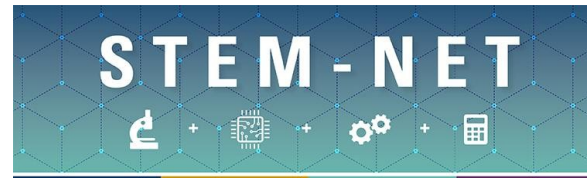


# United Nation's Sustainable Development Goals (SDG)

**Moderated by:**  
Dr. Frank A. Gomez  
Executive Director, STEM-NET  
Office of the Chancellor



<https://www2.calstate.edu/impact-of-the-csu/research/stem-net>

**Speakers**

**Ganesh Raman, Chancellor's Office**

Welcome, Introduction and Framing of SDG Elements and Data

**Debbie Andres and Bill DeVincenzi, San Jose State**

Complete SDG Assessment for San Jose State University

**Jun Bando, CCST**

UN Sustainable Development Goals: Trends and Opportunities

**Emma V. Sanchez, SFSU**

Nutrition and Health Equity: The Role of Policies and Built Environments

**Arne Jacobson, Cal Poly Humboldt**

Creating Institutions to Support SGD Progress: Quality Assurance for Off Grid Solar Products

# **Welcome, Introduction and Framing of SDG Elements and Data**

*Ganesh Raman– Chancellor's Office*

**Ganesh Raman**, Chancellor's Office

Assistant Vice Chair for Research, Department of Research and Initiatives

[graman@calstate.edu](mailto:graman@calstate.edu)

# UN Sustainable Development Goals

## Themes

- Nutrition and health (1, 2, 3, 6)
- Economic opportunity (4, 7, 8, 9)
- Environmental sustainability (11, 12, 13, 14, 15)
- Governance and justice (5, 10, 16, 17)



## California State Needs & Opportunities

Governor's FY2022-23 budget request includes \$22B+ for climate action:

- Forest health/fire protection - \$1.2B
- Water & drought response - \$750M
- Nature-based solutions/extreme heat/coastal & community resilience - \$2.1B
- High speed rail & transportation - \$9.1B
- Zero emission vehicles - \$6.1B
- Clean energy - \$2B
- Research, innovation & workforce development - \$550M

## **Complete SDG Assessment for San Jose State University**

***Debbie Andres, Senior Sustainability Lead***

***William DeVincenzi, Faculty in Residence for Sustainability***

**SDG Overview**



The Sustainable Development Goals (SDGs) are a set of 17 integrated and interrelated goals to end poverty, protect the planet and ensure that humanity enjoys peace and prosperity by 2030.

SDGs were adopted by all member states of the United Nations in 2015 in an effort to establish a global partnership. Universities can participate in some or all of the 17 SDGs.

## 2021 Times Higher Education (THE) Impact Rankings



- SJSU finished in the top 30 among U.S. institutions and top 500 worldwide. Included SJSU for first time Measure university progress around Sustainable Development Goals (SDGs)
- SJSU participated in five SDGs: Good Health and Wellbeing; Sustainable Cities and Communities; Life Below Water; Peace, Justice and Strong Institutions; and Partnership for the Goals
- SJSU's best showing was in the Life Below Water SDG, finishing in the top 10 in the U.S. and #62 in the world.



**Course Audit**

Each SDG has at least 1 department that best exemplifies what our school is doing to achieve these goals by offering classes and research opportunities

UN Sustainable Development Goal	Department	College
SDG 1: No Poverty	School of Social Work	College of Health and Human Sciences
SDG 2: Zero Hunger	School of Nutrition, Food Science, and Packaging	College of Health and Human Sciences
SDG 3: Good Health and Well Being	Public Health and Recreation	College of Health and Human Sciences
SDG 4: Quality Education	Child and Adolescent Development Department	College of Education
SDG 5: Gender Equality	Sociology and Interdisciplinary Social Sciences	College of Health and Human Sciences
SDG 6: Clean Water and Sanitation	Civil Engineering	College of Engineering
SDG 7: Affordable and Clean Energy	Electrical Engineering	College of Engineering
SDG 8: Decent Work and Economic Growth	College of Business	College of Business

UN Sustainable Development Goal	Department	College
SDG 9: Industry, Innovation and Infrastructure	School of Global Innovation and Leadership	College of Business
SDG 10: Reduced Inequalities	College of Social Science	College of Social Science
SDG 11: Sustainable Cities and Communities	Urban and Regional Planning	College of Social Science
SDG 12: Responsible Consumption and Production	Industrial Studies	College of Engineering
SDG 13: Climate Action	Meteorology and Climate Science	College of Science
SDG 14: Life Below Water	Moss Landing Marine Lab	College of Science
SDG 15: Life on Land	Environmental Science	College of Social Science
SDG 16: Peace, Justice and Strong Institutions	Justice Studies	College of Social Science
SDG 17: Partnerships for the Goals	Global Studies	College of Social Science

## Course Catalog

[JS 25 - Introduction to Human Rights and Justice](#)

### JS 25 - Introduction to Human Rights and Justice

3 unit(s)

This course is a lower division introduction to the history of human rights as a concept and body of international law, and to the complicated role of human rights in contemporary social justice campaigns.

