**IST 512: Group Assignment 1**

**Introduction**

    Access to clean water is a major issue affecting the global population, currently it is estimated that almost 700 million people do not have access to clean water (UNICEF, 2015). While this issue disproportionately affects those in developing countries it is an issue that can occur anywhere. In 2018 a toxic algae bloom in Salem, Oregon caused serious issues related to the safety of available drinking water, especially for vulnerable populations (Bach, 2019). Regional climate trends and population growth also create issues related to clean water access. Providing access to clean water to a growing population will continue to require an international effort drawing on most branches of science (Platt, 2011).

**Summary of our Discussion and Choices**

    Deliberating as a group, we (David, Marilyn and Jennifer Tehani) have debated and discussed the pros and cons of integrating various disciplines to most benefit a holistic view of this problem as well as most efficiently address it.  The three areas we chose to combine to create an integrated lens from which to analyze the aforementioned water problem are: Applied Anthropology, Public Health and Communication. Our team’s choices are briefly summarized in Table 1 below. Our team felt that research focusing on education and understanding of the problem of water contamination would best suit our backgrounds and also provide the best solutions. For instance, the science behind nutrient contamination is well fairly well understood and it is most likely communication and policy that will help alleviate this issue (Dzombak, 2011)

**Table 1: Research Choices**

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| **Discipline** | **Theoretical Research Solutions** | **Applied Research Solutions** |
| **Anthropology** | Medical Anthropology research to better support and implement policy decisions | Ethnographic research methods to assess outcomes of policy decision on vulnerable populations |
| **Public Health** | Research to model and assess future population risks due to contamination, climate change and water shortage | Research to investigate current issues like nutrient contamination |
| **Communication** | Research on how to best educate policy makers and the public on water issues and contamination | Utilizing modern communication to educate and inform the public and policy makers |

**Justification of our choices**

**Anthropology**

    Applied Anthropology as a discipline provides a well-rounded understanding (or for lack of understanding, tools and methods towards understanding) of humanity from a biocultural perspective.  The use of anthropology - specifically the utilization of ethnographic research methods - would identify and accurately gauge who the stakeholders are in Salem, who this situation actually affects in the community and in what ways an equitable and fair solution to this problem may arise and be implemented.  Too often many public health, political and environmental decisions are put into practice without both the input and consideration of vulnerable populations who would be most affected. In an effort to push on the social lever and ensure that solutions to the water crisis benefit everyone in the area instead of those with power of privilege, ethnographic research would be of great assistance to understanding and combating this problem.  Also, from a medical anthropological perspective (in other words, applying the perspective of Applied Anthropology beyond simply ethnography), an assessment of the ways in which cultural groups, communities and regionally specific practices affect exposure to, health risks from and usage of this contaminated water would more fully bring versatility and assistance to this interdisciplinary perspective on who, what and how people are affected by this problem.

**Public Health**

Our team also felt that Public Health is incredibly important to dealing with water contamination. A simple illustration of this is John Snow removing the pump handle in England after his connection of cholera transmission to water.  Public Health has often been at the forefront of providing access to clean water and understanding the public health risks associated with contaminated water. While many scientific disciplines like Biology and Medicine help understand and deal with the science of contaminated water, the field of Public Health is the bridge that links the public with preventative measures gained from the research of other disciplines.

**Communication**

    Finally, communication is incredibly important in addressing water quality. If a small group of educated scientists understand the risks of contamination it does little public good if this information is not conveyed to the public and policy makers. When a potential health crisis arises Communication is key to disseminating information in a clear, powerful and ethical way; particularly when sharing information to the associated press and/or community stakeholders who are affected by a potential health crisis. One example of this would be the recent health scare due to algal blooms in Salem, Oregon. After the crisis was solved rumors continued to abound about the unsafe quality of water and it was up to the utilizing proper communication channels to continue to educate the public about what occurred and the status of water quality (Bach, 2019).

**Conclusion**

    Though all areas of study are innately interdisciplinary (as nothing truly exists in a vacuum in our interconnected world), this particular synergy of academic perspectives addresses what we consider the most viable for understanding and applying an interdisciplinary perspective that would help ameliorate the challenge of contaminated water.

**Citations**

Bach, Jonathan. “Salem Spending $75 Million to Protect Drinking Water from Toxic Algae.” Statesman Journal, 15 May 2019, <https://www.statesmanjournal.com/story/news/2019/05/15/salem-water-crisis-defence-algae-bloom-cyanotoxins-drinking-water/1120319001/>.

Dzombak, D. A. (2011). Nutrient Control in Large-Scale U.S. Watersheds. *National Academy of Engineering*, *41*(4), 13–22.

Platt, Rutherford H. “Managing Sustainable Water Supplies.” *National Academy of Engineering*, vol. 41, no. 4, 2011.

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