

2018 Tribal Environmental Data Management Capacity & Needs Assessment

Executive Summary

The data generated through various environmental management and protection activities are vital to supporting and informing tribal decision-making, and enhancing the capacity of tribal environmental programs to manage this data is crucial. This Needs Assessment was conducted in an effort to understand where there are areas of mutual concern and common needs among tribal environmental programs, in order to inform strategies and identify priorities for resources to support tribes. The findings of this Needs Assessment offer possible solutions for building capacity and sustaining successful programs that protect tribal communities and strengthen tribal sovereignty.

Introduction

The ***Tribal Environmental Data Management & Capacity Needs Assessment*** (“Needs Assessment”) and accompanying summary report was prepared by the Institute for Tribal Environmental Professionals (ITEP) at Northern Arizona University (NAU), and the Exchange Network (EN) Tribal Governance Group (TGG), to better understand current tribal capacity, needs, and concerns related to environmental data management. The findings of this Needs Assessment will help to inform strategies and identify approaches for building and sustaining tribal capacity for environmental data management, collection, and use into the future, with the ultimate goal of ensuring adequate resources to support tribes’ ongoing needs for technical and programmatic development.

Background and Approach

Purpose: to better understand current tribal capacity, needs, and concerns related to environmental data management in order to identify strategies and approaches for building and sustaining tribal capacity for environmental data management, collection, and use into the future, with the ultimate goal of ensuring adequate resources to support tribes’ ongoing needs for technical and programmatic development.

Approach:

- Conducted online from Jan. 1-June 30, 2018
- Distributed to staff at all federally recognized tribes via email
- Responses received corrected for incomplete and irrelevant responses

Respondent Profile:

- 185 verified responses (213 total; 28 incomplete/excluded)
 - More than 50% of respondents were from EPA Regions 9 & 10
 - Nearly 20% of total responses received were from Alaska
- 25% of all federally recognized tribes responded (145 distinct tribes/villages represented; multiple responses received from some tribes); regional response rate was:
 - Region 1: 30%
 - Region 2: 25%
 - Region 4: 50%
 - Region 5: 48%
 - Region 6: 34%
 - Region 7: 33%
 - Region 8: 30%
 - Region 9: 26%
 - Region 10 (Washington, Oregon, Idaho): 20%
 - Region 10 (Alaska only): 11%
- Most respondents were tribal environmental managers or staff (as opposed to leadership, IT support, or other roles)
- Majority (>60%) had little or no prior knowledge of or experience with the EN, including the grant program, technology components, or governance

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Summary of Responses

The following is a synopsis of the overall responses received according to the focus area of the questions, including: Exchange Network grant program experience; types of data managed by tribes; technical and programmatic needs for data management activities; internet and information technology capacity; and data access and sharing, including concerns regarding data sovereignty and security.

- **Information access, connectivity, and security**
 - Majority of respondents indicated that they have access to high-speed internet access
 - 30% reported that service is intermittent or unreliable
 - 6% reported access to satellite or other non-fiber-optic systems only
 - Nearly all respondents reported that the tribe employs IT support that serves all tribal operations, in some cases limited to part-time contractor support
- **Environmental data collection, consumption, and sharing**
 - Most are managing (collecting, consuming, sharing) ambient water and air quality data
 - Most are sharing data with EPA and internally (other departments, tribal leadership, community); some are sharing data (~30%) with other jurisdictions
 - Most are sharing data via spreadsheets or text files, as well as in public information contexts (newsletters, websites) and geospatial database applications
 - Few (~10%) using the EN and its tools to share and report data
 - Few (~10%) reported not sharing data using any mechanism
 - Information access and security concerns include: data ownership/stewardship, use/misuse by others, and privacy/confidentiality of sensitive data
- **Technology and programmatic capacity and training needs**
 - Adequate staff resources (funding for staff, both environmental and IT) were identified as the highest need and lowest capacity
 - Training for staff on data management and basic statistics, as well as developing and using database programs and analysis tools were identified as top needs
 - Tribal access to adequate information technology (software, hardware, internet connectivity, storage) and qualified support staff were identified as concerns for some tribes, and not for others.
- **Exchange Network related grant program experiences**
 - Majority of respondents work directly under and/or manage or administer at least one grant-funded project for their tribal environmental program
 - About 40% of respondents were previously aware of the EN, but did not have a good understanding of what it is; these respondents typically have not applied for EN grants
 - Most respondents (~70%) had not applied for an EN grant in the past (or were not aware of past EN grants received), despite the majority of them collecting and managing eligible data (e.g. air, water, waste, toxics)
 - A mix of positive and negative experiences with the grant program were reported, with most comments indicating that the solicitation was confusing or challenging to understand how tribal programs can use it build capacity

Limitations of the Assessment

- Questionnaire only sent to tribes via email using an online form (required internet connection)
- Responses were not limited to one per tribe, which resulted in some duplication of responses and some inconsistent/conflicting responses
- Complex or confusing wording on some questions may have made them misunderstood, and therefore the responses are difficult to interpret with confidence

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- Significant portion of respondents (19%) represented Alaska Native Villages which may not necessarily be representative of Indian Country as a whole, but also highlighted the substantial interest and unique needs of Alaska Villages

Conclusions and Recommendations

The information captured by this Needs Assessment clearly indicates that despite insufficient resources for, and on-going barriers to, tribal participation in the Exchange Network, including extensive concerns regarding information access and security, tribes are interested in expanding their capacity to manage their environmental data using appropriate technology solutions. Tribes face numerous challenges and a variety of situations that require unique solutions and robust, on-going support to ensure long-term success. Overall, tribes identified the following major priorities and needs for further strengthening tribal environmental management programs into the future:

- **more support for staffing and IT infrastructure resources**
 - address restrictions on on-going operation & maintenance costs for EN projects
 - expand funding opportunities & support for tribes through improvements to grant programs
- **training and technical support that is relevant and appropriate for tribal staff**
 - data management concepts
 - statistics & data assessment methods
 - data analysis and interpretation tools
- **solutions for data management and sharing**
 - consider tribal concerns regarding information access and misuse
 - support a wide range of unique needs based on varying priorities & levels of capacity
 - improve access to, and support for, software, tools, and technology, including software licensing and adoption of open-source options

By providing adequate funding resources, technical assistance, training and guidance for tribes on sound data management practices, EPA can enhance tribes' ability to engage with EN grant projects, governance, and user communities. These actions will be instrumental in helping tribes and EPA meet the shared goal of protecting the human health and the environment, and continue to strengthen tribal sovereignty by establishing a legacy built on strong, effective data management that serves to protect tribal lands and lifeways for future generations.

Next Steps

The TGG will work with ITEP and EPA staff to develop a response and action plan to address tribal needs, including:

- Clarify and seek more detailed input on training and support needs identified;
- Conduct outreach activities to inform tribal respondents about relevant training, funding, and other support or resources available for enhancing their data management activities;
- Strategize about methods for reaching additional tribal staff to gather input on and inform tribes about opportunities for capacity development.

The TGG will use the information from the Needs Assessment to continue its support of tribes through ongoing communication and engagement with tribal and EPA staff, and collaborating on ideas for training and technical support activities for tribes in order to be responsive to their needs into the future.