Satisfies D: Social Sciences (formerly GE Area D3).

**Grading:** Letter Graded

Sustainability Focused - SDG 16: Peace, Justice and Strong Institutions

[Class Schedule](#) | [Syllabus Information](#) | [University Bookstore](#)

[METR 205 - Advanced Atmospheric and Climate Dynamics](#)

### METR 205 - Advanced Atmospheric and Climate Dynamics

3 unit(s)

Dynamics of larger-scale atmospheric flows over short and climate timescales. Quasi-geostrophic theory and applications; atmospheric waves; baroclinic instability; energetics of atmospheric and climate systems; dynamics of the general circulation; dynamics of the climate system; dynamics of climate change.

**Prerequisite(s):** METR 121B or equivalent

**Grading:** Letter Graded

Sustainability Related - SDG 13: Climate Action

[Class Schedule](#) | [Syllabus Information](#) | [University Bookstore](#)

**Research Output**

Preliminary audit of SJSU’s research output using SDG’s as criteria

	<b>Scholarly output</b>	<b>Share of all SJSU Output</b>
<b>SDG 1</b>	18	0.6%
<b>SDG 2</b>	19	0.6%
<b>SDG 3</b>	178	5.6%
<b>SDG 4</b>	123	3.9%
<b>SDG 5</b>	53	1.7%
<b>SDG 6</b>	30	0.9%
<b>SDG 7</b>	121	3.8%
<b>SDG 8</b>	53	1.7%

	<b>Scholarly output</b>	<b>Share of all SJSU Output</b>
<b>SDG 9</b>	98	3.1%
<b>SDG 10</b>	82	2.6%
<b>SDG 11</b>	138	4.3%
<b>SDG 12</b>	31	1.0%
<b>SDG 13</b>	59	1.9%
<b>SDG 14</b>	35	1.1%
<b>SDG 15</b>	25	0.8%
<b>SDG 16</b>	99	3.1%

**2022 SJSU Sustainable Development Report**

- 1 RESEARCH AND INNOVATION
- 2 ADVANCEMENT
- 3 STUDENT AFFAIRS
- 4 COLLEGES
- 5 ATHLETICS
- 6 STUDENT ORGANIZATIONS
- 7 FACULTY
- 8 ADMINISTRATION AND LEADERSHIP

**Example: SDG 10 Reduced Inequalities**

Empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

**RESEARCH AND INNOVATION**

Human Rights Institute, Institute for Emancipatory Education, Institute for the Study of Sport, Society and Social Change

**ATHLETICS**

Student-athlete scholarships, Sport Improvement funds

**ADVANCEMENT**

Endowments

**STUDENT ORGANIZATIONS**

Girls Who Code Loop, Finance and Economics Women's Club, Global Student Network, Native American Student Organization

**STUDENT AFFAIRS**

Undocuspartan, African American/Black Student Success Center, MOSAIC Cross Cultural Center, Chicanx/Latinx Student Success Center, CCCAC

**FACULTY**

Diversity Statement Guidelines for Faculty Applicants, IDEAS Program

**COLLEGES**

Sociology, Communication Studies, African American Studies, Chicana and Chicano Studies, and Asian Studies

**ADMINISTRATION AND LEADERSHIP**

O DEI, HR - Collective Bargaining, Equal Opportunity, Faculty Housing

## Next Steps - Timeline

JANUARY: QUESTIONNAIRE

FEB - JULY: DATA GATHERING

AUG-SEP: EDITING

FALL 2022: PUBLICATION

SEPT-NOV: IMPACT RANKING

Office of Sustainability will send out questionnaire by end of January

Submission of written descriptions of programs and projects.

Strategic Communication and Office of Sustainability to compile and edit report

Publication of 2022 SJSU Sustainable Development Goals

Submit data for Impact Ranking 2023 for all SDG's.

