Making a Humanitarian Difference

The mission of ‘Geoscientists Without Borders’ is to connect young geoscientists, academia and the industry with projects that will benefit people and the environment around the world.

JANE WHALEY

“‘The vision of Geoscientists Without Borders® is to apply geophysical technologies developed in the energy industry to projects in the developing world which would not normally have access to them,’” explains the SEG Foundation Program Manager of Geoscientists Without Borders. “Although the first goal is to apply geophysics to humanitarian purposes, in the process we create a bridge between academia and industry, and connect with the next generation of geoscientists, hopefully doing some good in the process. Many of our projects involve students from universities throughout the world, working together and fostering co-operation.”

Geoscientists Without Borders (GWB) originated in 2007 through the initiative of WesternGeco Chief Geoscientist Craig Beasley. Craig was President of the Society of Exploration Geophysicists (SEG) in 2004, at the time of the devastating tsunami in South-East Asia, and found the membership of the Society were coming to him and asking how they could help. Realising that geoscience could be used to undertake many humanitarian projects throughout the world, not just in the aftermath of natural disasters, he persuaded Schlumberger to kick-start the initiative with a donation of one million US dollars. The program continues to be funded by the SEG Foundation through donations from individuals, corporations, organizations and grants from other sources.

Transforming Lives

“We fund between two and four projects a year, and hope to fund even more in the future,” the GWB Program Manager explains. “There is a great need, and also strong interest – each year we receive about 20 applications, from which we draw up a shortlist of maybe six. All are well deserving, and if we had more money, we could fund a greater number of them, so we would love to get more companies involved in sponsorship. Schlumberger, Santos, CGGVeritas, Global Geophysical Services and Geophysical Pursuit are major sponsors at the moment and we are very grateful to them.”

“The main objective of GWB is to provide funding to projects that will benefit communities in need, where the application of geophysical science and information will improve poor conditions, or where dangerous conditions and hazards can be mitigated or removed using applied geoscience technology,” she continues. “In the process, we hope to strengthen the global geophysical community through multi-disciplinary partnerships and cooperation with other organizations active in engineering and geoscience throughout the world.”

David Ngobeni has been studying the effects of invasive trees on a vital water supply to a Children’s Village in South Africa.

A GWB project in Thailand.
At the moment, GWB Borders has nine projects running in various parts of the world, ranging from schemes to address the rural water crisis in India and geophysical investigations into pollution caused by mining in Romania, to working on designs for earthquake and tsunami resistant buildings in Sumatra. Several students were able to showcase and explain their projects at the SEG conference in October last year, giving participants from developing countries the opportunity to travel to the US and to gain presentation experience, as well as giving them a look at recent technological developments in the geophysics industry.

Linking Students

David Ngobeni, a student at the University of Witwatersrand in South Africa, is part of a team studying the impact of non-indigenous tree species on groundwater. “We have used a variety of geophysical methods to map the hydrological conditions at a children’s village, where over the last 30 years the water supply has gradually dried up. We think trees planted near the school are responsible for draining the aquifer, so we have used geophysical tools to map the groundwater conditions before and after the removal of these trees.”

The project, which had a grant of US $88,000 from GWB, is the first time the effect of invasive trees on ground water has been documented in South Africa. “Not only will the results have broad applications throughout the country, but a more immediate effect will be felt by the children at the Village; if their water supply improves, the school will be able to continue and even expand,” says David. “I have really enjoyed working on this project, particularly as it has involved co-operating with students from universities in the US and Canada.”

Sudershan Gangrade is an engineering student who has been working on another water project in India. As he points out, “there are half a million people the state of Mahdar Pradesh alone without water, and at the moment we don’t effectively harness the rain that does fall here. Our project is looking at the methods and community tools needed to aid water use management, to increase availability throughout the year. As well as participating in a very useful project, doing this has helped me determine my own future. I am studying as a research assistant in the US, after which I will return to India as an engineer to help my fellow countrymen.”

As these examples illustrate, the program is amplying fulfilling one of its objectives, which is to energize students throughout the world and introduce them to the broad range of geosciences careers, while also strengthening university programs in geophysics and the geosciences. One project being undertaken in Thailand, for example, has managed to involve 15 institutions and 45 participants from seven different countries, with students using a wide range of geophysical methods to address the local geotechnical problems.

Geoscientists Without Borders has recently had a major boost through the creation of an endowment fund by Debra and Mark Gregg of Kiwi Energy, who have committed to provide matching funds for gifts of between $500 and $25,000. As they put it, “This humanitarian program is changing lives today. Universities are taking students to the field. Geophysical expertise is transferring from developed to developing nations. Disadvantaged communities are being assisted in many ways. Best of all, this program showcases, in real life, the tremendous benefits that geophysical applications can bring to many global needs – not just oil and gas.”

To learn more about GWB and its projects, take a look at the website (www.seg.org/gwb).