

June 4, 2026

The Honorable Howard Lutnick
Secretary
U.S. Department of Commerce
1401 Constitution Ave., N.W.
Washington, DC 20230

RE: Modernizing U.S. Environmental Data Policy to Protect Commercial Innovation, Strengthen National Security, and Sustain the Public Good

ETTAC Recommendation 2026-14

Dear Mr. Secretary,

The Environmental Technologies Trade Advisory Committee (ETTAC) advises the U.S. government on policies affecting exports of environmental technology, goods, and services. We submit the following recommendations to modernize U.S. environmental data policy so that it protects American commercial innovation and intellectual property, strengthens national security, and continues to deliver the life-saving public benefits that have long been a hallmark of U.S. leadership in environmental intelligence (e.g., weather, air, and water).

Executive Summary

Environmental data has evolved from a purely public asset into a strategic resource integral to American competitiveness in AI and environmental intelligence. Current U.S. policy, while well-intentioned, was designed for an era when government agencies were the principal data producers. Today's commercial sector, including satellite constellations, cloud platforms, and AI-enabled forecasting, increasingly drives innovation, yet existing frameworks risk undervaluing this investment and limiting market sustainability. Meanwhile, European forecasting dominance and China's "data diplomacy" strategy are reshaping global markets and infrastructure in ways that disadvantage American providers.

ETTAC recommends adopting a modernized, case-by-case Commercial Environmental Data Framework that preserves public-safety missions while protecting commercial innovation:

- Empower federal agencies to negotiate tailored data licenses with vendors, recognizing that preserving downstream sales rights lowers taxpayer costs and sustains competitive markets
- Establish fair-value mechanisms for multi-agency use, ensuring vendors are compensated when data purchased by one agency is used across the federal enterprise
- Differentiate derived public-safety products (warnings, alerts, advisories) from raw data and proprietary algorithms, which should be protected as commercial IP
- Authorize time-limited embargoes on raw data and algorithms, balancing vendor commercial windows with eventual transition to public archives for research

- Distinguish between existing international commitments and incremental value from American innovation, which should not default to free sharing
- Lead World Meteorological Organization (WMO) modernization to legitimize hybrid public-commercial, data-policy architectures as a sustainable path forward

Background

Strategic Framing. U.S. export competitiveness flows from private-sector innovation and the ability of American firms to raise capital and innovate at a pace no government program can match alone. As environmental technologies evolve into a data-driven sector spanning areas of air quality, high-resolution atmospheric modeling, satellite-based methane detection, and autonomous water-quality monitoring, environmental data must be recognized as a dual-use strategic resource essential to America's AI technology stack and national security, consistent with Executive Order 14218 and directives on American space superiority. At the same time, open dissemination of derived public-safety products remains a foundational American contribution to global safety. The framework below is designed to strengthen, not weaken, that public good by placing the commercial enterprise that increasingly produces the underlying observations on sustainable footing.

Competitive Landscape. The geopolitical context has sharpened considerably. The European Centre for Medium-Range Weather Forecasts (ECMWF) continues to maintain a performance advantage in global atmospheric modeling and has become the de facto benchmark for numerical weather prediction worldwide. European governments reinforce this position through integrated industrial strategies, public procurement preferences, and coordinated investment that scales European firms across the forecasting value chain. The cumulative effect is a European weather enterprise that is increasingly difficult for U.S. commercial competitors to displace in third-country markets, even where American technology is technically superior. China, meanwhile, is aggressively expanding its Fengyun satellite constellation and pairing it with a "data diplomacy" strategy that offers free or subsidized data, turnkey ground stations, and AI forecasting packages across the Global South. The effect is to embed Chinese standards and dependencies into the weather resilience infrastructure of vulnerable nations. Left unaddressed, a strategic competitor will become the default provider of environmental intelligence to much of the world.

