



November/December 2022 Update

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Overview

November marked the end of the first quarter of the Delaware Extension Climate Change Coordination Initiative (DECCCI). We are pleased to share that by November we had achieved the quarterly goals we had outlined and continued to develop the foundation for this research in December. This summary provides an introduction to the research methods being used by DECCCI, a review of recent research activities, insights from the initial key informant interviews, and links to newly added repository materials.

1st Quarter Goals (September, October, November)

- Developed research protocol
- Produced project background briefing document(s)
- Established contacts and organized preliminary meetings with key partners
- Furthered archival and existing materials investigation
- Reviewed and tested software for data analytics (i.e. GIS, text analysis, Social Network mapping, timelines)
- Developed research timetable and gathered data from pilot poll
- Began key informant interviews

Climate Change Related Activities and the DECCCI Research Model

In the October DECCCI Update, we introduced the “Action Insights” method, a qualitative research ideology centered around succinct data collection that serves as the foundation for our work. We use this model, as well as a series of “qualitative” and “ethnographic” tools to gather information about people’s beliefs, values, emotions as these underpin the way people act, feel, think and learn about climate change.

How “Action Insights” Works

Qualitative methods, as compared to statistical analyses, focus on understanding the specific socio-cultural, political and economic patterns that frame how people respond to climate change

adaptation activities in any given geographic location. Specifically, this method will allow us to understand the “why” or “meaning” of “who is doing what, where, and when” of current climate change activities in Cooperative Extension, the University of Delaware, and in local, county and state organizations and institutions. Action Insights represents a transition from more traditional linear approaches to data gathering, analysis and communication to a multi-dimensional “complex social systems” perspective informed by the following assumptions:

- Human organizations are social systems
- Social systems are complex systems
- Complex human social systems are embedded in the physical environment defined by place and time
- Change in social systems is defined by the ongoing interaction of multiple variables in all places at all times (“simultaneity”)
- Relationships between variables in complex systems are often non-linear and emergent
- Non-apparent, invisible and “hidden” elements, such as human “beliefs”, “values” and “emotions” influence all relationships in a complex system and affect projected “visible” outcomes

At the foundation of Action Insights is a simple social taxonomy that shows the interplay of the key components of all human social systems: Actors, Actions and Artifacts in Time and Place, or “AAAPT.” AAAPT is:

- **Actors** – people, groups and institutions. Actors take on specialized ways of acting, or “roles” that help organize the “why”, “what”, “where”, “when”, and “who” of any social context. Roles help maintain the patterns of interaction because they create the culturally accepted rules that give form to relationships. These rules help negotiate how power, authority and legitimacy are to be organized. Roles that actors use in relationships help create the repeated patterns of social interactions.
- **Actions** – activities, programs, projects, initiatives, etc.
A fundamental concept in the study of human behavior and the basic building block of human social systems are “action”. The term action can represent the action of an individual, the collective activities of a group or the complex activities of groups that form organizational activities. Action (no matter at what level of complexity) that occurs between actors is labeled “social interaction”. Social interaction between actors creates a “relationship”
- **Artifacts** – material objects derived from the links between actors and actions. They represent tangible manifestations of social interactions; therefore, they are fundamental source of information for all social research activities.
- **Place** – geographical location
- **Time** – historical moment

Using a “social context” framework as the foundation of Action Insights means that “geo-spatial” variables are an essential component of understanding human climate change activities. Human activity can only be understood within specific “**place**” (geography) and “**time**” (history) dimensions. Taken together, space and time are the basic parameters of all human cultures (how specific people define their life actions within any given “space and time”). An

understanding of culture—and cultural diversity--- has to be at the foundation of any research focused on climate change adaptation and equitable community responses across Delaware.

