UN-GGIM 13th Session Side Event: Inclusion and Diversity in Geospatial Information Management

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What Kind of World Do You Want to See?
What Kind of World Do You Want to See?

In Balance with Nature
Sustainable
Prosperous
Healthy
Equitable
Peaceful
Secure
Sustainability and Equity Starts with Geography . . .

Seeing the World as One

Geography Provides the Science & Fundamental Language

Organizing & Integrating All the Factors

Environmental

Social

Economic

Illuminating Patterns & Discovering Relationships
CREDIT: https://interactioninsitute.org/illustrating-equality-vs-equity/
ArcGIS
A Comprehensive Spatial Analytics System
... For Understanding issues of Equity

- AI, ML & DL
- Data Engineering
- Vector Analytics
- Spatiotemporal Statistics
- GeoAI
- Big Data
- Network Analysis
- 3D Analysis
- Python Scripting
- Mapping
- Image & Raster Analytics
- Graph Analytics
- Advanced Visualization
- Modeling
- Real-Time
- Statistical Modeling
- Spatial Data Exploration
- Point Cloud Classification
- Presence-Only Prediction
- Raster Analytics & Modeling
- Density-Based Clustering with Time
- Visual Modeling
- Interactive Charts
- Graph Analytics
- Voxels
How will healthcare access change?
- What were the travel times to women's healthcare clinics across the country before the recent Supreme Court decision?
- How will those travel times change after the decision?
- Where do people have the most cumulative burdens?

How will demand be redistributed?
- What was the demand on women's clinics across the country before the Supreme Court decision?
- How will demand change for remaining clinics after state laws go into effect?
Tracts weighted by population

Connections to Clinics
Then what?

- Calculate changes in travel times resulting from state level policies (access)
- Evaluate cumulative burden
- Calculate changes in service area population for remaining clinics (demand)
People traveling > 3 hours to reach facility
March 2022

Post repeal
People traveling > 3 hours to reach facility
May 2023
Travel time to clinics

- Where do people have the most cumulative burdens?
  - % poverty
  - % no internet access
  - % no access to vehicles
  - % w/ insurance coverage
  - Travel time to nearest clinic
Four other variables impact: Below poverty line, no internet, no vehicle, With Insurance
Calculate Composite Index based on those four indicators

Areas with highest burden in purple
Case Example: WKKF

Black Women and Healthcare Access
Black women of childbearing age in New Orleans and locations of hospitals with and without NICU facilities.

Black Women age 15-49
- > 1,764 - 3,030
- > 1,153 - 1,763
- > 0 - 389
- > 728 - 1,152

- Hospitals with NICU
  - plus Baby-Friendly Designation
- Hospitals without NICU
- Hospitals without Birthing Facilities
Births and Healthcare Access

Births in the last 12 months for the total population in New Orleans, Black women of childbearing age, and access to hospitals.

Fertility
Number of women who have given birth in the last 12 months.

- > 222
- 170
- 100
- 50
- < 0

Black Women age 15-49
- > 1,764 - 3,030
- > 1,153 - 1,763
- > 390 - 727
- 0 - 389
- > 728 - 1,152

- Hospitals with NICU
- plus Baby-Friendly Designation
- Hospitals without NICU
- Hospitals without Birthing Facilities
Black Women and Expanded Care

Black women of childbearing age in New Orleans, hospitals, and additional healthcare support options.

Black Women age 15-49

- > 1,764 - 3,030
- > 1,153 - 1,763
- > 728 - 1,152
- 0 - 389

- Hospitals with NICU
- plus Baby-Friendly Designation
- Hospitals without NICU
- Laboratories without Birthing Facilities
- Federally Qualified Health Centers
- Planned Parenthood
Case Example: African Women Share their Reproductive Health Stories

Background + Objectives

“AGYW in sub-Saharan Africa are a heterogeneous population, and a one-size-fits all approach for HIV or pregnancy prevention will not work.”

Word on the Street was created to

- To raise awareness in this field for potential new funders and policymakers, leveraging USAID funding
- Amplify and strengthen the MPT Target Population Mapping Tool through digital storytelling - bring the data to life
- Highlight the intrinsic links between unintended pregnancy and risk of HIV and other STIs
- Enhance MPT advocacy resources
- Foster an enabling environment for female-initiated HIV prevention and family planning choices, including MPTs
Word on the Street: African Women Share Their Reproductive Health Stories

StoryMap developed as part of a collaboration between CAMI Health, Wits RHI, and FHI360

[Logos for PEPFAR, USAID, Envision FP, FHI360, CAMI Health, and Wits RHI]
Word on the Street
African Women Share Their Reproductive Health Stories

Scroll down to continue
"I’m worried about unplanned pregnancy"
Young women in South Africa discuss unintended pregnancy.

"It’s a good thing to be protected"
Male partners in South Africa speak about HIV prevention.

"We women don’t have a choice"
Young women in South Africa share their thoughts on combining prevention.

"Life is too short"
Grandmothers of young women in South Africa discuss HIV, other STIs, and unintended pregnancy.
Visualizing the Gap: Unveiling Socio-Economic Inequalities

A Data-Driven Approach to Propel SDG 10 Forward

Ines Mato, PVBLIC Foundation
July 5, 2023
GIS and the Geographic Approach

Have Never Been So Important

Helping us better understand issues of Equity
GIS
Enables The Geographic Approach

A Powerful Platform for . . .

Creating Understanding . . .
Exploring Alternatives . . .
Finding Solutions . . .
Explaining . . .

. . . and Taking Action on issues of Equity

Data Collection
Visualization & Mapping
Analysis & Modeling
Planning & Geodesign
Decision-Making
Action
Improving How We Create the Future
Starts With Geographic Understanding

... Recognizing Our World as one

... A World In Which Humans Play a Dominant Role
You Have an Enormous Role to Play . . .

Your Work Is Part of Something Much Larger . . .
Influencing and Creating the Future of Our Planet . . .

You and the Work You Do . . .
Are Essential for . . .
. . . Creating a Sustainable
and Equitable Future

What Kind of World Do You Want?
Resources to help you

**Access gender identity and sexual orientation data**
ArcGIS Living Atlas of the World now includes gender identity and sexual orientation data for the nation, states, and 15 largest metro areas.

Learn about this dataset ➔

**Measure and visualize digital exclusion**
Learn how to analyze data about internet access and gain insights into digital exclusion in the US using a racial equity lens.

Go to the tutorial ➔

**Social Equity Analysis Solution Released**
Organizations can use this solution to understand community conditions and evaluate actions for more equitable outcomes.

Explore the solution ➔

**Apply the racial equity workflow using ArcGIS**
Discover how ArcGIS can play a significant role in helping organizations achieve racial equity by applying the racial equity workflow.

Go to the web course ➔
Be a Part of Change
Share Your Equity Work

The Esri equity and social justice team is looking to highlight best practices from leading professionals who have successfully leveraged geographic information system (GIS) technology to make significant strides toward achieving equity. We are looking for submissions from government agencies, community organizations, academic institutions, and international groups that include GIS maps, dashboards, and app screenshots. Final content will be featured in the GIS for Equity map booklet, a resource that can be used as a tool to start conversations with other teams or peers to inspire the next GIS for equity application or project.

go.esri.com/EquityBooklet