NSDI CAP Category 1 Project Final Report

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Project title: 2009 CAP Category 1: Metadata Training and Outreach for Tribal Natural Resources and Environment Management in New England regions
Interim or **Final report:** Final report
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I. Executive Summary

This project provided metadata training to tribal GIS users in the New England regions. The major activities included two one-day FGDC compliant metadata creation workshops, one conference based training session, and one or more on-tribe trainings and consultation based on the former attendees' interest. The two one-day major metadata training workshops were completed in Indian Island, Maine, and Mystic, Connecticut. Both of these workshops have had lectures, PC-based exercises and after-class readings. Nineteen tribal people registered for the training with eleven participants from five tribal governments and one tribal organization attended the two workshops. On-tribe post training and consultations have been offered by emails and follow-up calls to all the workshop attendees later. The emails also remind and encourage all attendees to start creating metadata as soon as they have produced or updated their GIS data.

II. Project Narrative

Great efforts were made to solicit the target audience through all possible channels after the project was approved. At first, the announcement of the workshops was emailed to more than 80 GIS-related employees in the 10 tribes and related federal agencies; EPA, USDA and BIA in the local area. The workshop schedules were posted on the Penobscot Nation tribal web site and flyers were distributed through related national/regional conferences/meetings such as NTEC (National Tribal Environmental Council) and NCAI (National Congress of America Indians). A couple direct calls were followed up to promote and remind potential participants and encourage timely registrations.

In mid-June, the principal investigator for this project was invited to make a presentation at the NCAI in Niagara Falls, NY. Metadata concepts and marketing information for these training workshops were integrated into the conference presentation. Questions about our GIS work and the training were asked after the presentation. An effort was also made to market the metadata training and the one-two hour training workshops through other conferences or meetings.

Using training materials from the FGDC and other organizations, a comprehensive training package was created to facilitate the metadata training. A 200 page binder containing the student guide was created. One binder for each attendee was provided at workshops. The student guide includes 8 sections of lecture slides (208 slides in total), exercise hand outs (3 brief, 2 detail-instructed, 32 pages), 5 reading documents in an appendix (46 pages). The reading documents include: how to write a good metadata, how to avoid 10 common errors, Metadata quick guide, CSDGM color maps, and a sample of detailed metadata. A digital file of CSDGM workbook and a copy of ArcView Metadata tool were also provided to attendees.

Two one-day workshops were planned and have successfully been completed in July in Indian island, Maine and Mystic, Connecticut. The nine attendees for the first workshop came from the tribes and organization in the state of Maine: Aroostook band of Micmacs, Houlton band of Maliseet, Passamaquoddy Pleasant Point, Penobscot Nation, and Four Directions Development Corp. There were 15 registrations with this workshop. The Mystic workshop has two attendees from Wampanoag Mashpee, Massachusetts. It received 4 registrations from 3 tribes.

In each workshop, slide-based lectures were major method for training. The lecture consists of 8 sections: metadata concepts, metadata values, NSDI, why use a standard, CSDGM, Tools & ArcCatalog, Clearinghouse & GOS, and metadata implementation. The first 7 sections were presented and discussed in class. The lecture covered the key concepts, core components, demo of tools, the GOS web site, and some state GIS data webs. A 10-15 minute mini-exercise was followed in class with each of the 3 sections: metadata concepts, metadata values and CSDGM. Two 30 minute exercises with 13 and 16 pages instruction were scheduled for ArcCatalog and GOS sections, but not all attendees went through these practices in class due to limit of PCs and GIS software.

The majority of attendees were satisfied with the lecture contents, handout and training materials, and training format. They strongly agree or agree that they learned information which can be used on the job. Their knowledge about metadata concepts and its importance has been significantly improved. And the skills on how to create it, and where to find the useful data/info were greatly enhanced. The survey reports from most of the attendees show that "little or no knowledge" about metadata was improved to "sufficient knowledge". The two surveys from the Mystic workshop showed stronger interest with the training. They were very satisfied with the training content, handout materials, and what they learned from the training. One attendee said his knowledge about metadata importance and where to find help was greatly improved from "no knowledge" to "extensive knowledge".

However, due to diverse job duties, skill backgrounds, and metadata knowledge levels, there were also other responses regarding the workshops and training materials. Two responders of the surveys said the workshop was a little bit too long. One said the materials are too simple, and two said the relevance to their job is somewhat complex.

Late November of 2009, an email was sent to all attendees in the workshops: 1). Reminding of and encouraging them to create metadata as soon as they have produced new GIS data, or updated/modified existing data with their project in the summer; 2). Offering opportunities for additional on-tribe metadata training, technical assistance, or consultation, such as software/hardware acquirement, system setup/configuration, metadata tool uses and resource development and so on if any tribes or groups were interested in metadata implementation. In addition to the emails, follow-up calls have been made as well.

III. Next Steps

Will this project's activities continue after this?

There will be no more specific metadata training workshops after this project is completed. The training provides opportunities for the tribes in this area to know each other, and to know the status of other tribes' GIS applications. Efforts will be made to keep in touch with the participating tribes and organizations. We are willing to keep providing related technical assistance or training for tribal metadata creation and GIS data management.

What formal or informal organizational relationships established to sustain activities beyond the performance period?

A primary relationship and connection between the tribal GIS users has been established. It is good to maintain constant contact and exchange, in order to promote GIS application and data share. As the training provider for this project, we will try to keep in touch with other tribes, and offer technical assistance with any kind of metadata issues if this need arises.

Describe the next phase in your project:

Using the contact information of GIS users from this project we will keep regular contact, offer technical assistance of metadata creation, search for further opportunities for GIS data management, data exchange and data sharing.

What other areas need work?

Many tribal GIS users have just started using GIS and don't have much knowledge of GIS data quality and integrity. They don't quite understand how important metadata is. But they do need to know and use metadata as a tool to find more GIS data; even if they don't create much new GIS data in the short term.

IV. Feedback on Cooperative Agreements Program

What are the program strengths?

In addition to metadata training, the project provides an opportunity for different tribes come together to discuss common GIS issues and see other tribes' GIS facilities, and allow us to show how we can help others in GIS services.

Where does the program make a difference?

We wouldn't have been able to provide the training workshop without the support of the CAP program. I learned a lot as well about metadata, tools, internet resources and FGDC NSDI metadata facilities.

Was the assistance you received sufficient or effective?

The assistance was sufficient. It is very effective as well.

If you were to do this again, what would you do differently?

1). Have two categories of workshops based on content: beginner--for primary GIS users, with a focus on metadata concepts, importance, how to use it to find GIS data, and data webs/data catalog; intermediate--for advanced GIS users, covering GIS data components, integrity, metadata creation tools, software and exercises. If one workshop includes too many contents the beginners often feel it covers too much, however advanced users believe it is too simple. All participants should have some GIS knowledge or GIS work experiences. Some non-GIS person may not follow the class and/or would show less interest on it.

2). Choose appropriate date for the workshop. Some tribes did not attend these workshops because they have a busy field season in the summer. Additionally, during the winter traffic becomes a concern at this area, which will impact participation as well. More negotiation is required for a better date setting.

3). Confirm the use of laptops and the GIS facility. Confirm access to the internet for surfing the data catalog and obtaining online metadata resources. Also ArcGIS license were needed. I ordered 6 ArcGIS licenses 3 months before the workshop date, but they did not arrive on time. The internet service was ok, but not all attendees were able to bring a laptop to class therefore planned exercises were not well implemented.