## **Contact Information:**

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Office of Sustainability

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**CCST**  
CALIFORNIA COUNCIL ON  
SCIENCE & TECHNOLOGY

# United Nations Sustainable Development Goals: Trends and Opportunities

## United Nations Sustainable Development Goals: Trends and Opportunities

*Jun Bando – Senior Advisor, Ca. Council on Science and Technology*

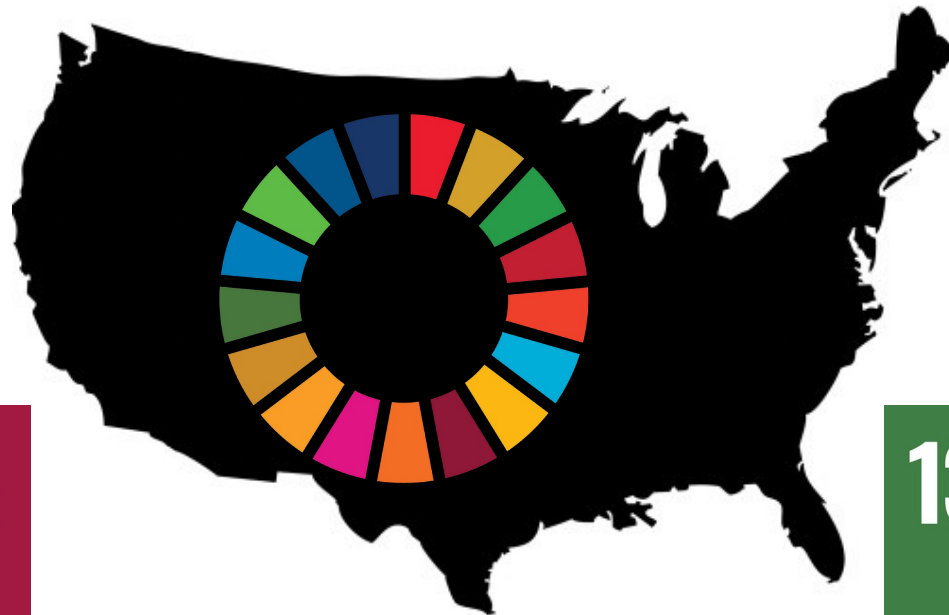
**Jun Bando, Senior Advisor**  
**California Council on Science and Technology**  
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## Global Trends



## U.S. Role and Trends



# United Nations Sustainable Development Goals: Trends and Opportunities

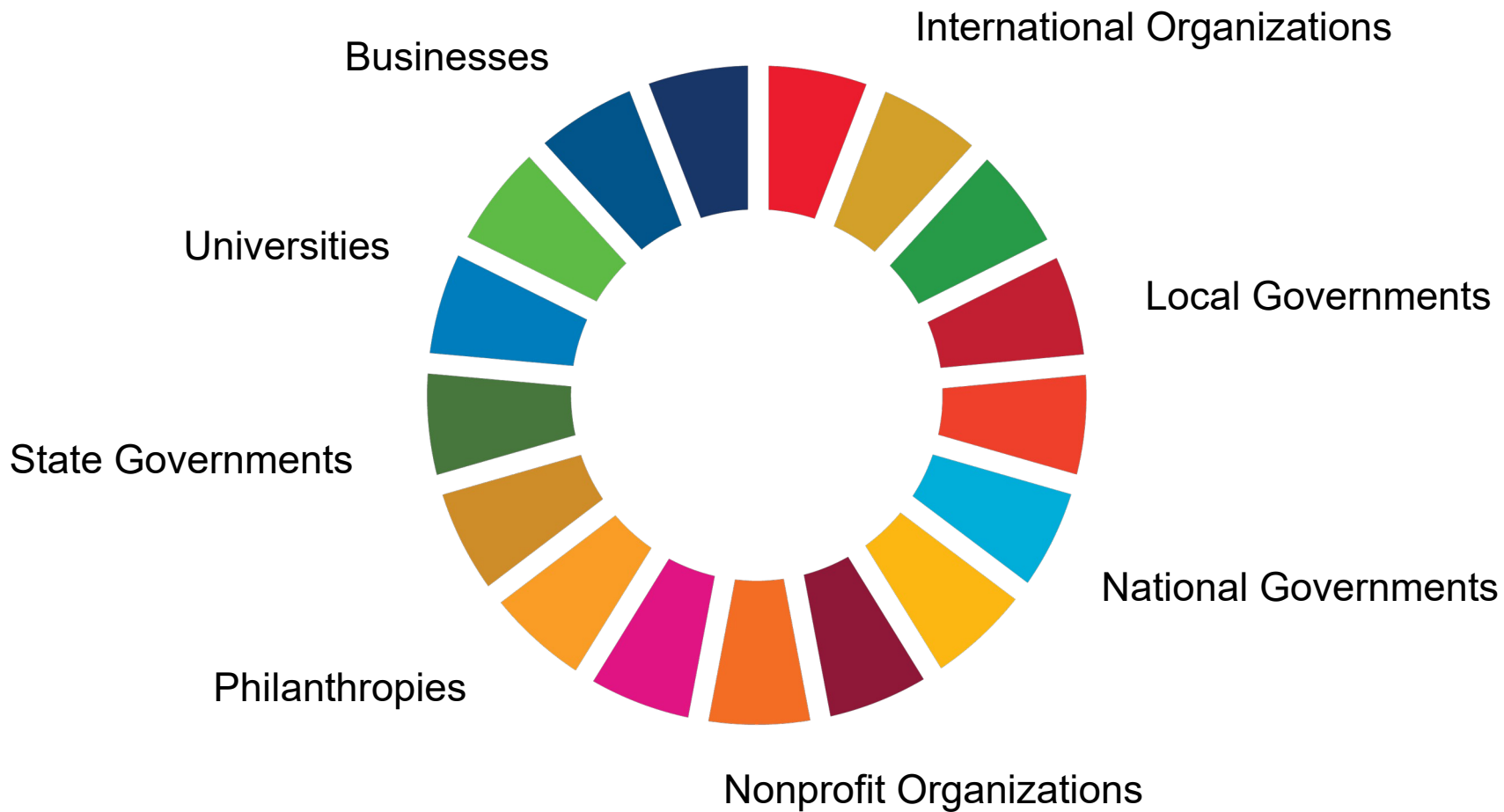
## Links to CA Priorities





# United Nations Sustainable Development Goals: Trends and Opportunities

## Opportunities





## University Opportunities

- Research
  - Assess needs/priorities of communities most impacted by implementation gaps
  - Design more inclusive, resilient, and sustainable communities
  - Develop new conceptual frameworks to describe SDG interdependencies
  - Compare implementation among countries and at different scales
- Education/Training
  - Embed SDG education across disciplines
  - Increase public awareness
- Implementation
  - Voluntary progress reviews (Carnegie Mellon)
  - Course catalog mapping to SDGs (University of Tennessee, Knoxville)
  - University strategic plan (Georgia Tech)





