

August 5, 2021

Speak Truth to Power: Human Rights Education and Science

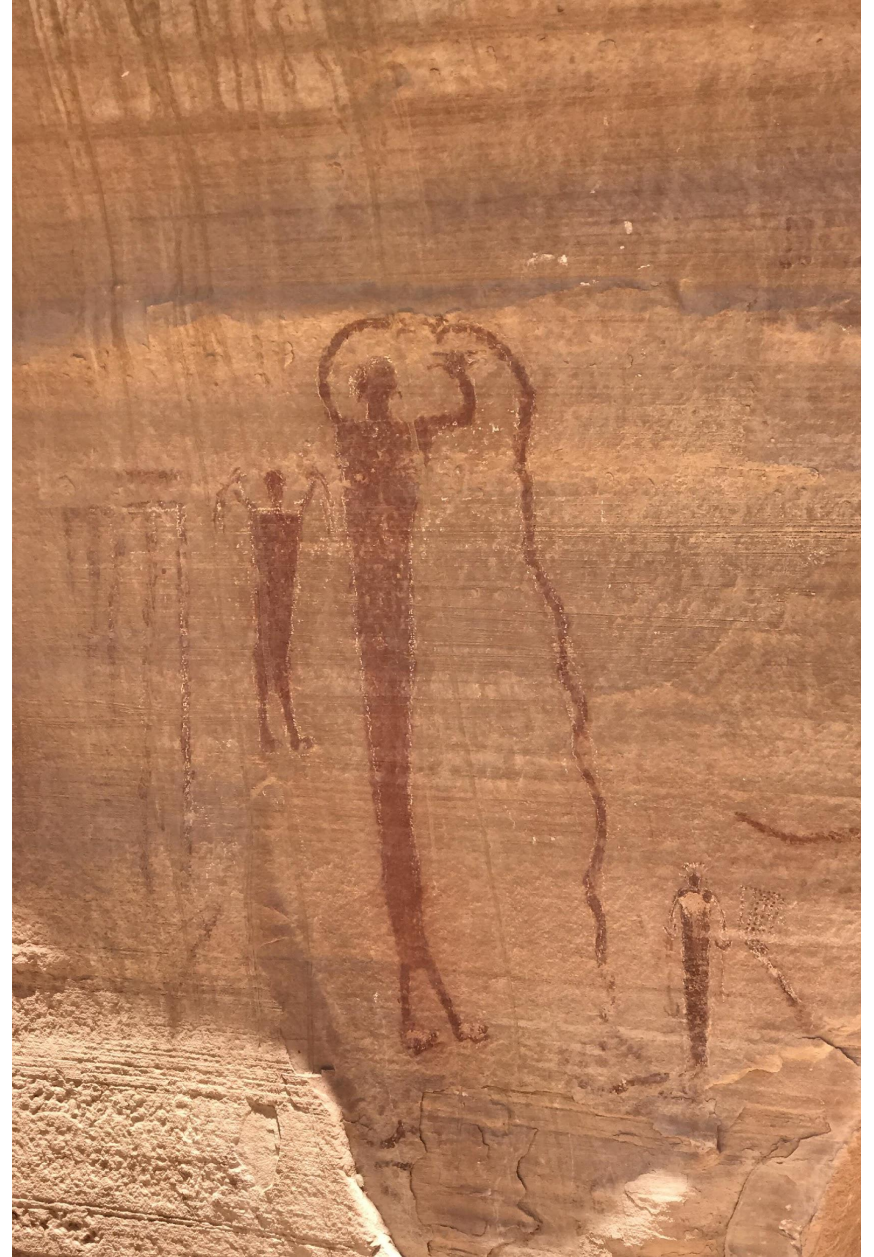
LAND ACKNOWLEDGEMENT

- “Land acknowledgments are used by Native Peoples and non-Natives to recognize Indigenous Peoples who are the original stewards of the lands on which we now live.” (National Museum of the American Indian)
- Sharing “[Digital Land Acknowledgment](#)” by Adrienne Wong
- **Land acknowledgements help us to understand the history of the land on which we find ourselves, acknowledging indigenous peoples as the owners of the land and the impact of colonization and other other factors that have brought us to reside there.**

Find the Nations’ land on which you reside at <https://native-land.ca/>

Support other Indigenous organizations like:

- [American Indian College Fund](#)
- [Cultural Survival](#)
- [Native American Heritage Association](#)
- [The National Indian Council On Aging, Inc. \(NICOA\)](#)



Sciences

- Sustainability Workshop
- Social Issues and Science
- Topics in Chemistry
- Topics in Water



Why are Human Rights important?

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Human rights...

- Ensure we have **basic needs** met
- **Protect people** from abuse and injustice
- Encourage **freedom of speech** and expression
- Give people the freedom to practice their **religion**
- Allow people to **love** who they choose
- Encourage equal **work** opportunities
- Give people access to **education**
- Protect the **environment**

Human Rights Education

Human Rights Education is a deliberate, participatory practice aimed at empowering individuals, groups, and communities through fostering knowledge, skills, and attitudes consistent with internationally recognized human rights principles.

