

# Report on International Regulations on AI in Geospatial Applications

## Introduction:

As Geospatial Artificial Intelligence (GeoAI) continues to evolve, governments worldwide are implementing regulations to address its ethical, security and privacy challenges. GeoAI plays a crucial role in urban planning, disaster management, defense and environmental monitoring. However, its rapid growth raises concerns regarding data privacy, surveillance and the responsible use.

This report provides an overview of the current landscape of international regulations concerning AI in geospatial applications.

- **Canada**

Geospatial AI in Canada is subject to applicable regulations, laws and policies. Notably, the **Artificial Intelligence and Data Act (AIDA)** is being proposed under Canada's Digital Charter and aims to regulate high-impact AI systems, including geospatial AI applications, emphasizing transparency, accountability, and risk management. Federal government organizations must also comply with the **Directive on Automated Decision-Making**, which mandates conducting and publishing an Algorithmic Impact Assessment whenever AI is used to make administrative decisions or when AI-generated data informs such decisions. Regulations, laws and policies are implemented by the responsible federal department or agency, in partnership with other jurisdictions and stakeholders. The **Canada Centre for Mapping and Earth Observation** under Natural Resources Canada also provides important guidance regarding the responsible management and use of geospatial data.

- **EU**

The **EU's AI Act**, which came into force on August 1, 2024, represents the first comprehensive legal framework for AI regulation globally. It classifies AI systems into four risk levels: minimal, limited, high, and unacceptable risk. High-risk AI systems, including those used in biometric identification, critical infrastructure, and employment decisions, are subject to stringent requirements. Most provisions will be enforced starting in August 2026, with member states required to designate national enforcement authorities by August 2025.

**Although the Act does not explicitly categorize geospatial AI applications as a standalone risk group, it nonetheless impacts their use.** AI systems that process biometric or location data, enable mass surveillance, or tracks movements in public places could fall under high-risk category.

**The European Data Protection Supervisor (EDPS)** has also raised privacy concerns regarding how AI analyzes geospatial data. Consequently, geospatial AI used in urban planning, disaster response, and security will need to adhere to strict transparency and data protection rules.

- **Saudi Arabia**

Through the Saudi Data and Artificial Intelligence Authority (**SDAIA**), Saudi Arabia has been actively shaping AI regulations. While there are no specific standalone regulations exclusively for AI in geospatial applications, AI governance in the Kingdom covers various sectors, including environmental monitoring and urban planning, which involve geospatial AI applications.

- **United States of America**

While the U.S. lacks comprehensive federal AI legislation, certain states such as California, have enacted laws addressing AI-generated content and privacy. However, there have yet to be specific regulations targeting geospatial AI.

- **United Kingdom of Great Britain and Northern Ireland**

United Kingdom is considering regulatory models similar to those of the EU, reflecting a growing recognition of the need to address the unique challenges posed by AI in geospatial applications.

- **ITU's Role in GeoAI Regulation**

The International Telecommunication Union (ITU) is actively working on the regulation and development of geospatial AI (GeoAI), particularly concerning the UN Sustainable Development Goals (SDGs). The ITU's "GeoAI Discovery" initiative focuses on policy and ethical considerations, highlighting the need for international collaboration in setting standards for AI in geospatial technologies.

## **Conclusion**

While there is no single global framework regulating AI in geospatial applications, the EU AI Act is the most advanced and could serve as a model for other regions. Meanwhile, the International Telecommunication Union (ITU) and several national governments are developing policies to promote responsible AI use in this field. In Saudi Arabia, SDAIA is leading efforts to regulate AI, positioning the Kingdom as a regional leader by ensuring responsible development and aligning with international standards.