

Muhammad Hanif Adiprana

hanifadiprana@gmail.com | +62 813-9349-1024

LinkedIn: [Muhammad Hanif Adiprana](#) | ORCID ID: [0009-0007-5206-6801](#)

DI Yogyakarta, Indonesia

A recent graduate specializing in earth and environmental science as well as geospatial data science to model and analyze complex-multiscale challenges. Proven ability to leverage remote sensing, machine learning, land surveying, and physical-based models to generate insights on soil erosion, hydrology, slope stability, groundwater, carbon monitoring, and land degradation. Combines rigorous technical expertise with an award-winning passion for science communication and reputable Q1 journal article. Eager to deepen this interdisciplinary skill set through data-oriented science to develop scalable solutions for adapting climate change.

Work and Experience

Junior Hydrologist | Faculty of Geography

(March 2026 – Now)

- Conducted technical hydrological audits for a major gold mining operation in West Nusa Tenggara to ensure data integrity for environmental compliance.
- Managed field instrumentation checking, overseeing the calibration and monitoring of hydrological sensors to maintain 100% data continuity.
- Validated 7 million+ large-scale spatiotemporal datasets, identifying and resolving anomalies to provide a reliable foundation for regulatory reporting.
- Collaborated with interdisciplinary experts at UGM to synthesize field observations into actionable environmental impact assessments.

Environmental Expert Assistant | Postgraduate School of Gadjah Mada University

(August 2025 – April 2026)

- Conducted comprehensive environmental site assessments, focusing on hydrological and hydrogeological constraints to inform sustainable land-use planning.
- Executed specialized field tests, including soil infiltration and permeability measurements using the Auger Hole method, to establish baseline hydraulic conductivity data.
- Performed rigorous erosion analysis and modelling to identify high-vulnerability zones, providing critical data for environmental mitigation strategies.
- Developed high-precision thematic maps and GIS-based models to visualize complex hydrological patterns, soil stability, and erosion intensity.
- Authored integrated technical documentation, environmental reports, to detailed design, ensuring all field data was accurately translated into actionable recommendations for stakeholders.

Research and GIS Assistant | Environmental Study

(July 2025 – December 2025)

Centre of Gadjah Mada University

- Assessed groundwater recharge spatially using static and dynamic methods in the context of calculating water balance and analyzed water quality distribution in Tuban Regency, Indonesia.
- Collaborated with and communicated towards team members and academic experts, ensuring proper water balance in the area.

Spatial Analyst | WRI Indonesia

(May 2025 – June 2025)

- Conducted species distribution modelling of coffee from the 19th century using historical Dutch land-use maps and maximum entropy machine learning algorithms.
- Assisted with land suitability analysis using a raster-based approach to enhance community forest tenure and sustainable livelihoods in Indonesia.

Field Surveyor | Disaster Study Centre of Gadjah Mada University

(April 2025 – May 2025)

- Conducted collaborative disaster risk data gathering through field observation and interviews for a multi-hazard risk assessment survey for Yogyakarta and Bali, Indonesia.

Data Analyst Contributor | WRI Indonesia – Forest Development Bootcamp

(January 2025 – March 2025)

- Spatial Data Management: Acquired and processed spatial data from various open access sources across Indonesia, leveraging Google Earth Engine, Google Colab, and ArcGIS REST services for effective analysis.
- Environmental Impact Assessment: Conducted a comprehensive analysis of deforestation in Lampung Province (2000-2023), contextualizing findings within legal policy and social dynamics.
- Carbon Inventory: Estimated carbon stock in peatland and non-peatland ecosystems, utilizing Indonesian FREL (Forest Reference Emission Level) methodologies.

MOOC Video Production Assistant | Landslide study Project

(May 2024 – November 2024)

- Cinematography and DOP: Operated as a Cinematographer and Director of Photography (DOP) in a production house studio, producing high-quality footage.
- MOOC Video Production and Editing: Compiled and edited 12 educational audio-visual videos for a Massive Open Online Course (MOOC) on the UGM Online platform.

Conference Staff | International Conference on Environmental Resources Management in Global Region Management (ICERM)

(June 2024 – August 2024)

- Proofread and formatted numerous submitted papers, verifying adherence to specific publisher style guides and formatting requirements.
- Accurately and efficiently notated conference presentations, producing detailed summaries.

