



GEOSCIENTISTS without BORDERS

Building resilience globally, one community at a time.



Advancing Humanitarian Geoscience Solutions ***Worldwide*** and Developing the ***Next Generation*** of ***Geoscientists***

*GWB Java WAVES tsunami preparedness team
taking measurements (BYU, USA)*

Geoscientists without Borders® (GWB)

The world has problems; geoscientists have solutions. Geoscientists *without* Borders® advances the humanitarian application of geoscience to benefit communities facing hazards, hardship, and poverty worldwide.

When environmental hardships and natural hazards confront communities, geoscientists create solutions. Groundwater resources exploration and management; aiding food security, disaster preparedness and risk reduction; pollution abatement; habitat management and preserving unique, irreplaceable archaeological and cultural heritage are a few ways GWB® enables geoscientists to deliver vital humanitarian relief to communities in need globally.

Educating and training students and future generations is a central pillar of all GWB projects. All projects include active student participation from project locations. Some projects are exclusively deployed by an all-student team e.g. GWB's Indonesia (water) and Brazil (landslide) projects, which were successfully completed by SEG Student Chapter members in those locations.

“*We are all very proud of what we have accomplished as a team to identify the challenges that the local community faces in accessing potable water sources and what possible solutions can be provided as alternatives.*”

*– Stella Andoko- GWB Aquinas student participant at
SEG's Univ. Of Indonesia Student Chapter.*

seg.org/gwb

Where It Began

GWB was created after the 2004 tsunami in Indian ocean with initial contribution of \$1M USD by Schlumberger and first projects were awarded in Sumatra (Indonesia), India and Thailand in 2008. Since then, corporate supporters and donors have joined this effort. Additionally, Debra and Mark Gregg (KiwiEnergy, Ltd) created a GWB endowment fund, which is supported by individual donors.

To date, GWB has enabled 68 impactful projects across more than 40 countries, made possible by the commitment of our current donors and supporters. Building on this proven foundation, the program remains steadfast in building resilient communities worldwide. However, the demand for high-impact projects continues to outpace available resources, and **GWB is actively seeking new donations from corporations, foundations, philanthropic organizations, and scientific institutions to extend its global reach.** Support at any level makes a measurable difference in bringing these projects to life.

Priority Needs

GWB advances projects in these main areas of community need:

- **Water, Sanitation, and Hygiene (WASH)**– electrical and seismic geophysical techniques to find groundwater aquifers and ideal locations for drilling water wells. Groundwater quality and recharge evaluations ensure long-term water management.
- **Food security**– geophysical tools, soil analyses, and satellite imagery boost sustainable agriculture, fisheries management and ensure water availability. Exemplary projects improve groundwater management, agricultural productivity, and irrigation efficiency.
- **Disaster Preparedness and Risk Reduction (DRR)**– focus on earthquakes, landslides, tsunamis, and volcanoes – include devising earthquake monitoring systems, tracking landslides, mapping tsunami deposits, monitoring volcanoes, and developing emergency response programs like Early Warning Systems (EWS).
- **Environmental and cultural conservation**– include wildlife habitat mapping and management, pollution mapping and mitigation, archeological site investigation, coastal management and cultural preservation such mass or abandoned burial sites using non-invasive geophysics.



GWB West Sumatra tsunami project (Geohazard Int.)



GWB Thailand archaeology project (Boise State Univ.)



GWB Indonesia Aquinas water project (Univ. of Indonesia)



GWB Guatemala volcano project (Hearts in Motion)

United Nations Sustainable Development Goals (UNSDGs)

GWB projects help achieve one or more UNSDGs.
<https://sdgs.un.org/goals>



GWB by the Numbers

- 68 > Total projects funded
- 40 > Countries hosting projects
- 1345 > Students involved
- 95 > University partners involved

- 90 > Community partners involved
- 25 > Industry partners involved



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without BORDERS

> Call to Action

To propose a humanitarian project for meeting a community need through the geoscience application, see our grant application guidelines online at seg.org/gwb.

To support Geoscientists *without* Borders®, please donate today at seg.org/gwb/donate

GWB Around the World



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- | | | | |
|------------------------------------|---------------------------|-------------------------------|--------------------------------------|
| Volcano Preparedness | Archaeology | Landslide Preparedness | Pollution Mitigation |
| Tsunami Preparedness | Earthquake Preparedness | Habitat Management | Water, Sanitation and Hygiene (WASH) |
| Habitat Management / Food Security | Habitat Management / WASH | Landslide Preparedness / WASH | Earthquake Preparedness / WASH |

Attributes of project sustainability

Successful Geoscientists without Borders projects:

- Provide **human benefit** to communities in need by applying geoscience where it can make a critical difference in **improving conditions** of poverty or hazards.
- Demonstrate **clear scientific merit** in applying appropriate, effective methods to address a community's need.
- Forge teams that **include local expertise**, partners, and participants in the countries where projects take place.
- Ensure **long-term sustainability** by offering a comprehensive plan for empowering a community to meet its needs and train local participants to ensure knowledge transfer for **lasting impact**.
- **Involve students** in ways that deliver educational opportunities for the next generation of geoscientists while advancing solutions.
- **Guarantee financial transparency** through budgets that are efficient, consistent, and easy to understand.



GWB Nigeria water project (University of Nigeria)

Frequently Asked Questions

Q: What is the purpose of Geoscientists without Borders?

A: GWB unites multidisciplinary and community-based partners to provide applied geoscience solutions for communities in need around the world.

Q: Where do projects happen?

A: Proposals are submitted by higher education and humanitarian organizations worldwide. Projects, likewise, are conducted in locations around the globe.

Q: When are grants awarded?

A: Applications are reviewed twice a year. Grants are awarded one or two times annually.

Q: How many grants are awarded?

A: It is not unusual for GWB to receive closer to 100 applications in one year. GWB typically awards four to six of those projects, depending on availability of funds.

Q: How large is a typical grant?

A: GWB awards up to US\$50,000 for one-year projects, and up to US\$100,000 for two-year projects.

Q: Who are program participants?

A: GWB projects are directed by geoscientists from universities and nonprofit organizations, which involve local students and partners in project locations.



GWB Vietnam landslide project (PetroVietnam Univ.)



Contact

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