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NEWSLETTER VOL. 2

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Development and testing of a shared, AI-based predictive model for a coordinated use of big data and for a joint Monitoring System of landslides risk in the Adriatic-Ionian region

In this issue of our Newsletter, you can read about:

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TRANSNATIONAL STRATEGY FOR LANDSLIDE RISK

Uniting Against a Common Threat: AIMS Builds a Transnational Strategy for Landslide Risk

Landslides do not respect borders. This simple truth is at the heart of the AIMS project's latest effort to create a safer, more resilient Adriatic-Ionian (Adrion) region. We have created "Transnational Inventory and assessment of standardized data on landslide types and risk categories", document that provides a groundbreaking overview of how seven partner countries—Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Serbia, and Slovenia—currently monitor and manage landslide risk.

This comprehensive report reveals both the shared challenges we face and the immense potential for collaboration.

A Fragmented Landscape: Different Countries, Different Approaches

The inventory shows that while all partner countries are actively working to understand landslides, their approaches are highly diverse:

- Varying Inventories: National landslide inventories exist, but they differ greatly in scale, data format, and accessibility. For instance, Italy's IFFI inventory is one of the largest in the world with over 625,000 records, while other nations are still in the process of establishing their official databases.
- Uneven Access: Public access to landslide data is available in countries like Italy, Serbia, and Croatia, while in others, data access is restricted or not yet available.
- Differing Legal Frameworks: Only Italy has a specific law mandating a national landslide inventory. In other countries, legal support is often tied to broader disaster risk strategies, leading to gaps in systematic data collection.

Common Challenges, Collective Solutions

Despite different starting points, the report identifies a set of common challenges across the region:

- Funding and Staffing: Persistent budget constraints and a shortage of specialized professionals hinder consistent monitoring and risk assessment.
- Technological Gaps: A lack of advanced infrastructure for real-time monitoring and predictive modeling is a widespread issue.
- Data Inconsistency: Outdated or incompatible data formats make transnational comparison and regional analysis difficult.
- Institutional Coordination: Unclear responsibilities and poor communication between different levels of government can slow down effective risk management.

You can find the whole report in library section of the project's website: https://aims.interreg-ipa-adrion.eu/library/

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TRANSNATIONAL STRATEGY FOR LANDSLIDE RISK

The Path Forward: The AIMS Joint Strategy

This detailed assessment is not an end in itself, but a crucial first step. It directly leads to the AIMS Joint Strategy. This strategy will leverage our shared knowledge to create a unified, collaborative framework for landslide monitoring and early prediction.

Key priorities for improvement, as identified by the report, include:

- Harmonizing data collection standards.
- Promoting the use of modern monitoring technologies and AI.
- Enhancing public engagement through reporting platforms.
- Establishing clearer legal and institutional frameworks for risk management.

By understanding our differences and aligning our efforts, the AIMS project is laying the foundation for a future where the entire Adrion region is better equipped to predict, prepare for, and respond to the threat of landslides.

We continue to build bridges—both digital and collaborative—for a safer tomorrow.

The photos taken from the document D.1.1. "Transnational Inventory and Assessment of Standardised Data on Landslide Types and Risk Categories" refer to landslide phenomena in Greece.

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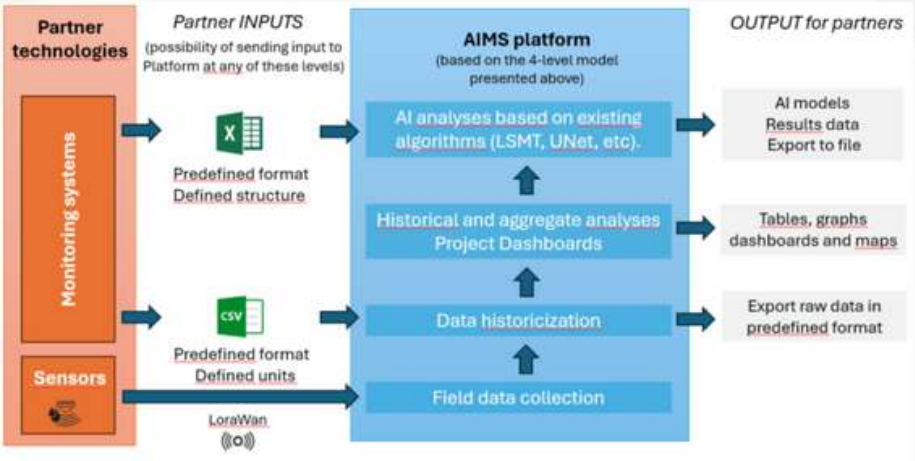
AIMS LANDSLIDE MONITORING PLATFORM

A Glimpse into the Future: The AIMS Landslide Monitoring Platform is Taking Shape!

