



Unlearning Racism in Geoscience



Virginia Tech Geosciences Pod

Deliverable #4 URGE Policies for Working with Communities of Color for Virginia Tech

Below we describe what was found by the Virginia Tech Geosciences URGE Pod at Virginia Tech on Policies for Working with Communities of Color as well as plans for improved processes and/or needed resources.

1) Below is an overview of some previous interactions with communities of color in our pod to provide context for the discussion below:

Interactions with communities of color in the United States:

One pod member had experience doing geophysics research on Native American reservations around Wyoming. One pod member is in the preparation stage for an upcoming permafrost study in a predominantly Native Alaskan community.

Interactions with communities of color in other countries:

Several group members have worked in communities of color in other countries where those communities of color were not necessarily minority groups in those countries. Our pod member felt that the concerns of working with communities of color in other countries differed based on the unique history of each country, so these interactions are listed separately from US interactions. A few pod members had experience doing tectonics research in Madagascar, Tanzania, Uganda, and Kenya. One pod member had experience doing geology research in Chile, where there is a large Hispanic population, but there are very few indigenous peoples (similar to many parts of Latin America). A couple of pod members had experience doing paleontology research in Australia, where a relatively low proportion of the population (< 3%) identify as indigenous Aboriginal Australians or Torres Strait Islanders.

Note that this does not include all interactions with communities of color among groups at Virginia Tech. All interactions that required establishment of a Memorandum of Understanding (MoU) between Virginia Tech and a community are available through the Freedom of Information Act, and can be accessed at <https://www.mou.iss.vt.edu/>

2) What worked well in these interactions?

Pod members who had built scientific collaborations with colleagues at universities in the area where they were performing research (which included collaboration at the planning stage) felt that this had worked well. Some pod members had also been involved in training workshops for the scientific techniques being used at universities in the area, which helps support the scientific research and education missions of those universities. Additionally, such collaborations

and training workshops have been helpful in recruiting graduate student researchers who are from the region where research is carried out.

Several pod members identified strategies that had worked well for communicating with communities of color in these interactions. Some of these strategies included tours of field sites, presentations geared towards community members or land owners with up-to-date findings, partnership with a national park that encouraged ecotourism, visiting local schools to give presentations about the research area, being open to discussions with any community members we encounter in any setting (e.g. at restaurants, bars, throughout the community) or any communication method that is preferred (WhatsApp, Skype, Messenger, etc.), and press releases or other large-scale communication prior to arrival (so the community is aware and knows intent of the research). Several pod members noted that learning some of the local language(s) was extremely beneficial, and pod members noted the importance of using place names that were used by indigenous people, as well as land acknowledgements in publications. When visiting local schools, pod members noted that it has worked best to have local collaborators give presentations. For research that involves an initial setup phase followed by data collection for a period of time without hands-on work required, the data collection period is an ideal time to visit local schools or community centers.

To learn about local history, culture, and expectations, our pod noted the payoff of putting in work early-on in the planning phase such as reading literature beforehand and learning some of the local language. However, when doing fieldwork in a community, there is no better resource than building a rapport with local collaborators.

While some aspects of this discussion focused on faculty's actions in planning stages, non-faculty pod members noted the importance of the planning process as a time to learn how to plan and lead field campaigns. For example, a pod member noted the importance of joining meetings with local leadership. Some pod members have been able to engage with local communities in the region where they were carrying out research as students, leading tours of field sites or giving presentations for the community. Our pod noted that it is important for the advisor to encourage students to engage with local communities.

Our pod noted that it can take a long time to build relationships and trust with communities, but that long-term efforts are often the most beneficial for everyone involved. It is important to respect boundaries and understand that not all communities are interested in conducting outreach with researchers and students. When it is not possible to identify a scientific collaborator who is a member of the community, it is important to develop collaboration with someone who has built a long-term relationship with the community.

3) What did not work well in these interactions? How can this be better addressed in future plans?