**CCST**  
CALIFORNIA COUNCIL ON  
SCIENCE & TECHNOLOGY

# United Nations Sustainable Development Goals: Trends and Opportunities

## Thank you!

Jun Bando, Ph.D.

California Council on Science and Technology

[jun.bando@ccst.us](mailto:jun.bando@ccst.us)





## Nutrition and Health Equity: The Role of Policies and Built Environments

*Emma V. Sanchez–  
San Francisco State*

**Collaborators:**

*Brisa N Sánchez, Drexel University*

*Maria Acosta, SFSU*

*Mika Matsuzaki, John Hopkins University*

*Karen Petersen, University of Michigan*

*Ana Pelegrini, SFSU*

*Sahana Vasanth, SFSU*

*Jim Sallis, UCSD*

*Paula Braveman, UCSF*

**Funder:** *National Institutes of Health (NHLBI)*



**Emma V Sanchez-Vaznaugh, Professor**  
SFSU, Department of Public Health  
emmav@sfsu.edu

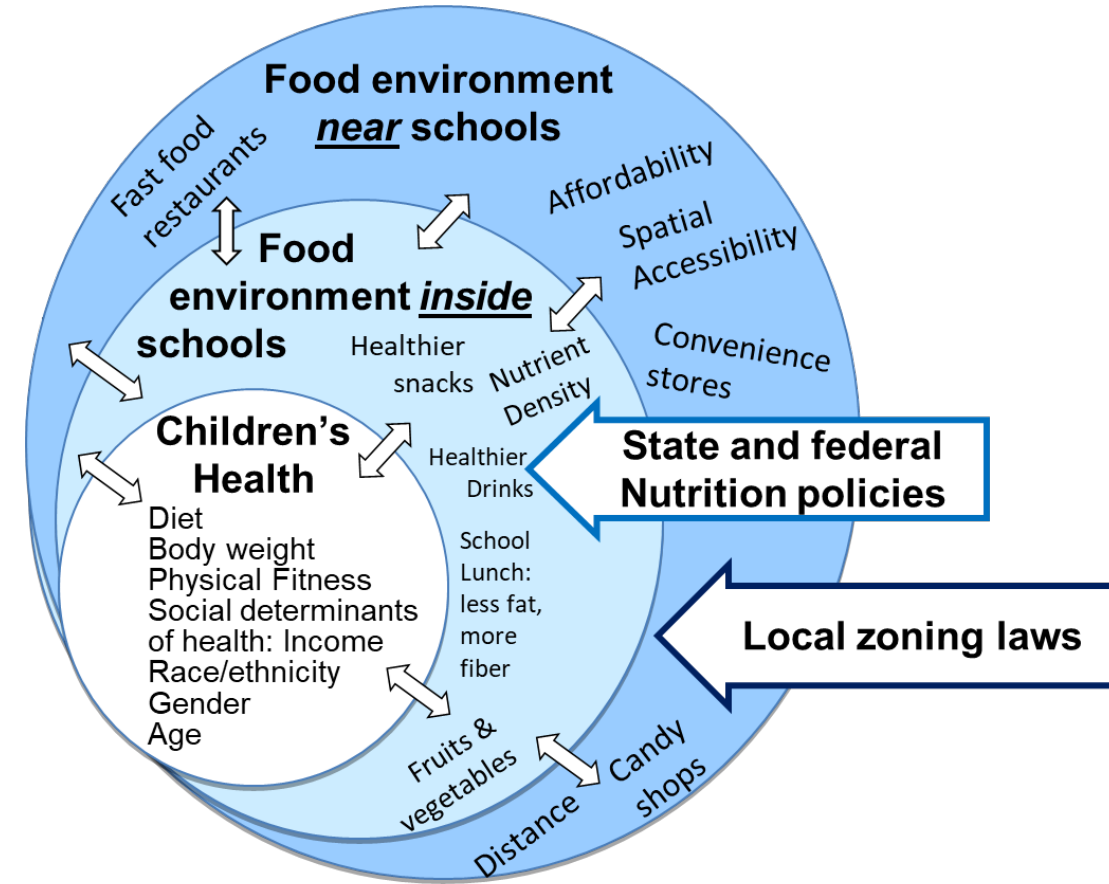


# Overview/Background

- Can local, state and federal nutrition policies shape children’s health and reduce health disparities?
  - Nutrition environment: schools and communities near schools
- → availability and quality of foods/drinks
- → children’s diets and dietary behaviors
- → health (healthy body weight)