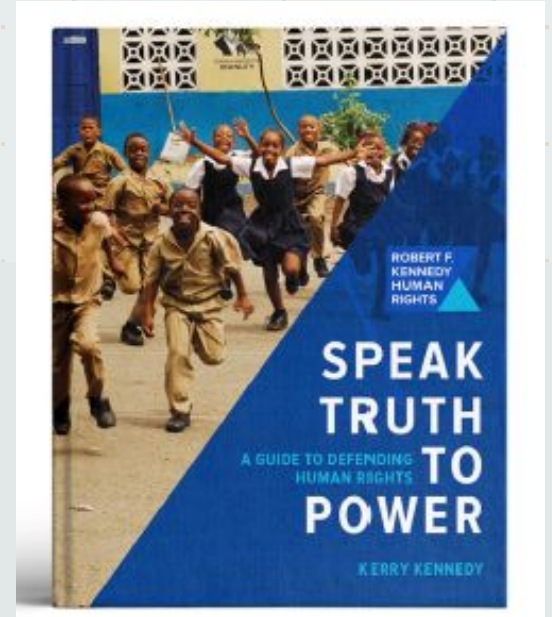
Human Rights Education builds awareness, empathy, and understanding of the basic rights shared by all people.

Human Rights Education encompasses education **about** human rights, **through** human rights, and **for** human rights.



About Speak Truth To Power

Based on Kerry Kennedy's book *Speak Truth to Power: Human Rights Defenders Who Are Changing Our World* and the Universal Declaration of Human Rights (UDHR), Speak Truth to Power is a multidimensional human rights education program that combines powerful storytelling and interactive learning to provide this generation with the knowledge and tools necessary to end and prevent human rights abuses around the world.



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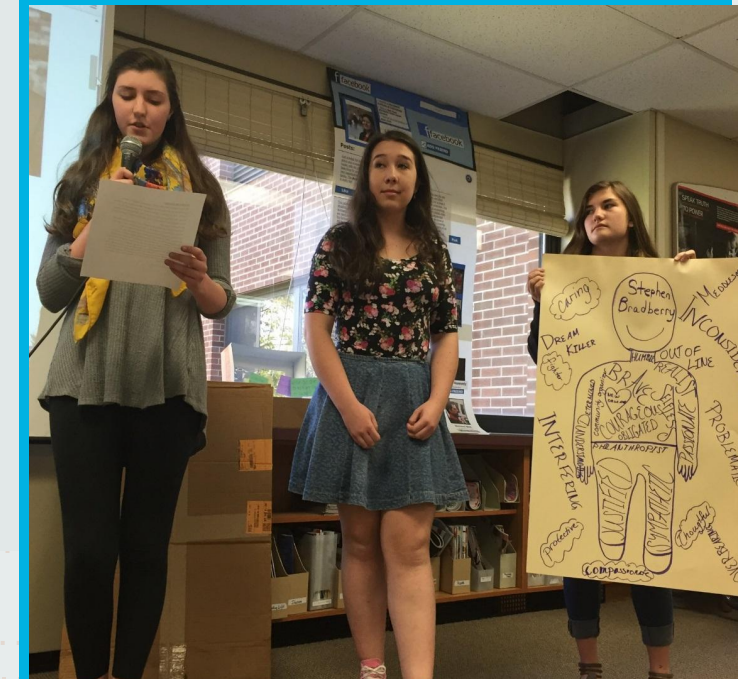
To date, our work has inspired an estimated **5.7 million** students, teachers, community leaders, and citizens, teaching them to be **empathetic and emboldened champions of human rights.**

STTP OBJECTIVES

Our vision for a just and peaceful world through HRE is grounded in:

- Building educator capacity to ingrain human rights education into the fabric of their pedagogy
- Reinforcing attitudes, mindsets and behaviors in the learning process for all participants so that they advance and protect human rights in their everyday lives
- All participants identifying as human rights defenders through mindful action (Aligned with UDHR and the UN Sustainable Development Goals (SDGs))

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RFK Defenders Lessons

Wangari Maathal

Loune Viaud

Librada Paz

Mohammed Elbaradei

Bertha Isabelle Zuniga

Greta Thurnburg

Pope Francis

Disciplines are manifest through the lens of the human experience.