We are excited to share a significant milestone in the AIMS project! The development of our innovative platform for landslide monitoring is well underway, and we are happy to share a first look at this powerful collaborative tool.

This EU co-funded platform is being designed as a secure, central hub for stakeholders to collect, visualize, and analyze landslide-related data, leveraging the power of Artificial Intelligence (AI) to turn data into actionable insights.



What can you expect from the AIMS Platform?

Based on the current beta version, the platform will offer our consortium:

- A Secure Data Hub: Authorized users will be able to seamlessly upload and manage project data from various sources, including real-time sensors, manually collected time series, and satellite imagery within a controlled environment.
- Interactive Visualization for Partners: Navigate a private interactive map to explore all pilot sites. With a simple click on a sensor, access intuitive graphs and dashboards to visualize data trends and monitor site status.
- AI-Powered Predictions & Detection: This is the core of AIMS! The internal platform will integrate advanced AI algorithms for exclusive use by the project team:
  - LSTM Networks for predicting landslide-related trends based on sensor data time series.
  - U-Net (CNN) for automatically detecting landslides from satellite images, a crucial tool for rapid post-disaster assessment.

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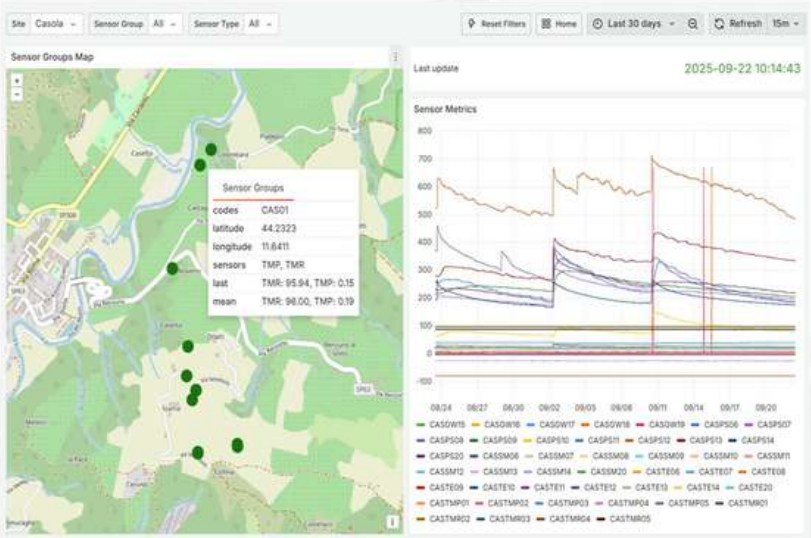
AIMS LANDSLIDE MONITORING PLATFORM

- Controlled Flexibility and Export: All project data and AI analysis results can be securely exported for further internal investigation. The AI scripts will be available for partners to download, allowing for customization and training on specific local conditions within the scope of the project.

A Sneak Peek at the Platform in Action for Authorized Users:

The platform interface will enable partners to:

- Filter project data by country, partner, site, and sensor type (e.g., piezometers, rain gauges, crack meters).
- View detailed, partner-specific dashboards for each site, showing the geolocation of all sensors and their corresponding data graphs.
- Access a complete history of all AI analyses performed within the project and review their outputs.



Our Next Steps

This inovative tool marks a beta release, and we are actively refining it for our partners' use. Our focus remains on creating a powerful and secure resource that will enhance our collaborative monitoring and research efforts across the ADRION region.

Stay tuned for more updates!

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ABOUT PROJECT

AIMS

Development and testing of a shared, AI-based predictive model for a coordinated use of big data and for a joint Monitoring System of landslides risk in the Adriatic-Ionian region

Project overall objective

The proposal aims to produce and disseminate a tailored methodology for territorial planners and policy makers to address the early forecasting and risk management of critical landslides in the ADRION region. For this purpose, AIMS targets the interconnections between different landslide manifestations and climate change derived meteorological events to build predictive models based on AI and big data analysis able to reduce the macro-region's vulnerability to climate change.

Specific Objective

Enhancing resilience to climate change, natural and maSpn-made disasters in the Adriatic - Ionian region

- **Lead partner:**
  Università Politecnica delle Marche, Ancona, Italia
- **Total Project Partners: 8**
  (IT, SI, AL, BA, HR, GR, RS)
- **Project budget in EUR:**
  986.735,00
- **Project Duration:**
  33 months

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