



The U.S. Needs a Global Monitoring Blueprint

AIA RECOMMENDATIONS

- **The Congress and administration should commit to taking strong leadership roles in establishing, funding, and implementing a U.S. Earth Observation architecture as a national priority.**

BACKGROUND

The U.S. needs a robust Earth Observation capability to sustain our collection of critical global data. A national long-range architecture is needed to guide plans that cross federal agency boundaries and leverage the contributions of academia and industry for effectively collecting and managing this important information.

Aerospace technology assets used to monitor global environmental conditions including weather, climate, and hazards are critical to the nation's economic and national security. Climate change is a threat multiplier for instability across the globe that can affect access to fresh water, impair food production, impact the spread of diseases, increase flooding, and disrupt commerce. Natural and political impacts from climate change must be monitored and understood in a global context.

Earth Observations (including the measurement or monitoring of the Earth using airborne and spaceborne sensors) requires the close interaction across many disciplines. A systems architecture will enable coordination of a commonly recognized target vision for federal Earth Observation activities based on assessments of essential measurements, monitoring capabilities, and decision support tools for applications of national priority. The architecture can include data handling, processing, computing, and visualization facilities, and data interoperability standards and protocols to optimize benefits of the resulting information for society.

KEY POINTS

- **While Earth Observations are implemented through many agencies across the government, there is no overarching architecture to serve as the basis for research, development, applications and integration plans.**
- **Development of a national Earth Observation systems architecture can benefit from high-level directives with input provided by experts from government, academia, industry, and the private sector and reflect the interests and needs of the supply and demand sides of the market.**
- **The architectural blueprint should take a long view, with horizons out for at least two generations, as well as provide guidance in transitioning new technology research sensors and systems into the next generation of operational observing systems.**