AFRICAN UNION (AU)

Strengthening the capabilities of AU members and fostering collaboration in space activities

Research Report

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"Out of this world"

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Position: Deputy Chair

Introduction

The African Union is made up of 55 member states located in the continent of africa. AU members are divided into five geographic regions, central africa, northern africa, eastern africa, western africa and southern africa. It is well known for everyone that most countries of the African Union are not economically stable. Thus, the African union needs to have more collaborations in order to achieve a better economy.

With 55 member states that together comprise the nations of the African Continent, the African Union (AU) is a continental organization. As the Organisation of African Unity's replacement, it was formally established in 2002. 32 heads of independent African states gathered in Addis Ababa, Ethiopia, in May 1963 to sign the charter that established the Organisation of African Unity (OAU), the continent's first post-independence organization. The OAU was the realization of the pan-African vision for an independent, free, and united Africa. This vision was enshrined in the OAU Charter, which was signed by the organization's founding fathers. It acknowledged that achieving freedom, equality, justice, and dignity was crucial to realizing the legitimate aspirations of the African peoples and that, in order to meet these aspirations, cooperation and understanding among African states as well as among African peoples themselves were required.

For a country to be an effective member of the global community, particularly in fields like diplomacy, economics, security, and technological advancement, it must possess several essential capabilities. These capabilities not only allow a country to maintain its sovereignty but also enable it to engage productively on the international stage. The essential capabilities of a country's citizens or members, particularly in the context of their contributions to society and the nation’s development, span across various dimensions, including personal, professional, and civic skills. These capabilities form the foundation for a well-functioning, inclusive, and progressive society. They enable individuals to participate actively in economic, social, political, and cultural life, contributing to both their own personal growth and the overall development of the nation.

The African Union (AU), as a successor to the Organization of African Unity (OAU), brings together 55 member states across the African continent to promote unity, cooperation, and sustainable development. Membership in the African Union offers several key benefits, including political, economic, and social advantages. However, there are also significant challenges and gaps that limit the AU's potential and effectiveness. The African union members have limited implementation and enforcement meaning that they have weak enforcement of decisions and insufficient resources, as they rely heavily on external funding. Furthermore they have extreme financial and political dependence on external powers, like the European Union, United States and china. Another disadvantage is their social and humanitarian gaps such as health disparities and educational inequalities. Last but definitely not least is their governance and corruption challenges due to weak democratic institutions and lack of accountability. In conclusionWhile membership in the African Union offers a range of political, economic, and social benefits, there are still significant gaps that need to be addressed for the AU to achieve its full potential. Issues such as weak enforcement mechanisms, ongoing conflicts, economic barriers, and governance challenges limit the effectiveness of the AU’s initiatives. To overcome these challenges, AU member states need to commit to deeper political and economic integration, improve governance and accountability, and reduce their dependence on external powers. With these improvements, the AU could become a more powerful force for peace, prosperity, and unity across the

African continent.

The African Union (AU) and NASA (National SAeronautics and Space Administration), have increasingly engaged in discussions and collaborative efforts in space-related activities, although the connection is still in its early stages. NASA's unique emission provides benefits to a country especially in their economy and improvement. By having collaboration in space the country automatically gains jobs; many people have to work hard in order to achieve goals, meaning that a large amount of people are needed so there will be numerous of jobs to the country, in this case the union, economical growth; as these projects start to improve the union starts to get money that go straight to the country's economy so the country is going to be much more economically helped by having access or at least having touch with space and its exploration.

Definition of Key Terms

OAU:
'Organization of the African Union'.It's an intergovernmental and post independence organization, established in 1963.

Pan-African vision:
Pan Africanism is a general term for various movements in Africa that have as their common goal the unity of Africans and the elimination of colonialism and white supremacy from the continent.

Hybrid software:
Robust security, smooth project management, and easy collaboration between teams are all made possible by hybrid work software, which integrates a variety of features no matter where teams are located.

Satellite:
A moon, planet, or spacecraft in orbit around a star or planet is called a satellite. For instance, because Earth orbits the sun, it is a satellite. Similarly, due to its orbit around Earth, the moon is a satellite. A device that is launched into orbit and travels around Earth or another body in space is typically referred to as a "satellite."

LEDCs:
(Less Economically Developed Countries), can be identified by three main factors. The people/citizens living in these countries usually have low incomes (small amounts of money to keep living). They also have poor nutrition, health care, and education. Finally, the economy of LEDCs is usually unstable due to many different reasons.

NASA:
(National Aeronautics and Space Administration), is the largest U.S. government agency that is responsible for science and technology related to air and space.

External funding:
Funds originating from a source outside the corporation to increase cash flow and to aid in expansion efforts (ex. Bond offering, bank loan

General Overview

Space activities represent one of the most remarkable and transformative endeavors in human history. From the earliest days of space exploration to the modern era of commercial spaceflight, humanity's fascination with the cosmos has driven technological innovation, scientific discovery, and international collaboration. The activities that take place beyond Earth's atmosphere encompass a broad spectrum, ranging from government-led missions to private sector initiatives, all aimed at exploring, utilizing, and understanding the vastness of space.

