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Geoscience Information For Teachers

Transferring The Space Mining Legacy – Teaching The Next Generation About Contemporary Space Mining Concepts

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INTRODUCTION

The idea of space mining appears to have been misaligned and misconstrued since its conception. Consequently, it has received low public interest with little appreciation for its potential impact on the world and the future of mining. This is because traditional mining (i.e., exploitation/processing of mineral resources) has received some public backlash as a result of occupational health and environmental mishaps and lack of compliance to best practices.

To make it worse is the notion of Space Mining and the general public is worried about the logistic feasibility. We seek to clarify and differentiate Space Mining *sensu stricto* from contemporary Space Mining *sensu lato*.

Space Exploration Legacy

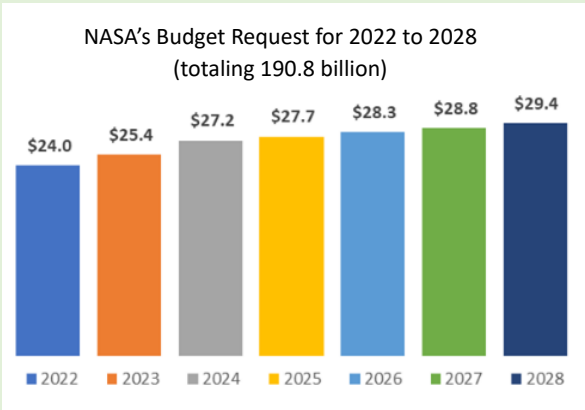
Financial Investment since 1960

$107,777 million (only US & Russia)

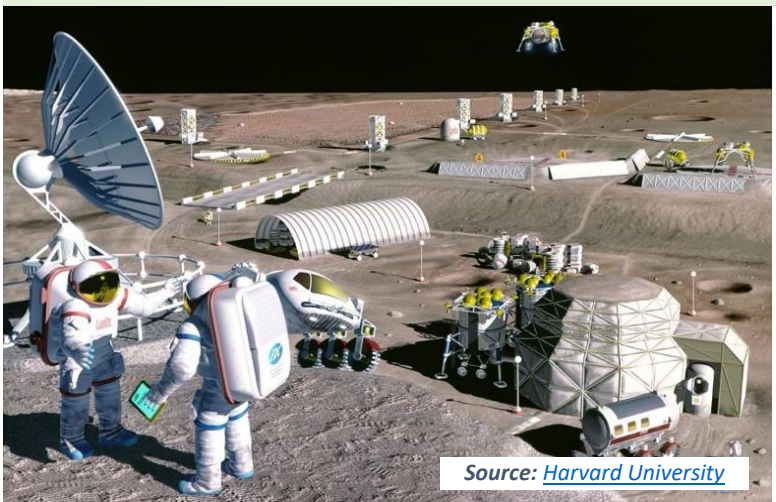
Benefits

1. **Advancements in technology**
   - Improved international cooperation
   - New industries and job creation
   - Space tourism
   - Medical advancements
2. **Improvement in the following**
   - Improved communication
   - Improved transportation
   - Improved agricultural practices
   - Improved energy production
   - Improved weather forecasting
3. **Enhanced understanding of the universe**
4. **Enhanced national security**
5. **Aids disaster monitoring and prevention**

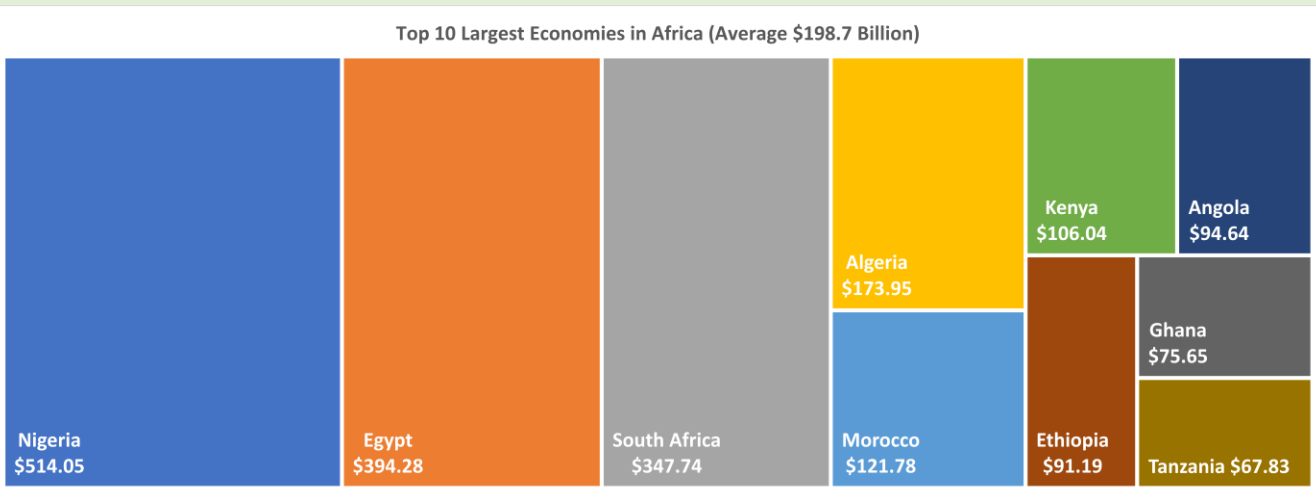
An average top 10 economy of Africa is NASA's budget till 2028



Indicative of an economy the size of a country inherent in Space, signifying an opportunity with no bounds



Source: Harvard University



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Contemporary Space Mining

Contemporary space mining therefore focuses on finding ways to use space resources in space itself, rather than bringing them back to Earth.

THE LEGACY TRANSFER

There are several reasons why most people know little about space mining.

In our conservative opinion,

1. ***understanding,***
2. ***appreciation, and***
3. ***collaboration***

are crucial for space mining to succeed

NEXT STEPS FOR SPACE EXPLORATION/MINING (INDUSTRY)

- Investment into today and future technologies for space explorations
- Further exploration potentially involving expedition to other planets and settlements on the moon
- Physical exploration outside the solar System with robotics
- establishing mining and fuelling outposts, particularly in the asteroid belt.
- public-private partnership model that seeks commercial development of deep space exploration capabilities (https://www.nasa.gov/content/nextstep-overview)

NEXT STEPS FOR SPACE EDUCATION (ACADEMIA)

- Promoting STEM
- Investing in scholarship packages for the STEM and then the Geoscience teacher
- Creating the platform for diversity and for exchange of ideas e.g. **GIFT**
- Developing curricula the that promotes Space Knowledge, Understanding and Appreciation
- Creating the platform for diversity and collaboration on the contemporary space mining