

## Hydrogeologists without Borders: Connecting geologists to International Development

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### Summary

Major efforts to provide improved water supply in emerging regions are thwarted and often fail because of the inability to find, develop, and sustain groundwater resources. This inability can be due to a lack of hydrogeological expertise on the part of aid agencies, who do not have the full range of hydrogeological expertise (including an integrated knowledge of geology, groundwater flow, natural groundwater geochemistry, and groundwater contamination) required to appropriately design water wells in optimal locations and at optimal depths. Hydrogeologists without Borders, whose mission is to build capacity in emerging regions to provide safe, sustainable water supplies, seeks to find a relatively small niche in the water and sanitation sector that will facilitate a high success rate in aid projects. This poster provides the outcomes of a recent revision exercise and seeks input from the geological community.

### Introduction

Although its use is particularly high (and increasing) in emerging regions there is a significant deficit in hydrogeological capacity both in regions of critical need and in the water and sanitation aid sector that conduct large aid projects to alleviate the lack of water supply. The consequence is water well drilling projects that are thwarted or fail because they do not find, develop, or sustain groundwater supplies. This is partly because hydrogeology is a relatively recent, and multidisciplinary science with little capacity in either the developing parts of the world or developed parts of the world. A small, effective organization is needed in a niche area of the water and sanitation sector

### Theory and/or Method

We evaluate the evidence that i) groundwater use is high and increasing in critical areas of need, and ii) factors that contribute to failure of water and sanitation projects. Existing centers of expertise in 'hydrogeology in development' are reviewed, as is the evidence that groundwater supply projects are thwarted or fail due to the lack of hydrogeological expertise. Specific areas of contribution to the water and sanitation sector are considered.

### Conclusions

There is a need for a small, value-added organization that will bring groundwater science to the water and sanitation sector to significantly improve the outcome of ground water supply projects.

Thank you for submitting an abstract to GeoConvention 2013: Integration.

### References

Reference Style (use Arial 9pt normal)

Larry, S. M., Curly, H., and Moe, W. W., 1955, Prestidigitation, strabismic filtering and ocular violations in the San Andreas strike slip fault zone: *Geophysics*, **24**, 338-342.