Space exploration, perhaps the most iconic of these activities, has long captured the imagination of people around the world. Early achievements such as the launch of the first artificial satellite, Sputnik, and the landing of humans on the Moon during NASA's Apollo missions set the stage for decades of exploration. Today, missions to Mars, the Moon, and beyond continue to push the boundaries of human knowledge. Unmanned robotic missions, such as NASA's Perseverance rover on Mars or the Voyager probes traveling into interstellar space, expand our understanding of distant planets, moons, asteroids, and the outer reaches of our solar system. Space telescopes, such as the Hubble Space Telescope and the James Webb Space Telescope, allow scientists to peer deep into the universe, revealing secrets about the formation of galaxies, stars, and planets, and even giving insights into the potential for life beyond Earth.

Alongside exploration, space activities also include the development and deployment of satellites, which have become essential to modern life. Satellites enable global communication, weather forecasting, navigation, environmental monitoring, and scientific research. The Global Positioning System (GPS), for instance, has revolutionized navigation, while Earth observation satellites provide critical data for understanding climate change, tracking natural disasters, and managing resources. The increasing commercialization of space has also led to private companies, like SpaceX, Blue Origin, and OneWeb, launching satellites for various purposes, driving innovation in satellite technology and making space more accessible.

Space activities can provide significant benefits to developing countries. Firstly, satellites can support critical services such as communication, weather forecasting, and disaster management, which are essential for improving infrastructure and responding to natural hazards. Earth observation satellites help monitor agricultural productivity, deforestation, and urban development, supporting better resource management. Space technologies also drive innovation, create jobs, and boost technological capabilities, enhancing national development. Furthermore, participation in space activities fosters international collaboration and knowledge exchange, enabling developing countries to access global expertise and technology, empowering them to contribute to global space efforts.

Major Parties Involved

Member states of the AU:

The African Union (AU) consists of 55 member countries, covering all regions of the African continent. These countries are committed to working together on issues of political stability, economic development, social progress, and regional integration. These countries work together under the African Union to address shared challenges such as peace and security, economic development, climate change, health crises, and governance, aiming to promote unity and cooperation across the continent.The countries of Africa are crucial to the success and existence of the African Union(AU) for a number of reasons. As a continental organization, the au relies on the participation, collaborations and contributions of its member states to achieve its over reaching goals of peace, development, and unity across africa.

United States of America:

The United States plays a pivotal role in space activities for several reasons, including its leadership in space exploration, technological advancements, and influence on global space governance.NASA's Contributions: The National Aeronautics and Space Administration (NASA) is one of the world's most advanced space agencies, with decades of experience in human spaceflight, planetary exploration, and satellite technologies. NASA's innovations, such as the Apollo missions, the Mars rovers, and the James Webb Space Telescope, have set benchmarks in space science. Furthermore The USA has been a key player in expanding human knowledge of the cosmos through its ambitious space exploration missions. Usa plays a vast role in this issue since it has the most power when it comes to space activities, so it can be very helpful in this topic.

China:

China's space ventures hold potential for both competition and cooperation with the United States and other countries. China is increasingly important for space activities due to its rapidly advancing space capabilities, significant investments in space exploration, and its growing influence on the global space sector. China's importance in space activities stems from its advanced technological capabilities, long-term strategic vision, growing influence on global space policy, and significant investment in both governmental and commercial space initiatives. Its achievements in human spaceflight, lunar and Mars exploration, and space station development have cemented China as a key player in the new era of space exploration. Additionally, China's approach to fostering international cooperation and providing alternatives to traditional space powers ensures its continued relevance and leadership in global space activities.

Private sector:

Intelsat

Intelsat has the world's largest integrated space and land network. No matter how difficult the situation, intelsat applies their unrivaled expertise and glocal reach to connect individuals, companies and communities. With the first hybrid, multi-orbit, software defined 5G network in the world, intelsat is changing the future global communications and provides seamless and secure coverage wherever and whenever the customers need it most.

Eutelsat

Among the most creative operators in the commercial satellite industry is Eutelsat. Eutelsat's strategy is centered around three main pillars and has allowed us to continue growing. Firstly strengthening our position as the industry leader in Europe and extending our reach globally. then creating digital

services for the data and communication sectors as well as the video market. And lastly, investing in and experimenting with innovative ideas to update our satellite fleet and create new services and applications.From humble beginnings more than 40 years ago, we are at the center of a thriving digital economy and a worldwide satellite industry.