Practicum Assistant | Geomorphology Practicum Course

February 2024 – May 2024)

- Provided materials and tutored 19 students in geomorphology, facilitating practical learning through 9 sessions.
- Designed and implemented practicum modules, evaluated student performance through report assessments, field work observations, and final testing.

Field Surveyor | Geoelectrical survey in the parking area of the faculty of dentistry (health cluster) at Gadjah Mada University

(December 2023)

- Piloted drones and generated photogrammetric maps using Agisoft Metashape.
- Precisely geotagged ERT electrodes with Geodetic RTK GNSS, ensuring accurate coordinate referencing for ERT cross-section.

Skills and Language

Spatial and data science skills: QGIS, GRASS GIS, SAGA GIS, DJI Terra, Autocad, Geostudio, Agisoft Metashape, ResiPy, Pix4D, Sketchup, Python, MySQL, MS excel, MS word, MS power point.

Surveying skills: Drone piloting and photogrammetry processing, land surveyor using geodetic RTK GNSS.

Creative and productivity skills: AI-Assisted Coding, Prompt Engineering, Canva, Inkscape, Capcut, Davinci Resolve, Adobe Premiere Pro, OBS Studio, and low-skill of Blender.

Languages: Bahasa Indonesia (native) and English.

Education

2025 - **Geography and Environmental Science Undergraduate Program**, Gadjah Mada University.

Thesis title: Erosion Simulation Using the Simwe Model in The Kalisari Landslide, Magelang Regency.

2020 - SMA Negeri 9 Yogyakarta

Certifications and Awards

IELTS overall band score 6.5

PSLH UGM (Environmental Study Centre of Gadjah Mada University) – Fundamental of AMDAL and ESIA

Dicoding Indonesia – Programming introduction with python course

Dicoding Indonesia – Fundamental of Artificial Intelligence course

Dicoding Indonesia – Data science course

Dicoding Indonesia – Fundamental of Project Management course

Dicoding Indonesia – Fundamental of Structured Query Language (SQL) course

WRI Indonesia – Nominated as Favourite Participant in Youth Data Contributors of Forest Development Bootcamp

Faculty of Geography UGM – 3rd Winner of Three-Minute Thesis Competition

Publication

Adiprana, M.H. & Samodra, G. (2026) Comparing erosion processes in vegetated and non-vegetated landslide slopes using the physically based SIMWE model and UAV-LiDAR. *Earth Surface Processes and Landforms*, 51(7), e70329.

Available from: <https://doi.org/10.1002/esp.70329>

Damayani, B. L. A., Buana, A. S., Febrianti, A. L., Firdausy, A., Chusnia, D. L., **Adiprana, M. H.**, Alifia, N. T., Manjasari, V., & Pangaribowo, E. H. (2023). *Sebaran Spasial Industri Mikro Kecil dan Hubungannya dengan Infrastruktur Ekonomi di Kabupaten Banyumas*. *Media Komunikasi Geografi*, 24(2), 206–222. <https://doi.org/10.23887/mkg.v24i2.66430>

Projects

August 2026 – Video publication “**Menghitung Jejak Erosi untuk Masa Depan**” – Laboratorium GLMB, Faculty of Geography UGM – <https://youtu.be/o7fCbdUpor8?si=P5ejQKCTyqVjwZb3>

September 2025 – Video publication “**Memodelkan Erosi pada Skala Detail**” – Faculty of Geography UGM 3 Minute Thesis Video Competition - https://youtu.be/jHB8kgftH_A?si=D84fmT8CSLkiGQ0J

January 2025 – Edited youtube video “**Teknologi Canggih di Balik Pemetaan Akurat: GPS Geodetik, Drone, dan TLS untuk Masa Depan!**” – Laboratorium GLMB - <https://www.youtube.com/watch?v=bx2NGsfThIY&t=7s>

January 2024 – Edited youtube video “**Sudut Pandang Geomorfologi - Eksplorasi Longsor Kalisari**” – Laboratorium GLMB - <https://www.youtube.com/watch?v=vmEYxWeWvKk&t=673s>

December 2023 – Geoelectrical Survey in the Parking Area of The Faculty of Dentistry (Health Cluster) at Gadjah Mada University