AND WELL-BEING

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4 QUALITY

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## **International Center for Space Education in Africa at the BSC-3**

**10** REDUCED INEQUALITIES

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11 SUSTAINABLE CITIES 12 RESPONSIBLE AND COMMUNITIES 12 RESPONSIBLE 13 CLIMATE ACTION



6 CLEAN WATER AND SANITATION AFFORDABLE AN

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8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION

# Activities and programs

14 LIFE BELOW WATER

• Training courses

15 LIFE ON LAND

16 PEACE, JUSTICE AND STRONG INSTITUTIONS 17 PARTNERSHIPS FOR THE GOALS

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SUSTAINABLE

- Workshops
- Seminars
- Internships
- Research projects
- Spin-off activities



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# **International Center for Space Education in Africa at the BSC-4**

**10** REDUCED INEQUALITIES

8 DECENT WORK AND ECONOMIC GROWTH

# **Disciplines and areas of research**

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• Earth observation, including services and applications

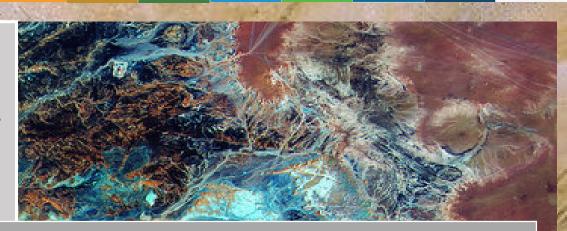
6 CLEAN WATER AND SANITATION

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• Space communications

3 GOOD HEALTH

- Satellite data acquisition, processing, archiving and dissemination
- Control and telemetry services
- Launching and control of satellites, sub-orbital platforms and stratospheric balloons



15 LIFE ON LAND

17 PARTNERSHIPS

14 LIFE BELOW WATER

- Science research
- Navigation and positioning applications and services
- Healthcare and Telemedicine
- Space Policies and Institutions

13 CLIMATE

55<sup>th</sup> session of the STSC - Vienna, 29 January – 9 February 2018



#### Conclusions



**Italian Capacity-building activities in Africa** represent a **contribution to**:

- UNISPACE+50
- UN Agenda 2030
- African Union Agenda
  2063











# Thank you – www.asi.it