Timeline of Events

1957 – Launch of Sputnik 1: The Soviet Union launches the first artificial satellite, Sputnik 1, marking the beginning of the space age.
1961 – First Human in Space: Soviet cosmonaut Yuri Gagarin becomes the first human to orbit Earth aboard Vostok 1.
1962 – First American in Orbit: American astronaut John Glenn orbits Earth aboard Friendship 7.
1969 – First Human on the Moon: American astronauts Neil Armstrong and Buzz Aldrin land on the Moon during NASA's Apollo 11 mission, marking a major milestone in human space exploration.
1971 – Salyut 1, First Space Station: The Soviet Union launches Salyut 1, the first space station to orbit Earth.
1975 – Apollo-Soyuz Test Project: The first international human spaceflight mission, where an American Apollo spacecraft docks with a Soviet Soyuz spacecraft, marking a symbolic end to the space race.
1976 – Viking 1 Lands on Mars: NASA's Viking 1 becomes the first spacecraft to successfully land on Mars and conduct experiments.
1986 – Challenger Disaster: The NASA Space Shuttle Challenger tragically explodes shortly after liftoff, resulting in the loss of seven astronauts.
1998 – International Space Station (ISS) Construction Begins: The first module of the International Space Station (ISS) is launched, marking the start of a major international collaboration between the U.S., Russia, Europe, Japan, and Canada.
2000 – First ISS Crew: The first long-term crew arrives at the ISS, beginning continuous human presence in space that continues to this day.
2003 – Space Shuttle Columbia Disaster: NASA's Columbia shuttle disintegrated upon re-entry, leading to the loss of seven astronauts.
2003 – China's First Human Spaceflight: China sends its first astronaut, Yang Liwei, into space aboard Shenzhou 5, making China the third nation to independently send humans into space.
2004 – Private Spaceflight Milestone: SpaceShipOne becomes the first privately funded spacecraft to reach space, winning the Ansari X Prize
2011 – End of the Space Shuttle Program: NASA retires its Space Shuttle fleet after 30 years of operation, with Atlantis flying the final mission.
2011 – *China's First Space Lab (Tiangong 1)**: China launches Tiangong 1, its first space laboratory, marking the beginning of the Tiangong space station program.
2012 – Curiosity Rover Lands on Mars: NASA's Curiosity rover successfully lands on Mars, embarking on a mission to explore the planet's surface and search for signs of past life.

2014 – Rosetta Comet Landing: The European Space Agency's Rosetta mission successfully lands the Philae probe on comet 67P/Churyumov-Gerasimenko, the first-ever soft landing on a comet.
2016 – Juno Enters Jupiter's Orbit: NASA's Juno spacecraft enters orbit around Jupiter to study the gas giant's composition and magnetic field.
2019 – China's Chang'e 4 Lands on the Far Side of the Moon: China's Chang'e 4 becomes the first mission to land on the far side of the Moon, a major milestone in lunar exploration.
2020 – SpaceX Crew Dragon Launch: SpaceX launches Crew Dragon, the first privately built and operated spacecraft to carry NASA astronauts to the ISS, marking the beginning of commercial human spaceflight.
2020 – China's Chang'e 5 Returns Lunar Samples*: The Chang'e 5 mission successfully returns lunar samples to Earth, making China the third country to achieve this after the U.S. and the Soviet Union.
2021 – Tianwen-1 Mars Mission*: China's Tianwen-1 successfully lands the Zhurong rover on Mars, making China the third nation to land on Mars.
2021 – James Webb Space Telescope Launched*: NASA launches the James Webb Space Telescope, the most powerful space telescope ever built, which will allow scientists to study the universe in unprecedented detail.
2024 (Planned) – First Artemis Lunar Mission: NASA's Artemis program aims to return humans to the Moon, with the Artemis III mission planned to land astronauts on the lunar surface, including the first woman and person of color.
2024 – Tiangong Space Station Fully Operational*: China's Tiangong space station is expected to be fully operational, providing an independent space platform for long-term human spaceflight and scientific research.
2026 (Planned) – Mars Sample Return*: NASA, in collaboration with the European Space Agency (ESA), plans to return samples from Mars to Earth for the first time through the Mars Sample Return mission.
2030s (Planned) – Human Mission to Mars*: NASA and other international partners, including China, have long-term plans to send humans to Mars by the 2030s, marking a major step in interplanetary exploration.
2030s – Chinese Crewed Lunar Mission*: China has announced plans to land humans on the Moon by the 2030s as part of its ambitious space exploration roadmap.

Possible Solutions

Propose to the AU to enhance and advocate its African space policy and strategy (established in 2016) in order to facilitate effective collaboration among member nations on space activities and remind the member nations about the policy being signed.

Establish or expand academic programs in African universities focused on space science, engineering, and technology. Creating partnerships between local institutions and global space agencies (e.g., NASA, ESA, CNSA) can foster knowledge exchange and capacity building.

Encourage AU member states to develop small satellite programs that can be designed and built locally. Countries like Nigeria, South Africa, and Kenya have already launched satellites, and their experience can serve as models for other countries.

Establish continent-wide legal frameworks that align national space policies with AU goals. Harmonization of space laws can make cross-border collaborations more efficient and enhance the collective bargaining power of African countries in international space agreements.

Sources

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