



Translating Research Into Practice Through the Geoscience Alliance

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How can we increase the number of Native Americans trained in the Earth and Environmental Sciences?

Indigenous peoples are already feeling the effects of a changing climate on lifeways. Tribal leaders want indigenous voices to be heard when environmental decisions are being made. One way for Native voices to be heard is for Native peoples to seek advanced degrees in Earth and environmental science. The **Geoscience Alliance** is a national organization dedicated to this idea.



Dr. Wendy Smythe [Haida] leads education efforts in Hydaburg, Alaska. Originally funded by OEDG, here joined by **Dr. Nievita Bueno Watts** and graduate students from the center for Coastal Margin Observation & Prediction (CMOP). Dr. Smythe continues her work this year with Center for the Study of Evolution in Action (BEACON) **Dr. Judi Brown Clarke** and PhD candidate and GA member **Darryl Reano [Acoma Pueblo]**, Purdue University

To make progress in broadening participation as a discipline we need to move from an **exclusionary** model to an **inclusionary** model. Pathways must be built from trusted relationships, and these relationships take time. When working with Native communities it is a long term commitment.



1. Build a step-wise program which originates at tribal schools, goes through a 4-year college, and ends at a doctoral degree granting institution.
2. Visit schools and community events and bring hands-on experiences to the community. Educate the community on how to become an Earth scientist.
3. Summer Science and Math camps involving the community, university, local teachers and students, science educators, and elders. Make them **ethnocentric, rooted in place, and multigenerational.**
4. Promote and develop science fairs in the community and local school system.
5. Sponsor SACNAS or AISES chapters in your department.
6. Begin a Research Experience for Undergraduates (REU) in conjunction with tribal college partners.
7. Create safe spaces where tribal members and others can gather to discuss pressing issues in Indian country.
8. Create the structure for a virtual network to keep members in touch with each other
9. Take advantage of back to back professional meetings

How can you get Involved?
Like us on **Facebook**

- *we have a closed group
- *any member can post



Join the **list-serv**

-e-mail Diana Dalbotten
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- *Great place to hear about or post opportunities for jobs, internships, programs
- Sponsor** an event
- *if you have funds which could be used to sponsor a student, meet-up, or conference please let Nievita or Diana know

Bueno Watts, N., Smythe, W.F., Geraghty Ward, E., Green, V., Tano, M., Berthelote, A., & Dalbotten, D. (2014) The Geoscience Alliance: Building Capacity to Use Science for Sovereignty in Native Communities. In Future Earth: Advancing Civic Understanding of the Anthropocene, American Geophysical Union.



Indigenous knowledge, science education, and culture are woven together during summer science camps. Everyone participates. Elder approval is critical.

Bueno Watts, N. & Smythe, W.F. (2013). It Takes a Community to Raise a Scientist: A Case for Community-Inspired Research and Science Education in an Alaska Native Community. *Current: The Journal of Marine Education* 28(3).



The Sustainable Land and Water Resources REU is a collaboration between **Dr. Diana Dalbotten** of the National Center for Earth-surface Dynamics (NCED) and **Dr. Antony Berthelote**, Hydrology Department Head, Natural Resources Program, Salish Kootenai College. Students are divided into three teams and placed at either Salish Kootenai College, Fond du Lac Natural Resources Department, or the University of Minnesota Twin Cities.



The **Geoscience Alliance** is a national alliance of individuals committed to broadening the participation of Native Americans in the geosciences. Its members are faculty from tribal colleges, universities, and research centers; native elders and community members; industry representatives; students and teachers; and others. We have held three national conferences, the latest in April 2015. Members of 48 indigenous nations attended. **Bueno Watts, N., & Dalbotten, D. (2015), Exploring the impact of a changing climate on tribal communities, Eos, 96**