# Nutrition and Health Equity







# Overview/Background

- **State and federal policies** can improve **nutrition**
  - Standards for breakfasts and lunches
  - Standards for snacks/food, beverages sold to students (outside of school meals)
  - Limit availability of junk food and drinks
- California policies: regulate sugar, fat content of snacks; ban sodas/sugary beverages
- **Federal policy for school meals**
- **Health equity:** target low-income populations
- Junk food/drinks available in stores near schools can enhance/undermine nutrition efforts in schools

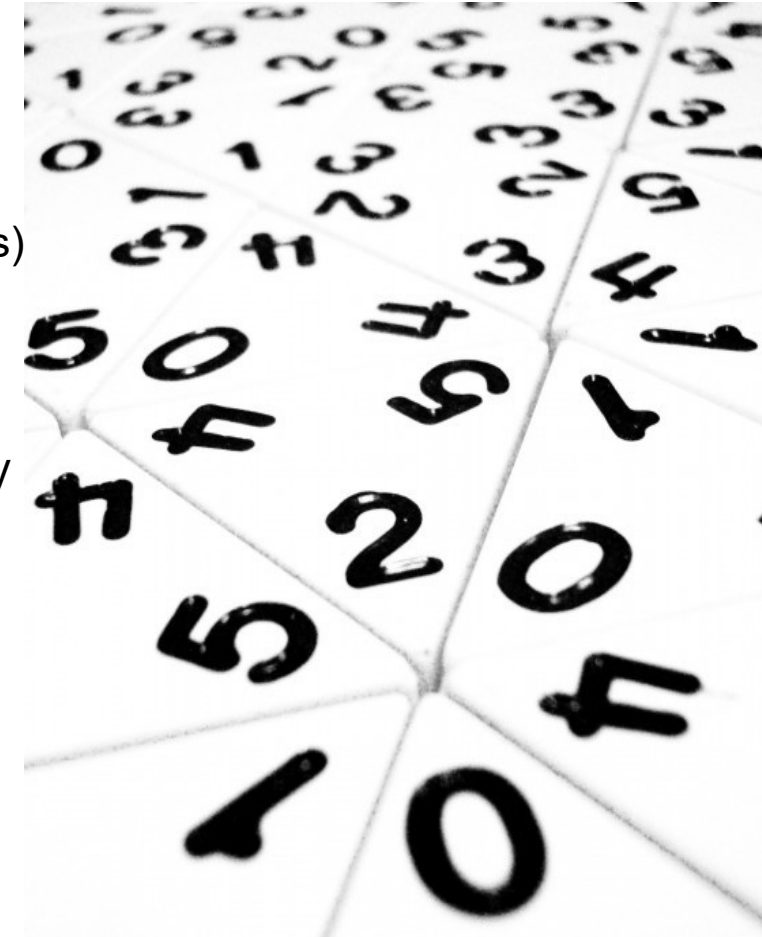
# Nutrition and Health Equity





## Activities

- *Prepare and merge* data sources for analyses
  - **Student data** collected in California public schools
  - **School characteristics**: school size; racial/ethnic composition of students
  - **Fast food outlets** and convenience stores near schools ( $\frac{3}{4}$  mile service areas)
  - **Census data**: income and education of residents in neighborhoods where schools are located
- Other data sources: Child data from the National Nutrition Examination Survey (NHANES)
- Define variables
- **Body weight** : BMIz scores
- **Exposure to policy**: after federal policy (2015-2018) vs before (2007-2010)
- **School meal participation**: 0 days; 1 to 2 days; 3+ days
- **Restrict analyses** to children 5-17 years old who are eligible for free or reduced-price meals





# Results

- Among children ages 5-17, who are eligible for free or reduced-price meals:
  - Breakfast participation associated with lower body weight among African American children
  - Evidence less clear among Latino children

Difference in predicted mean BMIz after (2015-2018) vs before (2007-2010) federal policy to improve school meals, according to breakfast or lunch participation and race/ethnicity