While our pod identified communication strategies that worked well, we also identified as one of the biggest challenges in some of these interactions. Sometimes communicating the intent of the research to the broader community is challenging (different from communicating the intent of the research to scientists). This can be better addressed in future plans by including people who are in the communities of color in planning how to best communicate with the community. Further, any promises that are made or improvement projects in the community must be followed through.

Further, pod members noted that, at times, researchers are acquiring new geological knowledge about a region, but that knowledge is not always sufficiently communicated with universities in the region (and thus curricula are not updated quickly). This can be better addressed in future plans by including collaborators at universities in the area because they are

familiar with university curricula in the region and know which courses, faculty members, and resources to share new findings with.

4) Are there ways to improve the outcome of projects already undertaken?

With our ongoing research, a project often goes through multiple phases. The time before applying for funding for a follow-up project would be the ideal time to bring in community stakeholders or collaborators for projects that are already undertaken. Before coming up with our own research questions for the next phase of the project, we should ask those community stakeholders or collaborators about their priorities or questions first. Then we can try to shape some of our research questions to support those priorities.

Research teams can often educate themselves about the culture and history of a community through activities like shared readings, watching documentaries, and having discussions. In places where indigenous peoples have been displaced, these educational activities should also include learning about groups that may have formerly inhabited the land where the team is working. This perspective should be a formal part of the resource process, and if a project has already begun, the team can undertake this effort together as a group. If it is a multi-phase project and the team is applying for a follow-up grant, this process can be included in the project timelines. Resources should be requested to compensate work by community members who are willing to teach the research team.

For NSF-funded projects, research teams can apply for supplementary Research Experience for Undergraduates (REU) funding or Research Experience for Teachers (RET) to pay undergraduate students or teachers from the community to collaborate on research. This can be done before or after a project is undertaken. Information about REU supplements can be found at: https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517 Information about RET supplements can be found at: https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505170

5) What resources are already available to assist in the process of planning ahead and working with communities of color?

- Resources for working with indigenous communities in the United States and finding community-owned businesses to partner with are below:
 - Tribal colleges and universities can be a good point of contact to find collaborators or recruit students. More information on tribal colleges can be found through the American Indian Higher Education Consortium (<http://www.aihec.org/>) and in Tribal College: Journal of American Indian Higher Education (<https://tribalcollegejournal.org/>).
 - Alaska Native Science Commission "serves as a clearinghouse for proposed research, an information base for ongoing and past research and an archive for significant research involving the Native community. ANSC provides information, referral and networking services for researchers seeking active partners in the Native community and communities seeking research partners." (<http://www.nativescience.org/>)
 - Alaska Native Science & Engineering Program is "a longitudinal education model that provides a continuous string of components beginning with students in sixth grade