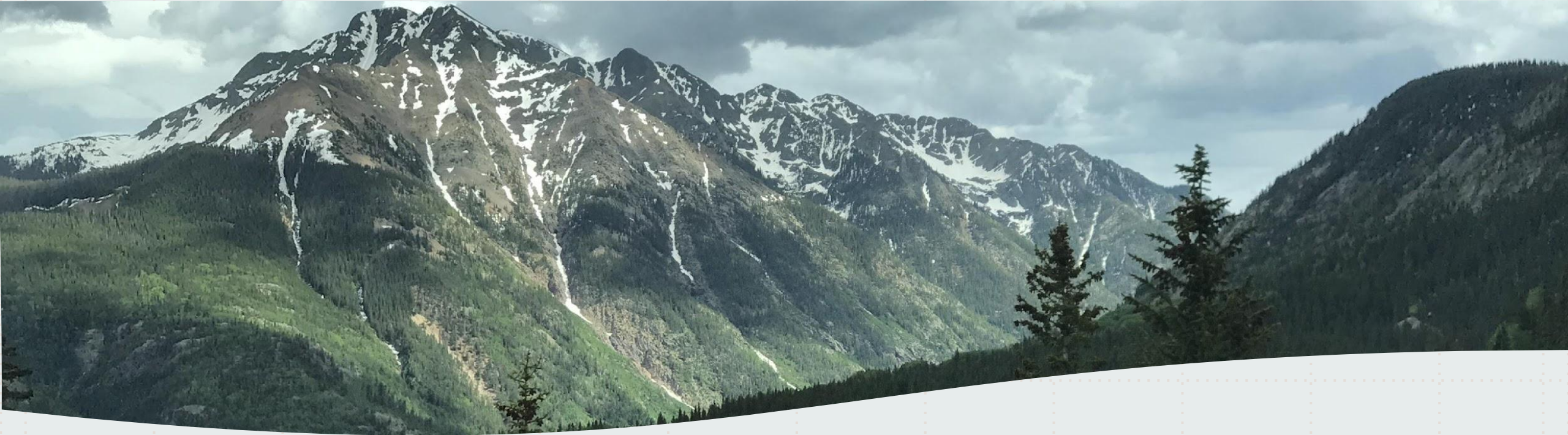
1. Sciences are built on human endeavors and include their social constructs and biases.
2. Wherever there is a concept, therein lies the human experience



Finding the bridge in science curriculum

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Elevating Lessons

...an approach to including HRE

- Begin building the collaborations
- Identify primary objectives (practices/concepts)
- Find the "story" behind the concept
- Consider social impact
- Include the voice of the story
- Selected reading to anchor discussion

National Standards

NGSS (Next Generation
Science Standards)

NCTM (National Council of
Teachers of Mathematics)

NCSS (National Council for
Social Studies)

NCTE (National Council of
Teachers of English)

Case studies

*Desertification in Central Asia (Aral Sea)

*Atomic Chemistry

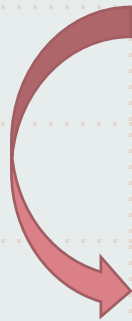
*Climate Change and Homelessness

Food Production and Food Inequity

Water Dynamics and Water Rights

Case No. 1

Aral Sea, Desertification (instructional practice)



students use Landsat satellite images of Aral Sea to determine % water loss over time

students overlay national boundaries adjacent to the Aral Sea directly on the images.

focus on Aral Sea boundary between [Kazakhstan](#) to the north and [Uzbekistan](#) to the south where students explore the social impact on communities.



The Story,...

F

or a young Madi Zhasekenov, summertime on the shoreline of the Aral Sea was an idyllic affair. His three-month school holidays were spent at the port near his home in Aralsk, south-western Kazakhstan, interacting with fishermen hauling in their daily catch.

But by the time he was 17, the water levels of the Aral Sea had dropped and the salinity had risen so rapidly that the freshwater fish that once thrived there could no longer survive. One of the hardest moments for Zhasekenov was when he realised that he needed to buy fish for his family's daily meals.

“We didn't know how to buy a fish because we just always used to catch them,” he said. “The first time I went to the market to buy it, it was just a very bad feeling.”

Outline the Issues (some include)

