



**INDONESIA AND THE UNITED STATES COOPERATION:
IMPLEMENTATION OF COOPERATION BETWEEN CVGHM
AND USGS ON INDONESIAN VOLCANOES**

UNDERGRADUATE THESIS
Submitted as one of the requirements for obtain Sarjana Sosial

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CIKARANG
JULY, 2025**

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ABSTRACT

This study aims to explore the implementation and impact of bilateral cooperation between the Center for Volcanology and Geological Hazard Mitigation (CVGHM) of Indonesia and the United States Geological Survey (USGS) in the context of volcanic disaster mitigation. Indonesia's high exposure to volcanic risks by hosting over 120 active volcanoes and the urgent need for scientific collaboration to mitigate the associated hazards effectively. The research focuses on the cooperative efforts between CVGHM and USGS from 1991 to 2024, including mechanisms of technology transfer, capacity building, early warning systems, and strategic interests of both parties. This study applies a qualitative descriptive method, employing in-depth interviews with experts and stakeholders directly involved in the cooperation, alongside secondary data analysis from official reports and scholarly literature. Limitations of the study include its focus on bilateral (Indonesia-US) cooperation within the volcanology field, without examining other multilateral disaster cooperation frameworks. The findings reveal that the CVGHM-USGS partnership significantly improved Indonesia's volcanic monitoring infrastructure, accelerated data analysis and early warnings, and enhanced the competence of Indonesian volcanologists. Additionally, the cooperation reflects science diplomacy in action, where shared risk and mutual interest foster long-term bilateral trust and capacity-building. In conclusion, the collaboration between CVGHM and USGS serves as a successful model of international scientific cooperation in disaster risk reduction. It demonstrates how disaster diplomacy and interdependence theory manifest in practice, offering valuable insights for future cross-border mitigation efforts in disaster-prone regions..

Keywords: CVGHM; Disaster Diplomacy; USGS; Volcano Monitoring, International Cooperation, Disaster Mitigation

ABSTRAK

Penelitian ini bertujuan untuk mengeksplorasi implementasi dan dampak kerja sama bilateral antara Pusat Vulkanologi dan Mitigasi Bencana Geologi (PVMBG) Indonesia dan the United States Geological Survey (USGS) dalam konteks mitigasi bencana gunung berapi. Indonesia memiliki paparan risiko vulkanik yang tinggi dengan memiliki lebih dari 120 gunung berapi aktif dan kebutuhan mendesak akan kolaborasi ilmiah untuk memitigasi bahaya terkait secara efektif. Penelitian ini berfokus pada upaya kerja sama antara PVMBG dan USGS dari tahun 1991 hingga 2024, termasuk mekanisme transfer teknologi, peningkatan kapasitas, sistem peringatan dini, dan kepentingan strategis kedua belah pihak. Penelitian ini menggunakan metode deskriptif kualitatif, dengan menggunakan wawancara mendalam dengan para ahli dan pemangku kepentingan yang terlibat langsung dalam kerja sama tersebut, di samping analisis data sekunder dari laporan resmi dan literatur ilmiah. Keterbatasan penelitian ini termasuk fokusnya pada kerja sama bilateral (Indonesia - Amerika Serikat) dalam bidang vulkanologi, tanpa memeriksa kerangka kerjasama bencana multilateral lainnya. Temuan penelitian ini mengungkapkan bahwa kemitraan PVMBG-USGS secara signifikan meningkatkan infrastruktur pemantauan gunung berapi di Indonesia, mempercepat analisis data dan peringatan dini, serta meningkatkan kompetensi para ahli vulkanologi Indonesia. Selain itu, kerja sama ini mencerminkan diplomasi sains dalam tindakan, di mana risiko bersama dan kepentingan bersama menumbuhkan kepercayaan bilateral jangka panjang dan pembangunan kapasitas. Secara keseluruhan, kolaborasi antara PVMBG dan USGS merupakan model kerja sama ilmiah internasional yang sukses dalam pengurangan risiko bencana. Hal ini menunjukkan bagaimana diplomasi bencana dan teori saling ketergantungan terwujud dalam praktiknya, memberikan wawasan yang berharga untuk upaya mitigasi lintas batas di masa depan di wilayah rawan bencana.

Kata kunci: PVMBG; Diplomasi Bencana; USGS; Pemantauan Gunung Berapi, Kerja Sama Internasional, Mitigasi Bencana

ACKNOWLEDGEMENT

First and foremost, I would like to extend my most tremendous gratitude to Allah SWT. Due to His gracious blessing and guidance, I can complete my final thesis writing successfully. Furthermore, throughout this thesis writing, I have received a great deal of support and assistance. Hence, I would like to use this opportunity to acknowledge

1. My parents and other family members who always give me unconditional love and provide material, financial, and emotional support to complete my thesis writing;
2. Muhammad Sigit Andhi Rahman, Ph.D., Your guidance played an important role in conducting this research. Your thoughtful and analytical feedback challenged me to think critically and significantly improved the quality of my work;
3. To all lecturers of the International Relations Study Program, whose guidance and knowledge greatly enriched my academic journey at President University;
4. Mardian Hardipto, Whose knowledge greatly contributed to the development of the research framework and methodology. Your valuable suggestions and detailed feedback helped me refine my ideas and elevate the standard of this thesis;
5. All of the staff at The Geological Agency of Ministry of Energy and Mineral Resources, who helped me conduct this research;
6. All my friends, who have provided support and helpful suggestions during my thesis writing.

With love and sincere appreciation, I thank all those who have been part of this journey and played an important role in the completion of my thesis.

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