UNCOPUOS | 67th Meeting

Making Space for the SDGs: NASA Earth Science to Action

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26 June 2024
Earth Science to Action

Vision
A thriving world driven by trusted, actionable Earth science

Objective 1: Knowledge
Holistically observe, monitor and understand the Earth system

Objective 2: Solutions
Deliver trusted information to drive Earth resilience activities
Plankton, Aerosol, Cloud, ocean Ecosystem mission

High-quality data for ocean color, biogeochemistry, and ecology as well as the carbon cycle, aerosols, and clouds

Provisional Product: Chlorophyll
Eight-day Average: 1-8 June 2024
Aquaculture Management & Siting

Palau applying Earth obs. for fisheries

Challenge:
Identify suitable areas for kinds of aquaculture while maintaining water quality and healthy marine ecosystems

Space-based Data:
Sea Surface Height, Salinity, Sea Surface Temperature, Chlorophyll, Turbidity

Interactive Mapping Tool using satellite data to assess favorable spots for aquaculture

Analytics to identify farm sites for specific species, sensitive habitats, cultural sites, economics, and other factors

Trainings and Guidance Manual for Practitioners

Aquaculture Farms in Palau

credit: Fabio Siksei

credit: TNC

Project PI: Robert Jones, TNC
Forest Health & Invasives Management

Environmental restoration meets economic opportunities

Challenges:
- Invasive water hyacinth impacting transportation and trade;
- Reduce risks of illegal deforestation and fires across forests and mangroves

Earth Obs. Data:
Landsat, Sentinel-2, Planet, and Mobile and Drone Images

Tools using space-based data support mapping of changes.

Project PI: Danielle Wood, MIT

Online observatory integrating Earth observations to inform management of water hyacinth by a local firm, and women paid the firm to harvest the invasive plant.
Partnerships: Going Further Faster

*Historical involvement with Earth observation collectives and UN bodies are a focal point of NASA’s collaborations for global sustainable development*
Tools, Challenges, and Data Sets

Assisting in the Use of Space for Sustainability

Earth Observations Toolkit for Sustainable Cities and Human Settlements

Country and City Use Cases

- **Indicator 11.1.1**
  - Adequate housing (Mexico)

- **Indicator 11.3.1**
  - Sustainable Urbanization (Mexico, Colombia, South Africa, Poland, UAE)

- **Indicator 11.2.1**
  - Rural population who live within 2km of all-season roads (Indonesia, China)

- **Indicator 11.6.2**
  - Levels of fine particulate matter (population weighted) (Greece, Poland)

- **Indicator 11.7.1 & 11.7.2**
  - Open spaces for public use (Greece, Poland, Colombia)

**DATA PATHFINDERS**

Providing direct links and familiarizing users with commonly-used datasets across NASA’s Earth science collection

Available across numerous topics, including SDGs
“The integration of statistics, geospatial information, Earth observations, and other sources of Big Data, combined with new emerging technologies, analytics and processes, are becoming a fundamental requirement for countries to measure and monitor local to global sustainable development policies and programs”

UN-GGIM Co-Chairs
Acknowledgements

Appreciation for significant contributions and assistance with this presentation package:

Corena Pincham, NASA HQ-BAH
S. Lillian Schaeffer, NASA HQ-BAH
Kevin Conole, NASA HQ
Maury Estes, NASA MSFC-UAH
Cindy Schmidt, NASA ARC-BAER
Danielle Wood, MIT