AAAPT MODEL

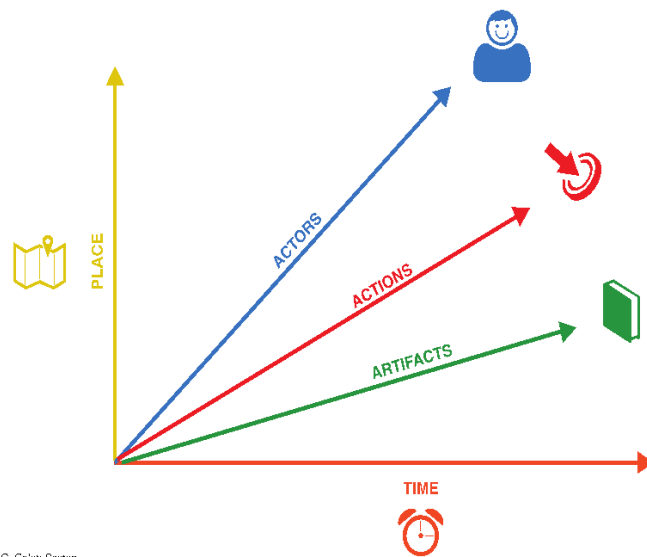
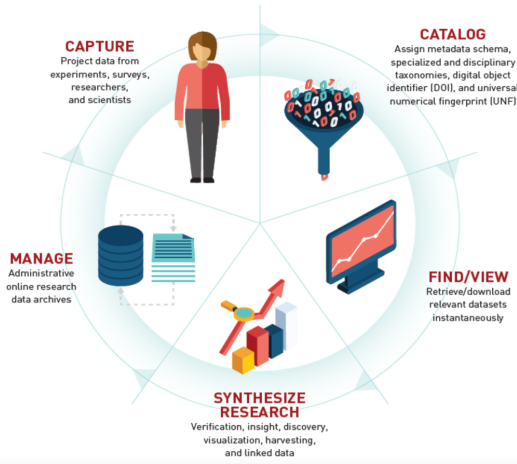


Illustration By: G. Calato Sexton

After the data is coded and stored in the repository it can be transformed into the dynamic visuals needed to analyze complex and multi-dimensional social settings. The use of dynamic visual tools increases the capacity to recognize and see links between themes, patterns and trends. Once visualized these linkages can more easily be communicated for shared discussions, synthesis and decision-making.

DECCCI DATA REPOSITORY



Visual Analytic Tools

TEXT/CONTENT ANALYSIS

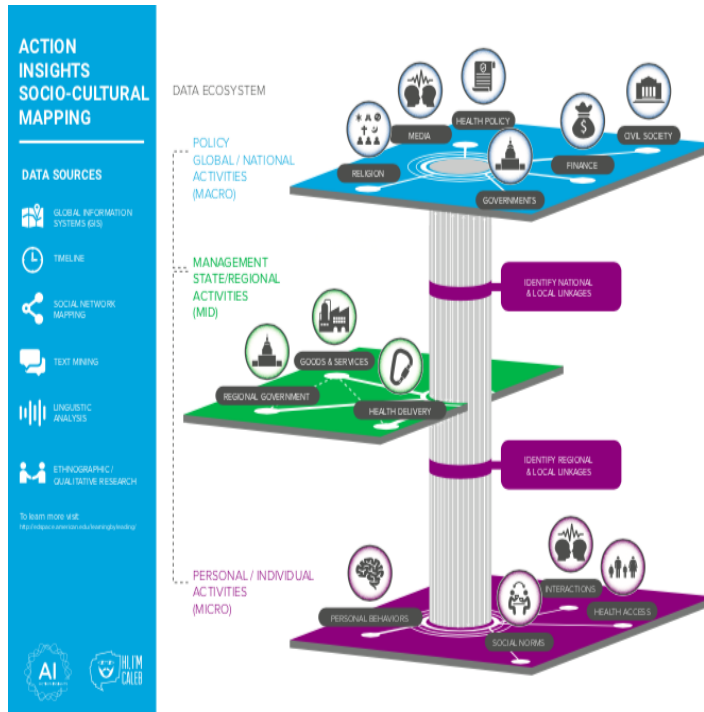
SPATIAL ANALYSIS

OBJECT RELATIONS

TIME/TREND ANALYSIS

Examples of Visual Software

When brought together, integrated and visualized, the data will allow previously “hidden” relationships, linkages and “embeddedness” of Delaware climate change related activities to be represented and visualized across multiple dimensions.