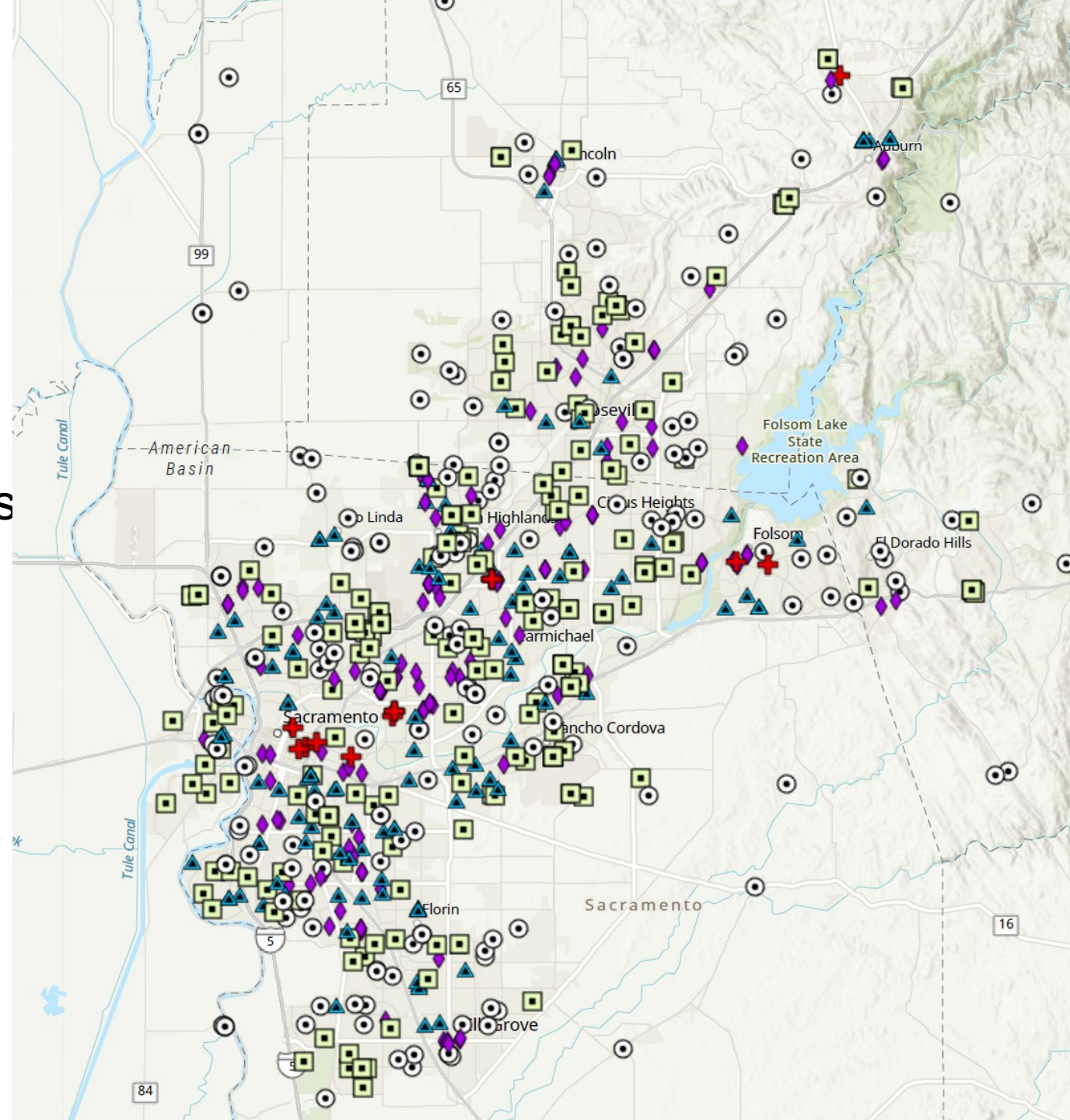
Breakfast	1-2 vs 0 Days	3+ vs 0 days
African Americans	<b>-.682</b> (-1.23, -.125)	<b>-.27</b> (-.64, .197)
Latinx	-.015 (-.467, .438)	.001 (-.285, .287)
Lunch		
African Americans	<b>-.643</b> (-1.29, .00)	.03 (-.387, .452)
Latinx	.068 (-.518, 1.129)	.15 (-.322, .622)

^ Adjusted for age, sex, nativity, education of the main caregiver and income. Data Source: National Nutrition Examination Survey 2007-2018



## Results

- Fast food restaurants near schools: **disproportionate** presence based on urban/rural locations, and income of residents in neighborhoods schools<sup>^</sup>
- Far more FFR near schools that serve more Latinx, African American and Asian students' low-income areas<sup>^</sup>



<sup>^</sup>Sanchez-Vaznaugh, EV et al 2019 *AJPM*;  
Studwell, A, et al 2020 *Geospatial Review*;  
Sánchez, B et al 2012 *AJE*; and  
Sanchez-Vaznaugh, et al 2016 *PrevMedicine*



### Implications/Lessons Learned

- Reasons for mixed findings among Latinx children are unclear
  - Diverse population
  - Different dietary patterns
- Data are cross sectional, lacks environmental variables





### Next Steps/Long-Term Plans

- Investigate influences of both **policies** and **environments** on child health and disparities
- Examine co-benefits of policy and environmental factors e.g., academic outcomes





### Summary

- Nutrition → health \*
- **Policies and interventions**--reach large numbers of children; implemented around the world
- Healthier **more equitable nutrition environments** can help narrow health disparities early in life
- Need to **examine policy/environment effects** specifically among sociodemographic subgroups: race/ethnicity, social class, gender and place
- **Improve nutrition environments everywhere**, particularly inside and near schools





SAN FRANCISCO  
STATE UNIVERSITY

## Nutrition and Health Equity

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**Campus/Department:** SFSU Department of Public Health

