

**Notes from Geospatial/GIS Meetup
January 12, 2023**

Rivera Library, Room 140 and Zoom

Attendees: Janet Reyes, facilitator;

In person: Alfredo Camacho, Amanda Grey, Chikako Takeshita, Daniel Lopez, David Biggs, Mike Cohen

Via Zoom: Andria Olson, Bart Kats, Devan Velji, Du, Eddie Helderop, Gerald Winkel, Jay Farago-Spencer, Krystal Boehlert, Lara Gardellini, Mario Mendoza, Mary A, Salma Abd Allah, Shanon Langlie, Vanessa Gomez-Alvarado, Zhiyi Wang

Announcements

This meeting was recorded; video is available [here](#). The passcode to view is 9fd.Ph8z

The [Geospatial/GIS Quarterly](#) has been updated for Winter quarter. Please refer to it for upcoming conferences, learning opportunities (such as [UC Love Data Week](#) in mid-February), and more.

Janet highlighted that the **R'Geospatial Club** for students is currently dormant but could be revived for 2023-24 if interested students are willing to serve as club officers.

The next Esri [GIS in Higher Education chat](#), on Tuesday February 7 at 9:00 am PST, will focus on the **Modern GIS curriculum** resources available to educators.

UCR Library is providing an [Introduction to StoryMaps workshop](#) on Tuesday February 7 at 2:00 pm.

A workshop to be offered by Esri staff on **using Planet imagery in ArcGIS** is in the planning stages. Tentatively it will be held on the afternoon of February 23. There will be a limited number of attendees, in-person only.

ArcGIS Pro has been installed on the computers in Watkins 2111.

Analysis tools will be available in ArcGIS Online's Map Viewer starting in late February.

Presentation

Chikako Takeshita is an Associate Professor in the Department of Gender & Sexuality Studies at UCR. Her presentation was on **Story Mapping Extreme Heat Experiences**.

Chikako started by sharing the story map "[Environmental Health and Justice in Southern California](#)" created as a course project in 2020 for GSST 171: Environmental Health and Social Justice. It was based on student interviews with community members in southern California. Chikako created the layouts in

the story map, but students conducted the interviews and provided photos, audio recordings, or video components to create a multimedia story. In the story map Chikako also included overall context for the interviews and a swipe component for comparing the [CalEnviroScreen](#) map with the location of the interview subjects.

In the presentation Chikako highlighted a few of the students' contributions to the story map, including one with audio and one with video of a vehicle tour through neighborhoods in Muscoy with numerous distribution centers.

For the same class this spring, Chikako would like the course project story map to center on heat exposure. With more heat waves due to climate change in our future, the health impacts of extreme heat will become more prevalent, especially for vulnerable populations. Climate resilience is not equally distributed among social classes. She anticipates that the students will interview people who are most vulnerable to extreme heat regarding their experiences, needs, adaptation strategies, and freedoms lost.

Chikako has limited GIS expertise and is seeking input on:

- how best to create a relevant map that shows distribution of heat vulnerability for our region.
- whether building a repository of locally relevant GIS images from available resources is feasible.

Some funding for a graduate student is available.

As an example of the type of project she envisions, Chikako shared maps representing [urban heat islands](#) in Portland, Oregon.

She closed the presentation by sharing the following existing resources that might be utilized in the project:

- [UCLA Heat Maps](#) - looks at ER visits in relation to extreme heat episodes
- California Heat Assessment Tool ([CHAT](#)) - shows heat health events and vulnerability indicators
- [CalEPA Urban Heat Island Interactive Maps](#) - comparison between urban and rural areas
- [Heat Severity - USA 2021](#) - snapshot surface temperature, by 30m raster; from Living Atlas of the World
- [Killer Heat in the United States](#) - an app created at the national level by the Union of Concerned Scientists
- [Urban Tree Canopy in California](#) - from US Forest Service; good local detail, but data is several years old

Discussion

Amanda pointed out that increasing the tree canopy has other benefits in addition to cooling, such as mental health. She suggested that a project that included representations of heat islands, tree canopy and health indicators would be beneficial.

Alfredo shared these thoughts:

- obesity might be one health indicator for vulnerable populations.

- people who walk, bicycle, or take buses out of necessity have more exposure to heat due to longer times spent outside while commuting.
- where schoolyards lack shade and are mostly asphalt, children end up not exercising on hot days.

David suggested that for the analysis Chikako could work with a GI scientist or a geographer. He mentioned Professors Qingfang Wang and Ran Wei, both in the UCR School of Public Policy, as potential contacts. UCSB and USC are schools that have scholars with the needed skillsets.

Daniel said it would be interesting to see the correlation between mobility/access to transportation and the impact on health. In vulnerable neighborhoods sometimes residents don't have the transportation to get to cooling centers. Taking the bus involves walking across long stretches of asphalt, which is hotter. He later observed that renters have fewer options for increasing the tree canopy where they live.

Shanon observed that our campus has issues with lack of shade in some places. This will impact the increasing numbers of students expected to enroll in summer sessions.

Several people commented that the strength of the course project story map is in the personal stories that the students collect.

Shared in the chat

Du shared:

- that the Living Atlas is a great mapping resource: <https://livingatlas.arcgis.com/en/home/>
- a story that also discusses environmental justice including: tree shade, redlining, and heat islands together: <https://storymaps.arcgis.com/stories/f168d465a0bc49eca99811c36cee6b59>

Mike found this resource: https://www.health.ny.gov/environmental/weather/vulnerability_index/

Andria shared these story maps that provide inspiration:

- <https://storymaps.arcgis.com/stories/7bf7141bb6fd41fb9b61a02cfbc61ecd>
- <https://storymaps.arcgis.com/stories/6f1e91cf8a8e4d5d9bd67525575c042e>

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