

Identifying Public Health Applications of Satellite-derived Drought Indicators: Improved Monitoring for Respiratory Health

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University of Nebraska Medical Center

- Recipient institution
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- Brian Wardlow (Co-I)



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Project Overview:

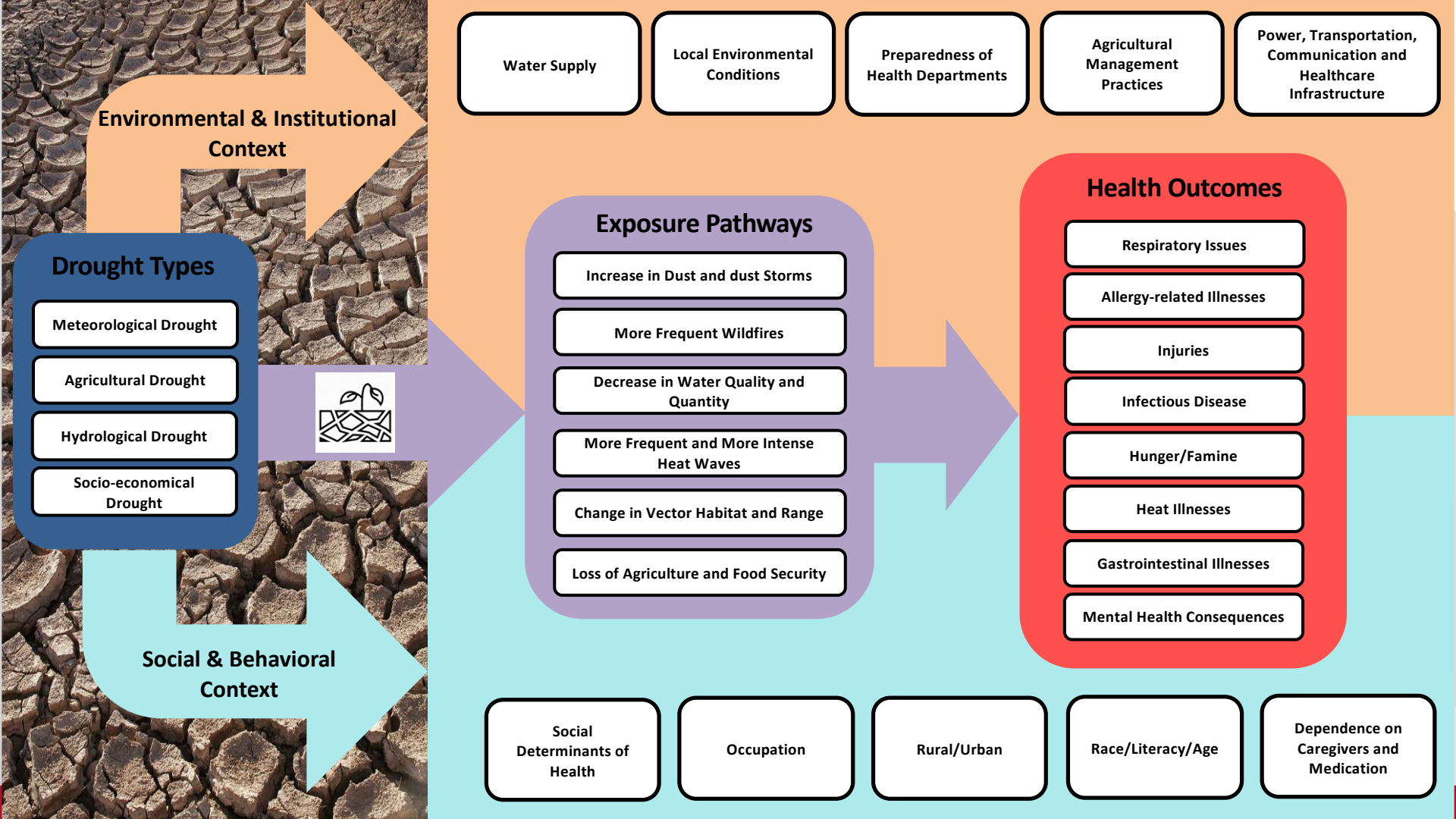


Overall Goals:

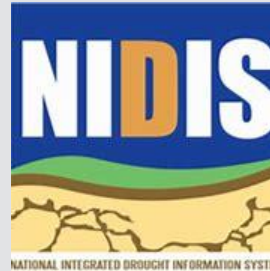
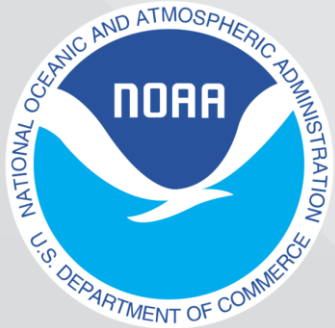
- Use existing satellite-derived drought monitoring tools to **analyze changes in air quality during droughts**, and **examine health risks and vulnerabilities** associated with these changes
- With feedback from end users, **create decision-making tools** for drought preparedness and response

Impact: Improved public health preparedness and capacity for adaptation to drought

Team meetings every 2 weeks



Committed End-users



Drought and Health Workshops



- June 17-19, 2019 – National Drought and Public Health Summit
- November 20-21, 2019 – St. Paul, Minnesota
- February 26-27, 2020 – Tucson, Arizona
- September 23-24, 2020 – Virtual Carolinas workshop
- April 12-13, 2022 – Bozeman, Montana
- October 19-20, 2022 – Portland, Oregon





Schedule and Intended Milestones

Next 6 months

- Use EPA Air Quality System Data to reconstruct historical changes (ARL 3)
- CDC National Center for Health Stats Detailed Mortality Data for US – access and formatting (ARL 3)

Next 12 months

- Evaluating changes in air quality with drought (ARL 3)
- Start a comprehensive air quality modeling system to simulate the underlying processes linking drought to air quality (ARL 3)



Schedule and Intended Milestones

Year 2

- Understanding links to health outcomes from drought (ARL 4)
- Understanding links to health outcomes from air quality (ARL 4)
- Evaluate at-risk populations (ARL 5)
- Determine regional differences (ARL 5)

Year 3

- Working with end-users for pre-product development (ARL 5)
- Product development (ARL 6)
- Workshop with end-users (ARL 6)
- Transition products to CDC and NIDIS (ARL 7-8)



Challenges and Risks

- No foreseeable risks currently
- All data are available
- Possible that analysis takes longer than expected
- Product transition to partners seems promising
 - CDC EH Tracking Program
 - FEMA HQ



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