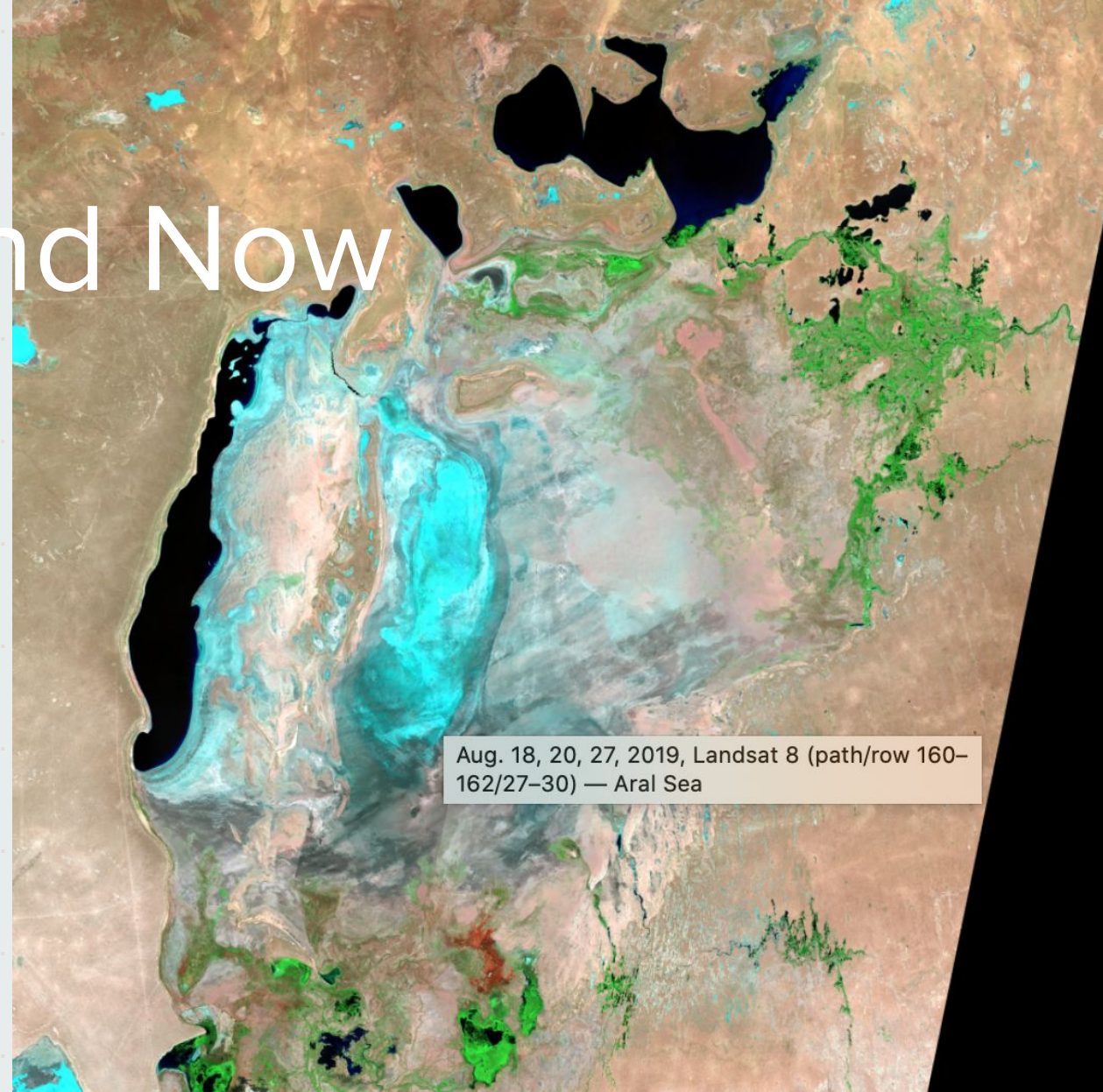
- Important Demographic Changes over the last decades
- Agricultural policies from former Soviet Union and high water demand crops spurred affected Aral Sea freshwater volume
- With the dissolution of Soviet Union in 1991, the transition from a centralized economy to a market one brought severe economic hardship and dispute over water rights
- World Bank steps in find success and failures