**Email:** [emmav@sfsu.edu](mailto:emmav@sfsu.edu)





## Creating Institutions to Support SGD Progress

# Creating Institutions to Support SGD Progress: Quality Assurance for Off-Grid Solar Products

*Arne Jacobson*

*Schatz Energy Research Center, Cal Poly Humboldt*

Collaborating  
Organizations



**VeraSol**

**Arne Jacobson**, Professor

Cal Poly Humboldt, Schatz Energy Research Center

Arne.Jacobson@humboldt.edu



## Creating Institutions to Support SGD Progress

### Environmentally Oriented Sustainable Development Goals

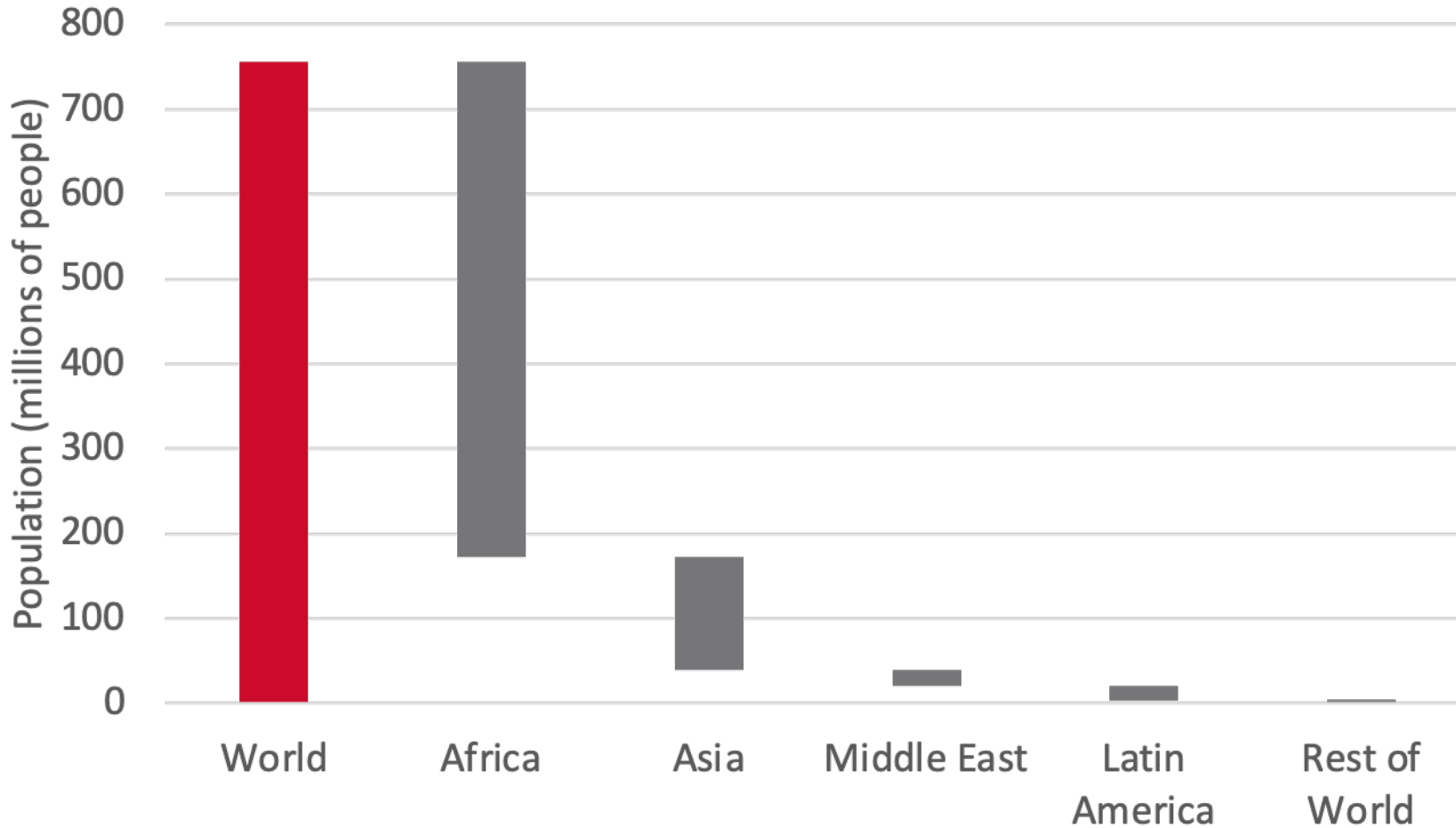
- Goals 6, 7, 11, 12, 13, 14, & 15 have a strong connection to the environment.
- The work I will discuss today relates especially to SDG7: Access to Affordable and Clean Energy





## Creating Institutions to Support SGD Progress

### People without access to grid electricity (2021)



- Globally, about 760 million people lack access to grid electricity. This is about 10% of the world's population.
- Over  $\frac{3}{4}$  of these people live in Sub Saharan Africa



## Creating Institutions to Support SGD Progress

**For many who lack access to electricity, off-grid solar has potential to provide an affordable near-term solution.**



Photo: Evan Mills



Image source: VeraSol

- Off-grid solar products include solar lanterns and solar kits that can power multiple lights and appliances.



## Creating Institutions to Support SGD Progress

**Availability of poor-quality products is a barrier. Product certification to ensure quality can help address this issue.**

- While good-quality solar products can improve energy access, low-quality products create frustration and can represent a significant financial loss for low-income people in off-grid areas.
- Product certification can help ensure quality and protect consumer interests, thereby enabling more widespread deployment.