Market Imbalance. Under current U.S. practice, data purchased by one federal agency is often redistributed across the federal enterprise and released internationally free of charge. While well-intentioned, this asks American taxpayers to subsidize the meteorological and AI capabilities of foreign governments, including strategic competitors, at the direct expense of U.S. firms that invested private capital to generate the data. It also leaves the U.S. Government as the only viable customer for many American innovators, eliminating any potential benefits of dual-use technology, suppressing private investment and eroding the domestic industrial base.

Detailed Recommendations

ETTAC recommends that the Department of Commerce lead adoption of a case-by-case Commercial Environmental Data Framework. Specifically:

1. **Grant federal agencies explicit authority to negotiate commercial data licenses.** Provide clear authority and standardized guidance for tailored licensing agreements with private-sector data providers, in lieu of the prevailing "purchase and share broadly" model. Protecting a vendor's ability to sell the same raw data to additional customers should be recognized as a legitimate feature of federal procurement. Pairing operational access with preserved downstream rights lowers net taxpayer cost, sustains a competitive American commercial sector, and reduces dependence on any single provider.
2. **Establish an enterprise-wide fair value mechanism for multi-agency use.** When data purchased by one agency is used across multiple federal agencies, the licensing framework should include fair compensation reflecting the broader use case. This prevents a single low-cost "anchor" contract from becoming a license for unlimited redistribution. A transparent valuation approach, developed with OMB and relevant agencies, would give both government and industry a predictable basis for scaling commercial data use responsibly.
3. **Differentiate derived public-safety products from raw observational assets.** Continue prioritizing immediate, open, and free dissemination of products that protect life and property, including severe weather warnings, flood and wildfire alerts, pollution advisories, and emergency forecasts. The underlying raw observations and proprietary AI algorithms, however, should be treated as protected commercial IP. This preserves the public-good mission while ensuring data-generating companies can sustain operations through multiple customers rather than relying exclusively on federal contracts.
4. **Authorize appropriate-period embargoes on raw data and underlying algorithms.** Empower agencies to negotiate time-limited embargoes. For operational meteorology, embargoes as short as 24 hours may suffice to preserve a vendor's commercial window. Once the operational window passes, data can flow into public repositories to support research, model validation, and trend analysis, expanding the scientific base over time rather than restricting it. Embargoes also serve a national security function: preventing high-resolution environmental intelligence from being immediately available to foreign actors seeking to identify infrastructure vulnerabilities or train rival military-grade AI systems, consistent with Executive Order 14218.
5. **Preserve existing international data-sharing commitments while protecting incremental value.** The United States should continue honoring its WMO commitments to free and unrestricted exchange of essential meteorological data; that baseline has served U.S. and global interests well. However, policy should draw a clear distinction between baseline obligations and incremental data, analytic products, or AI-derived outputs generated above and beyond those commitments. Incremental value should not be shared internationally by default. Decisions to extend access should be made deliberately, through negotiated arrangements that account for value offered, access received in return, and broader strategic implications.
6. **Lead modernization of WMO norms to reflect a hybrid public-commercial architecture.** The U.S. delegation to WMO should advocate for guidance that explicitly recognizes hybrid public-commercial data architectures as legitimate modernization pathways and anchors WMO's future role in setting operational, validation, and security standards for AI-enabled forecasting. The appropriate test for WMO norms is not whether data are produced by a government ministry or a commercial provider, but whether they improve forecast skill, warning lead time, and public safety.

Conclusion

Transitioning from a compliance-driven to an enablement-driven environmental data strategy is essential to securing U.S. leadership in next-generation environmental intelligence. The framework above protects the public-good functions that have long defined American meteorology, places the commercial enterprise on sustainable footing, and ensures sensitive environmental data is not weaponized by strategic competitors. These recommendations align U.S. data policy with Executive Order 14218, directives on American space superiority, and the broader objective of exporting a secure, trusted, and distinctly American AI technology stack.

ETTAC appreciates your leadership and stands ready to support the Department in developing and implementing these protections. We welcome the opportunity to discuss these recommendations further and to serve as a convener among federal agencies, industry, and the scientific community.

Sincerely,

A handwritten signature in black ink that reads "Clare Schulzki". The signature is written in a cursive, flowing style.

Clare Schulzki
ETTAC Chair