

# GEO Earth Observations for Health GEO VIRTUAL SYMPOSIUM 2023 (EO4HEALTH 2023–2024)

Predicting the Multisectoral Impacts of Health Infrastructure Small Working Group

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# Goals - HERC<sup>2</sup>ULES objectives

- Establish a monitoring and mitigation alert system for heat specifically tailored to vulnerable population
- Model a data-driven methodology to forecast spread, severity and vulnerability
- Create a "Digital Twin" for test and analysis of alternative realities
- Merge authoritative data sources in a geospatially enabled, multi-layer decision support data pool
- Validate approach and toolset with a variety of geographic areas globally
- Create and use synthetic data to augment data with expanded demographics and psychographics attributes to support advanced analytics and scenario forecasting, while protecting sensitive information.

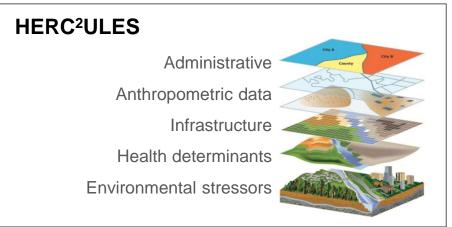
## skymantics

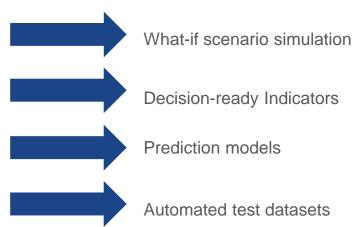
## Accomplishments - HERC<sup>2</sup>ULES implementation methodology

Earth
Observation
Sensing

Demographics & socioeconomics

**Epidemiology** 





#### Raw data sources

- Satellite
- Meteo
- Census
- Health provider

#### **Multi-sectoral impact**

#### **Analysis-ready data**

- Fusion
- Enrichment
- Scaling & extrapolation
- Time-series forecast

#### **Applications**

- Climate change policy
- Education
- Data science

Partners and geographic regions – Europe Spain, UK, Finland, Italy, Greece, Turkey, Switzerland USA California, Arizona, Nevada, Texas, New Mexico, North Carolina, Maryland Latin America Perú, Argentina, Uruguay Africa Egypt, South Africa, Several Sub–Sahara Countries International organizations, WMO, MRI (Conectate A+), PAHO, Red Clara, WHO, Inter American

Institute (IAI) for Global Change Research **Government institutions** Organismo Andino de Salud, (Convenio ORAS-CONHU), Ministerio de Salud Pública de Uruguay, Ministerio de Salud Pública de Neuquén, Argentina



# Needs: Bring HERC<sup>2</sup>ULES to life

## We seek funding, partners, and data

Sponsors role: Project scope

- Funding
- Identification of partners
- Identification of decision makers
- Input on implementation plan
- Data needed

## Fill in Knowledge Gaps

- Impact of extreme heat to:
  - Maternal/child health
  - Maternal/child nutrition
- Low and Middle Income Countries (LMICs)
- Adaptation effectiveness

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