“I hate solar, it doesn’t work...”  
- Kenyan solar user who had purchased a low-quality product

**SOLAR PANEL SCANDAL!!**

**BEWARE OF THE SILVER FRAME**

**LOOK FOR THE GOLD FRAME**

Tests carried out at Loughborough University in U.K. have shown that 14 watt panels made in China only give out half the power they should do !! They are therefore actually only 8 watt panels and should cost not more than Kshs 2000/= each. They can be identified by their **silver frames**.

This scandal has been reported to the Kenya Bureau of Standards. The detailed test results can be viewed at any Sollatek Solar Distributor, Sollatek Service Centre or [www.sollatek.co.ke](http://www.sollatek.co.ke)

**LOOK FOR THE PANEL WITH THE GOLD FRAME MADE IN U.K. BY ICP SOLAR AND SOLD EXCLUSIVELY BY SOLLATEK IN E. AFRICA TO BE GUARANTEED GOOD VALUE FOR YOUR MONEY.**

**The choice is yours!**

**Sollatek**<sup>TM</sup>  
SOLAR

HEAD OFFICE,  
P.O. Box 34246, Mombasa, 80118 Kenya. Tel:com : (041) 5486250/1,2,3 Fax: 5486259,  
Mobiles: 0733 615727 /610753 or 0722 764643  
e-mail: [sales@sollatek.co.ke](mailto:sales@sollatek.co.ke)

Daily Nation, May 2, 2004



## Creating Institutions to Support SGD Progress

### VeraSol is a Quality Assurance Program for Off-Grid Solar Products for Residential and Small Business Applications

- Working with partners, our team at the Schatz Energy Research Center helped develop and implement a product certification program for off-grid solar products. The program was launched in 2009 as part of the World Bank Group's Lighting Global initiative.



- In 2020, the program name was changed to VeraSol. The Schatz Center, working in collaboration with CLASP, operates the VeraSol product certification program.



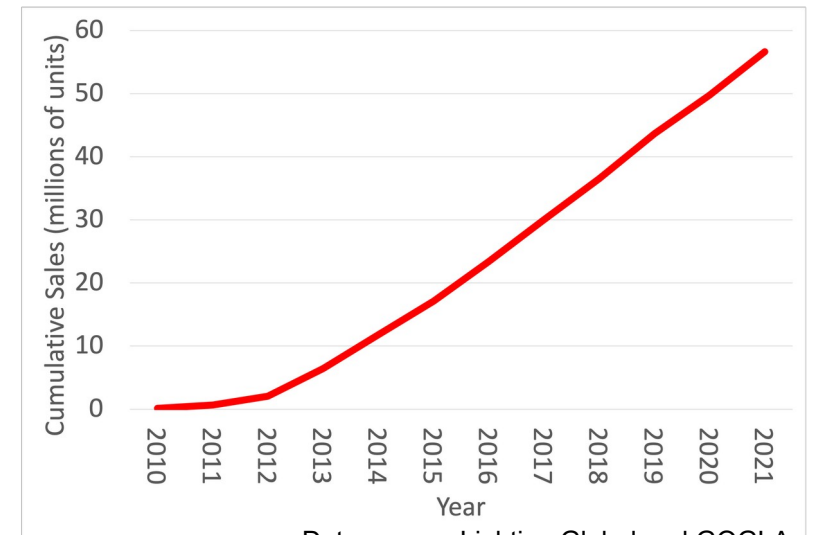
# VeraSol

CAL POLY HUMBOLDT

## Creating Institutions to Support SGD Progress

**Programs like VeraSol support SDG7 by creating institutions to protect consumers and support the deployment of good-quality solar products.**

- Since 2009, over 55 million solar products that were certified through the program have been sold globally. These products have helped improve energy access for over 100 million people.



Data source: Lighting Global and GOGLA





## Creating Institutions to Support SGD Progress

# Thank you!



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**CAL POLY HUMBOLDT**



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## Next Steps/Closing Remarks

Dr. Frank A. Gomez  
Executive Director, STEM-NET  
Office of the Chancellor



<https://www2.calstate.edu/impact-of-the-csu/research/stem-net>

## Webcast Feedback Survey

Please take a few moments to tell us about your webcast experience.

Use the QR Scan Code to download it



## STEM-NET May Webcast

Topic: NSF EHR Core Research (ECR) Program and CSU Grantees Webcast

Date: Friday, May 20, 2022

Time: 10am-11:30am

## STEM-NET Upcoming Events

Register Here



## Virtual Research Café 10.0

Date: Wednesday, May 18th, 2022

Time: 11am-12pm

Register Here





## Join our **CSU STEM-NET Community listserv**

[csustemnet@lists.calstate.edu](mailto:csustemnet@lists.calstate.edu)



## Begin a Conversation with Colleagues and Join our **Private CSU STEM-NET Facebook Group**

<https://www.facebook.com/groups/2629611737269292>



**THANK YOU FOR JOINING US TODAY!**  
**For more information about STEM-NET visit our website:**