- and continuing on through high school, into science and engineering undergraduate and graduate degree programs through to the PhD." (<https://www.ansep.net/>)
- List of Alaska Native corporations maintained by the magazine Alaska Business (<https://www.akbizmag.com/lists/alaska-native-corporations/>)
 - Native Hawaiian Organizations Association is a trade organization whose members are Native Hawaiian Organizations (defined by Small Business Administration) (<https://www.nhoassociation.org/>)
 - One can look for Native American owned businesses if they are 8(a) certified by the Office of Native American Affairs (<https://www.sba.gov/business-guide/grow-your-business/native-american-owned-businesses>)
 - Land Acknowledgements:
 - Information about the Virginia Tech land acknowledgement, which could be used by any researchers at Virginia Tech, can be found at: https://www.inclusive.vt.edu/content/dam/inclusive_vt_edu/docs/Guide.LandAcknowledgementI.pdf and through the Virginia Tech American Indian & Indigenous Community Center: <https://ccc.vt.edu/index/aiicc.html>
 - SACNAS provides a guide on developing a land acknowledgement: https://www.sacnas.org/wp-content/uploads/2020/11/SACNASresource_LandAcknowledgements.pdf
 - Resources for working with other communities of color in the United States:
 - Some starting points to find HBCUs and potential collaborators at HBCUs in/near a community are The Hundred-Seven (<http://www.thehundred-seven.org/>) and National Historically Black Colleges & Universities Foundation (<http://www.nhbcuaa.org/>)
 - A starting point to find Hispanic Serving Institutions and potential collaborators at HSIs in/near a community is the Hispanic Association of Colleges & Universities (<https://www.hacu.net/>)
 - The Virginia Tech University Libraries maintains archives and materials on historically marginalized communities, many of which include specific information about communities of color in the Appalachian region (<https://guides.lib.vt.edu/c.php?g=843646&p=6029778>)
 - Global resources to begin learning about the history and issues of indigenous peoples globally:
 - International Work Group for Indigenous Affairs (<https://www.iwgia.org/>)
 - The United Nations Department of Economic and Social Affairs often does work focused on indigenous people globally (<https://www.un.org/development/desa/indigenouspeoples/>) including guiding resources such as the UN Declaration on the Rights of Indigenous Peoples, and developing reports on the State of the World's Indigenous Peoples
 - Projects supported by the National Science Foundation can apply for Research Experiences for Undergraduates (REU) supplement funding (https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517) or Research Experiences for Teachers (RET) (link to information is different depending on the program within NSF) to support involvement of undergraduates or teachers from the community to collaborate on NSF-funded research projects
 - This webinar led by the URGE Geoscience team featuring Dr. Patricia Cochran and Dr. Sarah Aarons contains important advice about working with communities of color <https://www.youtube.com/watch?v=IL3XKcXhuQQ>
 - Language resources:
 - Virginia Tech students have free access to Rosetta Stone to assist with language prior to travelling to another community

6) We developed a guide called "[Considerations as you begin planning geoscience research with communities of color](#)" to share with geoscientists at Virginia Tech. We felt that having a short document with concrete questions, considerations, and resources would spur researchers to follow through with more careful planning with the communities they aimed to collaborate with. Researchers are encouraged to use this resource early in the planning stage before writing a proposal. The contents of the document are below:

As you plan research, answer the following questions:

- What are the motivations of this work?
 - Why would community members be motivated to collaborate?
 - What are the benefits to you, your institution or your research community?
- Looking beyond your scientific motivations, what are the most pressing needs and concerns identified by community members? Can your scientific research support these needs? If not, can your outreach and education plan substantively contribute to addressing these needs or concerns?
- How are you building trust and long-term relationships with the local community?
 - Are these individual relationships, relationships with community organizations, governmental organizations, companies, or colleges and universities?
 - Has this community experienced previous negative interactions with scientific research, and if so, how do your plans address this?
- How are local collaborators, liaisons and guides included in this work? Are they being included early in the planning phase? How are their contributions credited? How are they compensated for time, expertise and effort?
- How will you ensure that findings from the research are disseminated among faculty teaching related courses at colleges and universities in the community?
- How are you including local students, scientists, and engineers in the research?
- How are you training students at Virginia Tech to engage well with communities?
- Are there specific tasks and expectations between the research team and the community that should be addressed in a Memorandum of Understanding signed by Virginia Tech?

Consider whether you are following these best practices or using any of these resources:

- Start planning early so that collaborators or stakeholders in the community can be fully included in the process from the beginning
- Ask community members to identify priorities, and try to address these in defining the scope of research, education and outreach activities
- Establishing lasting connections is key, as is networking (contacts of your connections)
- Include cultural, historical and language education as part of the research process
 - Designated time period in the research plan
 - Develop a guide on safety and expected behavior in the field and communities
 - Cultural competency should be part of the field guide code of conduct
 - If funding agency allows such support, budget for cultural or language training
 - Take language classes at Virginia Tech or use Rosetta Stone app to learn
- When collaborating with a community of color, ask and use the communication method preferred by your collaborator(s)
- Use indigenous names for places, and write a land acknowledgement for use in presentations and publications
- As your team progresses through the phases of a project, take notes reflecting on what worked well and what didn't, as well as resources that were impactful in planning or carrying out the work. Share these notes and be open in sharing your experiences in discussions with others who are considering working with the same community. In this way, we will continue to improve the research process for all involved parties.