Then and Now



Sep. 1, 2, 3, 22, 1977, Landsat 2 (path/row 172–175/27–30) — Aral Sea

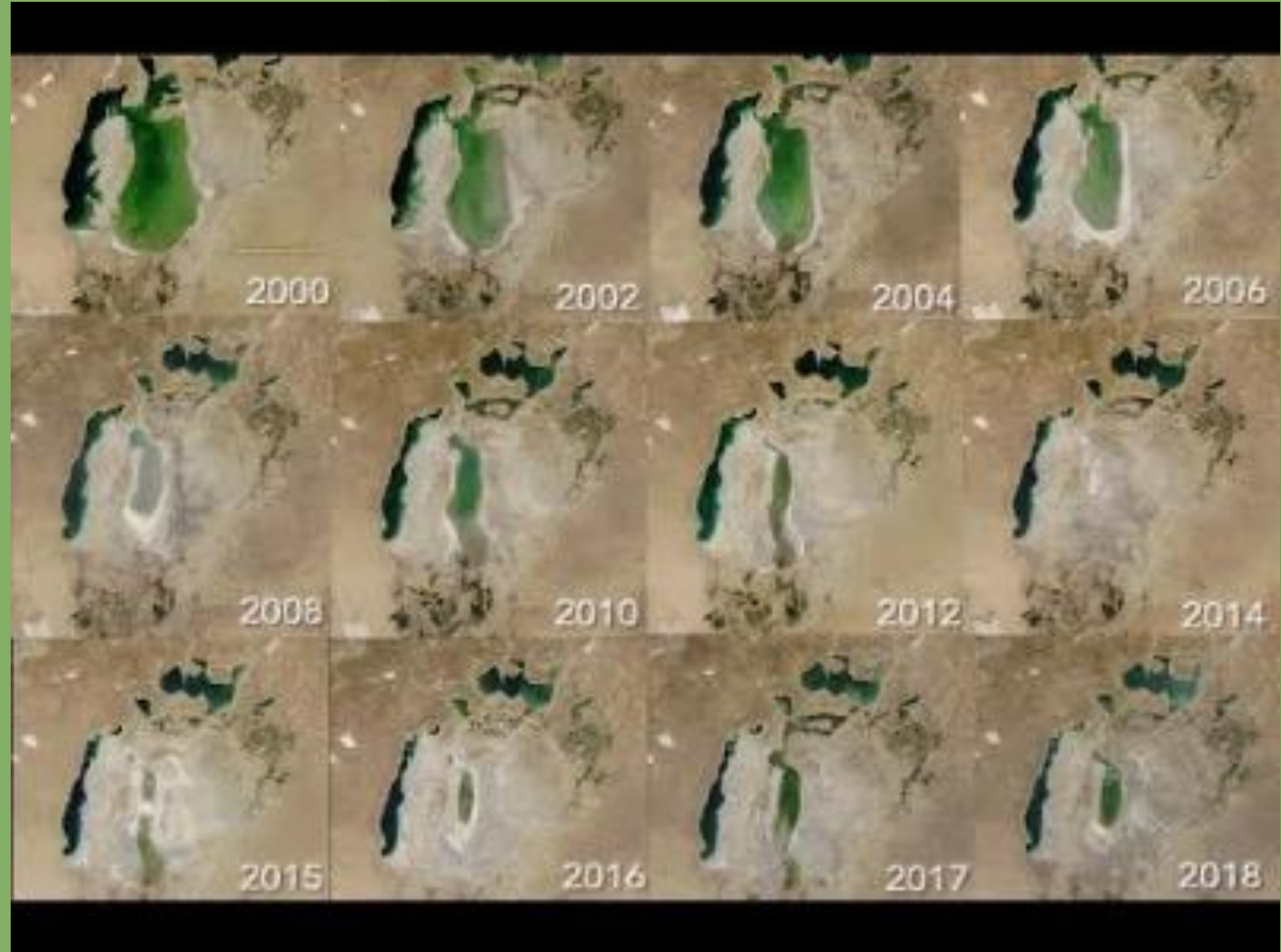


Aug. 18, 20, 27, 2019, Landsat 8 (path/row 160–162/27–30) — Aral Sea

Aug. 18, 20, 27, 2019, Landsat 8 (path/row 160–162/27–30) — Aral Sea

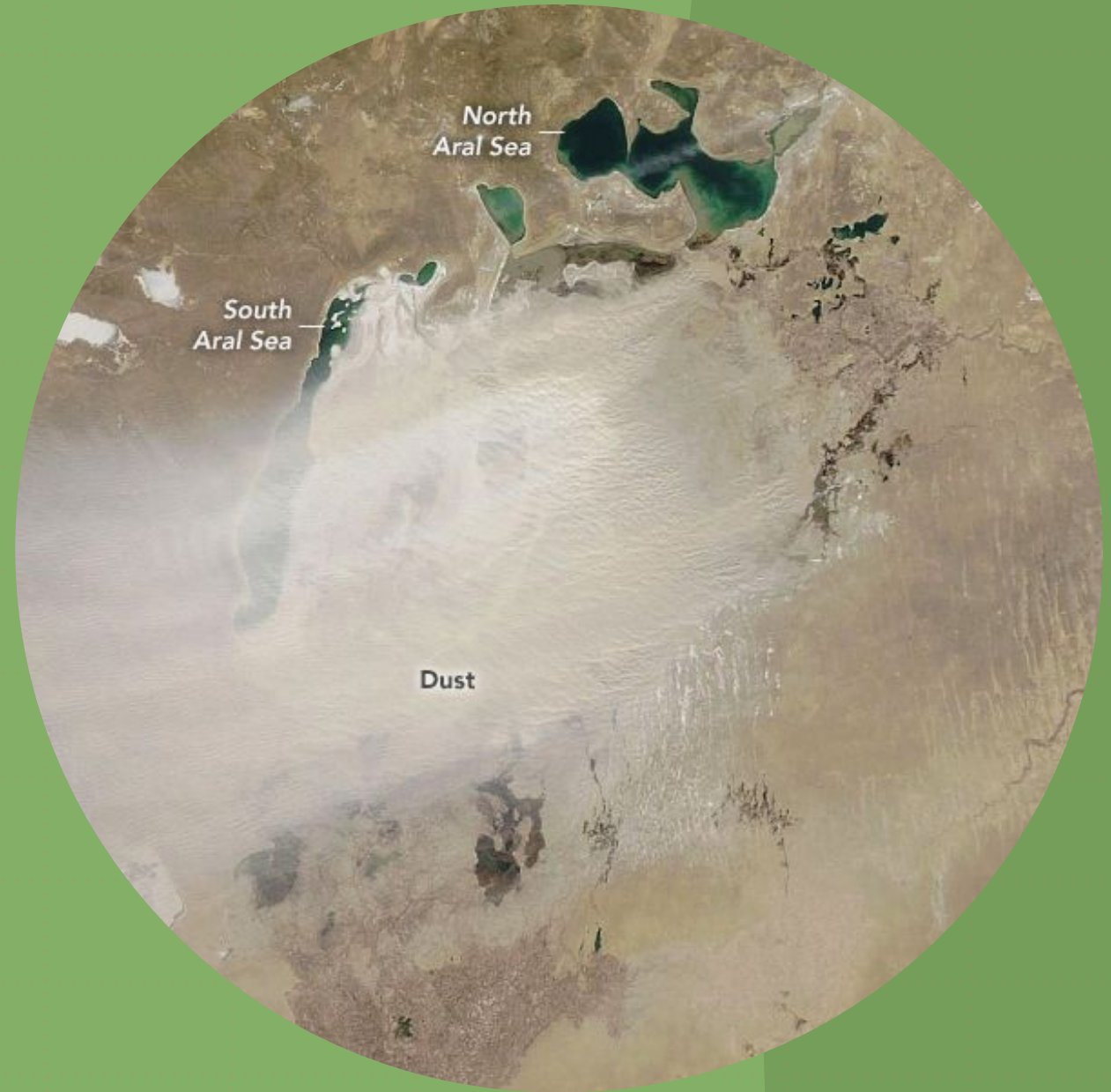
NASA (EOS)