Example infographic showing integrated “levels” of climate change activities occurring simultaneously in any given location.

Data Collection: Key Informant Interviews

Building on information gathered from the “4 Question Poll” that was sent out in October via email to all UD Extension employees, as well as employee lists, Extension personnel were contacted via email and asked to voluntarily participate in in-depth conversations. In response, ten interviews were held in November. Additional interviews are planned and given the holiday season and end of year commitments, scheduling additional interviews in December and January is currently underway.

The insights gathered from the “4 Question Poll” formed the basis of the interview schedule and the focus of the conversations. Interviewees were asked to share where and how they have **learned** – or not–about climate change, what they **think** about climate change, how they **feel** about it and what they are **doing** with respect to climate change. Participants permitted the Zoom sessions to be recorded and the written transcripts of the conversations have been saved and will be analyzed using linguistic and text analytic software. However, early responses to the “learn, think, feel and do” prompts have already begun to reveal patterns across respondents. It is clear that:

- Formal education or training about climate change has been limited
- Information about climate changes is primarily learned through social media or news channels
- There is great concern about questions of “evidence” of climate change
- People are anxious, frustrated and depressed
- The topic is highly politicized among Delaware farmers
- Most activities designed to “do something” about climate change are related to individually oriented action such as recycling, buying electric cars or planting local vegetation
- A common view is that collective action such as changing state policy, or implementing municipal, county or state-wide responses related to food waste, transportation, composting etc. “won’t work” in Delaware
- Integrating climate change into work plans will be an additional burden that adds to the workload and may not be part of grant funded goals and objectives

Examples of Climate Change Related Activities in Delaware

During November and December we continued to add new data to the repository. As part of the iterative research process the information (links to actors, actions and artifacts) has been coded for preliminary pattern analysis. Currently, efforts are being made to decide on the most appropriate text analysis, GIS, social network and timeline software tools for more comprehensive analysis and visualization.

Below are examples of University of Delaware Cooperative Extension climate change related activities.

University of Delaware Cooperative Extension

- Smart Choice Health Insurance:

<https://www.udel.edu/academics/colleges/canr/cooperative-extension/nutrition-wellness/health-insurance/>

- Extension Disaster Education Network:
<https://www.udel.edu/academics/colleges/canr/cooperative-extension/nutrition-wellness/eden/>
- Got Your Back:
<https://www.udel.edu/academics/colleges/canr/cooperative-extension/nutrition-wellness/got-your-back/>
- Beginning Farmer Program:
<https://www.udel.edu/academics/colleges/canr/cooperative-extension/sustainable-production/beginning-vegetable-fruit-grower/>
- Pesticide Safety Education Program:
<https://www.udel.edu/academics/colleges/canr/cooperative-extension/sustainable-production/psep/>
- Renewable Resources Program:
<https://www.udel.edu/academics/colleges/canr/cooperative-extension/environmental-stewardship/forestry/>
- Master Gardener Volunteer Educators Program:
<https://www.udel.edu/academics/colleges/canr/cooperative-extension/environmental-stewardship/master-gardeners/>
- Master Naturalist Program:
<https://www.udel.edu/academics/colleges/canr/cooperative-extension/environmental-stewardship/master-naturalist/>
- Salt-Impacted Agricultural Lands:
<https://www.udel.edu/academics/colleges/canr/cooperative-extension/environmental-stewardship/salt-impacted-land/>
- Industry Resources:
<https://www.deseagrant.org/events-all/2019/7/25/delaware-aquaculture-association-meeting>

Next Steps

As we continue to collect materials across a wide variety of sectors, once again we ask for your support and that you share with us any and all climate change, sustainability, “climate smart

farming/ agriculture”, agro-ecology, etc., related information you may come across. As an ongoing process, we will continue to gather information for the duration of the DECCCI project. We continue to seek all forms of climate change related materials, including annual reports, strategic plans, blogs, newsletters, videos, project documents and so on. In addition, we are collecting ideas about climate change related activities, including research, workshops, and community events.

For more information, questions and ideas about DECCCI, please contact:

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