- YEARS 2000 - 2018



Queries on Human Rights...

- “How did each country have such different outcomes?”
- What impact did the outcomes have on social structure?

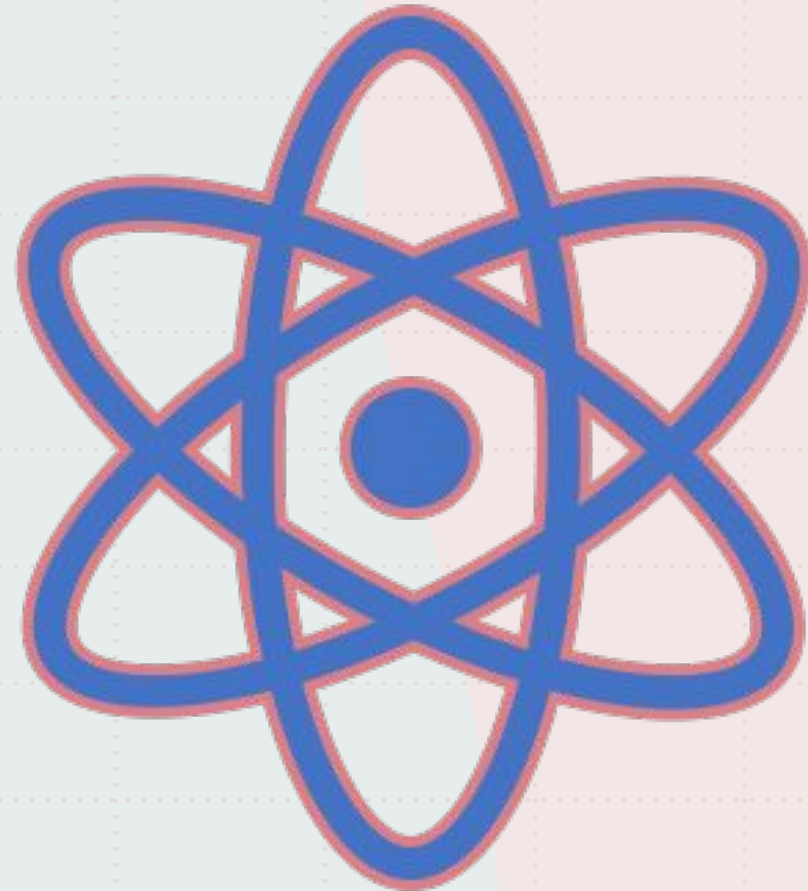


Case No.2

Atomic Energy

(instructional concept)

- atomic chemistry
- atomic energy



Periodical Resource: HCN "Is Yucca Mountain back from the Dead?" (2017)

Yucca Mountain Nuclear Waste Repository, Nevada

Case study: Hazardous high-level
nuclear waste and its transportation



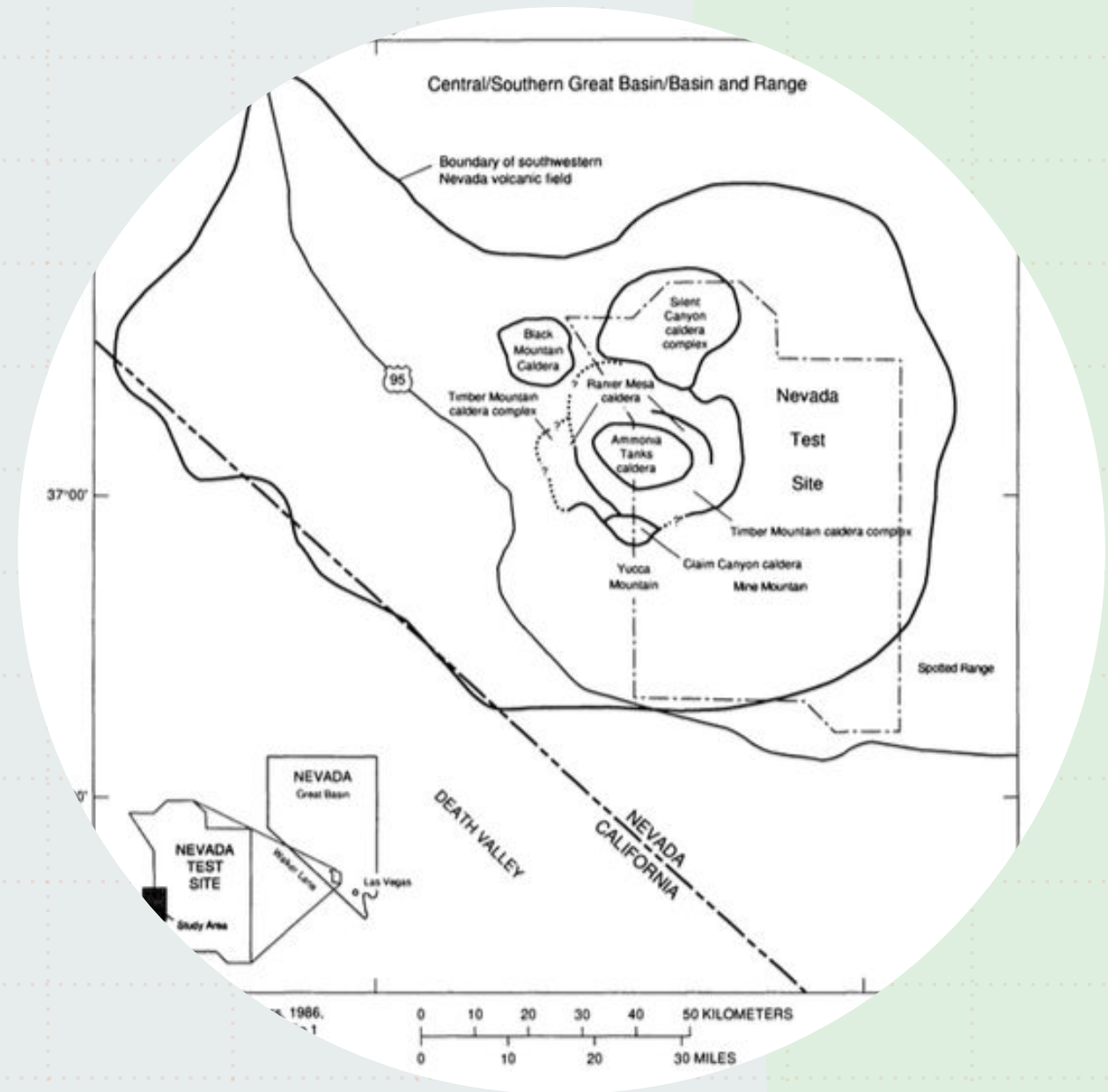
Outline Regional Geologic Setting

- **Discuss the Issue:** “to dispose or store high-level nuclear waste?” and “to isolate spent fuel and high-level waste” (HCN, 2017)

Influence and importance of political decision making

Communities of people that are affected

Human Rights Queries



- “There are also a number of other concerns, including transporting thousands of tons of radioactive waste, groundwater contamination, potential corroding, and earthquake activity. , Furthermore, previous attempts to store nuclear waste in the region have already failed. Bullfrog County an uninhabited area around Yucca mountain was created in 1987 for the storage of nuclear waste but after much resistance and a lawsuit from Nye County, it never went ahead.”

“Not only will the repository affect the residents’ health, but it has already cost taxpayers \$15 billion, and the project isn’t even complete.”

Yucca Mountain: Evidence for Concern

- “The article states that if Yucca is to be revived, nuclear waste from all over the country would have to be transported there. That poses a significant risk because the waste would have to travel long distances, including through Las Vegas and lower income districts, which puts people in danger.”

Case No.3

Homelessness: Climate change elevates wildfire intensity.

An opportunity to explore not only the chemistry and physics behind climate change, it begs the opportunity to explore the outcomes of climate change.

“Climate change has inexorably stacked the deck in favor of bigger and more intense fires across the American West” .



When studying climate change, the connections to human rights fall wide open.

In Jackson County alone, 60% of homes destroyed were in mobile home communities.

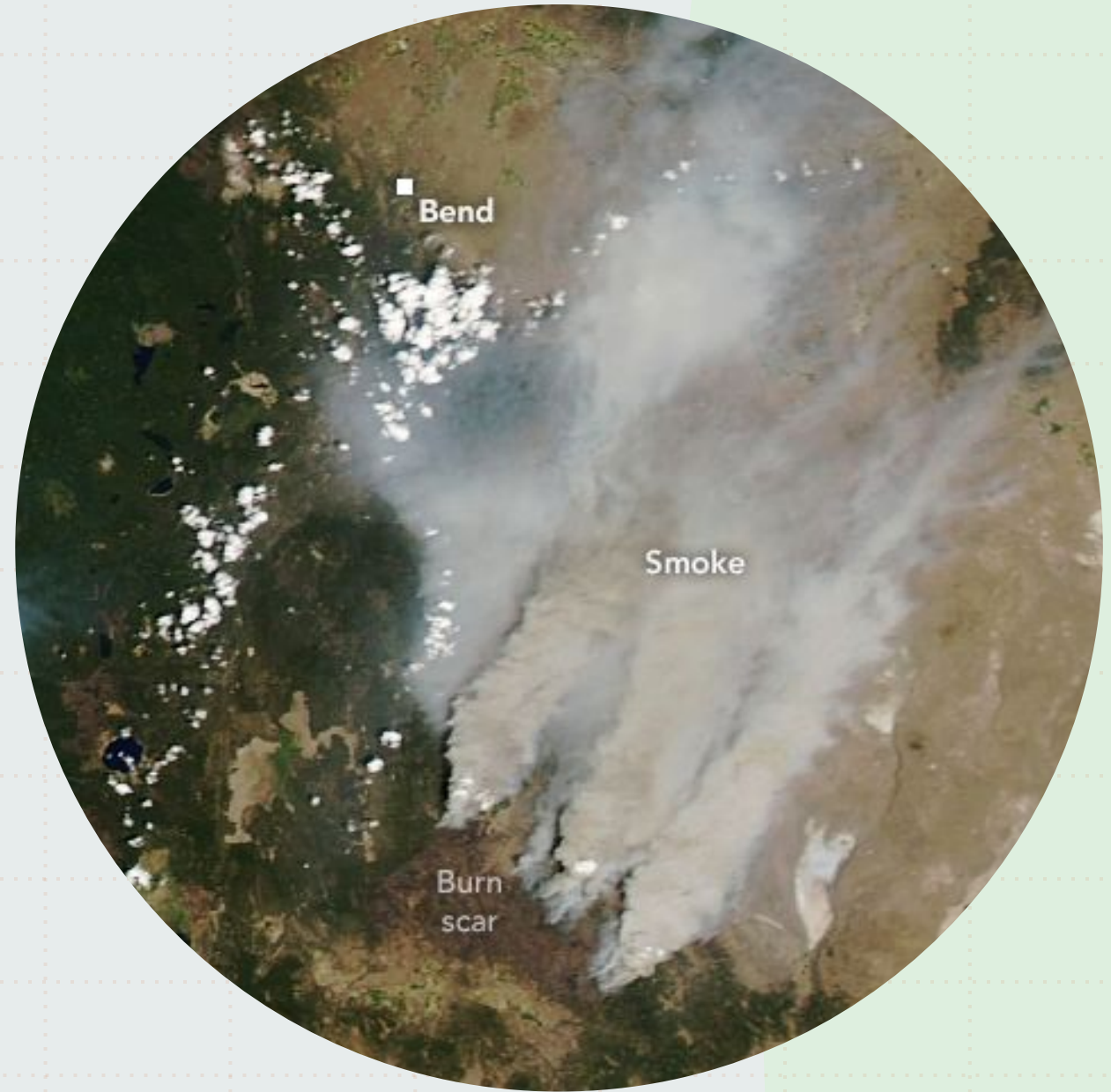
Project Turnkey opened their doors, and the community began to house people that had lost their homes to wildfires - later, the general homeless population

“... an intimate look into the lives of the Alvarlez family and their move into the Redwood Inn in Medford Oregon”

**VOICE IN
THE
STORY**



"Fires tend to have the greatest impact on marginalized communities, who are often left with few resources following climate-related disasters..."



Case No. 4

Water Rights: Colorado River Basin

(instructional content)

“The Colorado River Basin is the setting for some of the most drawn-out and complex water”

The 29 tribal nations in the upper and lower basins hold some of the river’s most senior water rights and control around 20% of its annual flow. But the tribes have often been excluded from water policymaking issues in the Western U.S.”

Case No. 5

Food Insecurity

(Sustainability Workshop)

Instructional Content: Studies in Food Production

Explore food insecurity in a local counties

The HR Query: Universal Declaration
Human Rights - Why is it not fulfilled?

Why are people
malnourished in the
richest country
on Earth?

PERIODICAL RESOURCE: HCN "Will a Native-led
initiative spur an agricultural revolution in rural Alaska



..... the sciences have a responsibility to bring knowledge and inspire wisdom, to uplift and positively impact the human condition - to actuate engaged solutions.

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