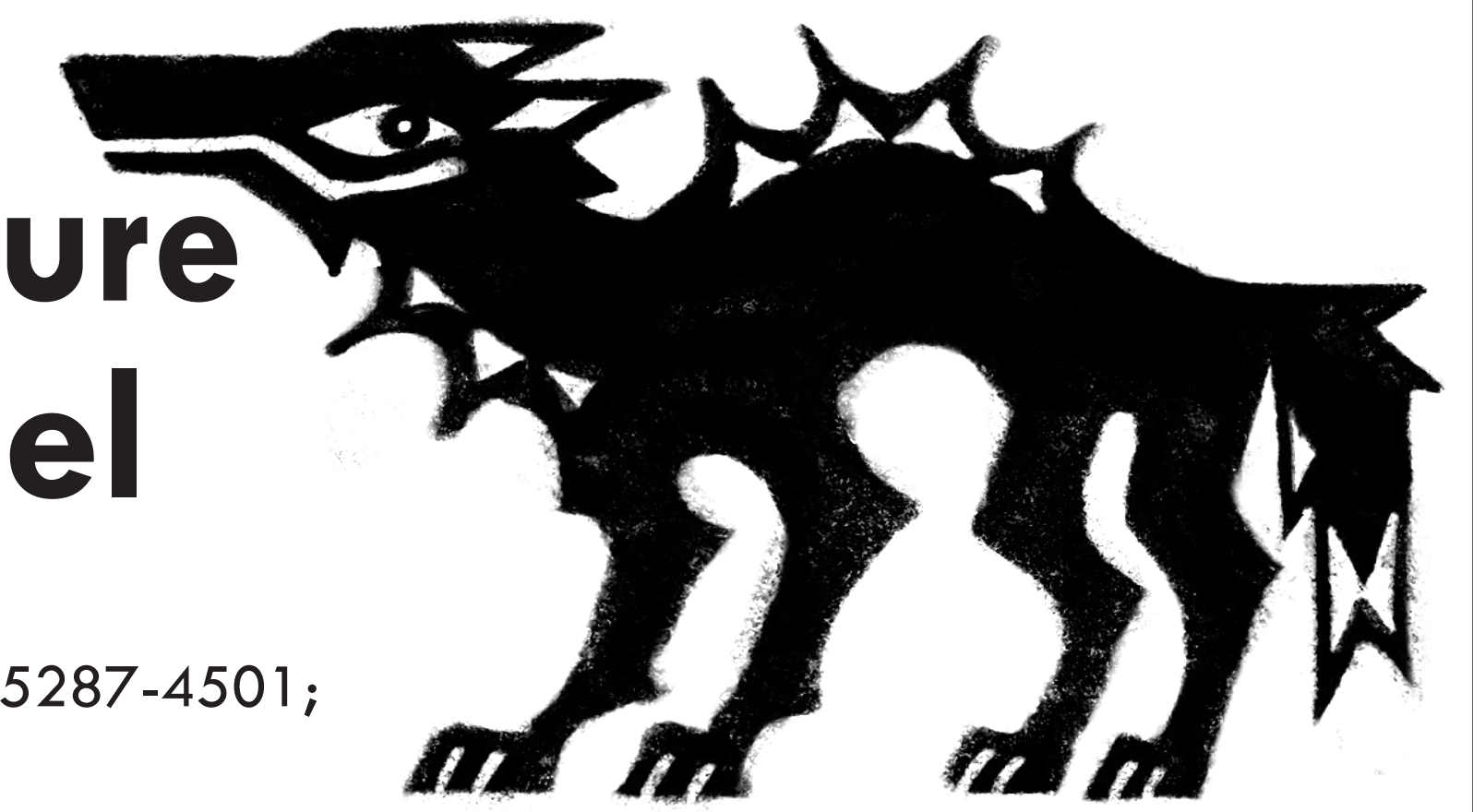




LIVING LANDS: Co-creating a Storytelling Game to Nurture River Relations Along the 'Onk Akimel

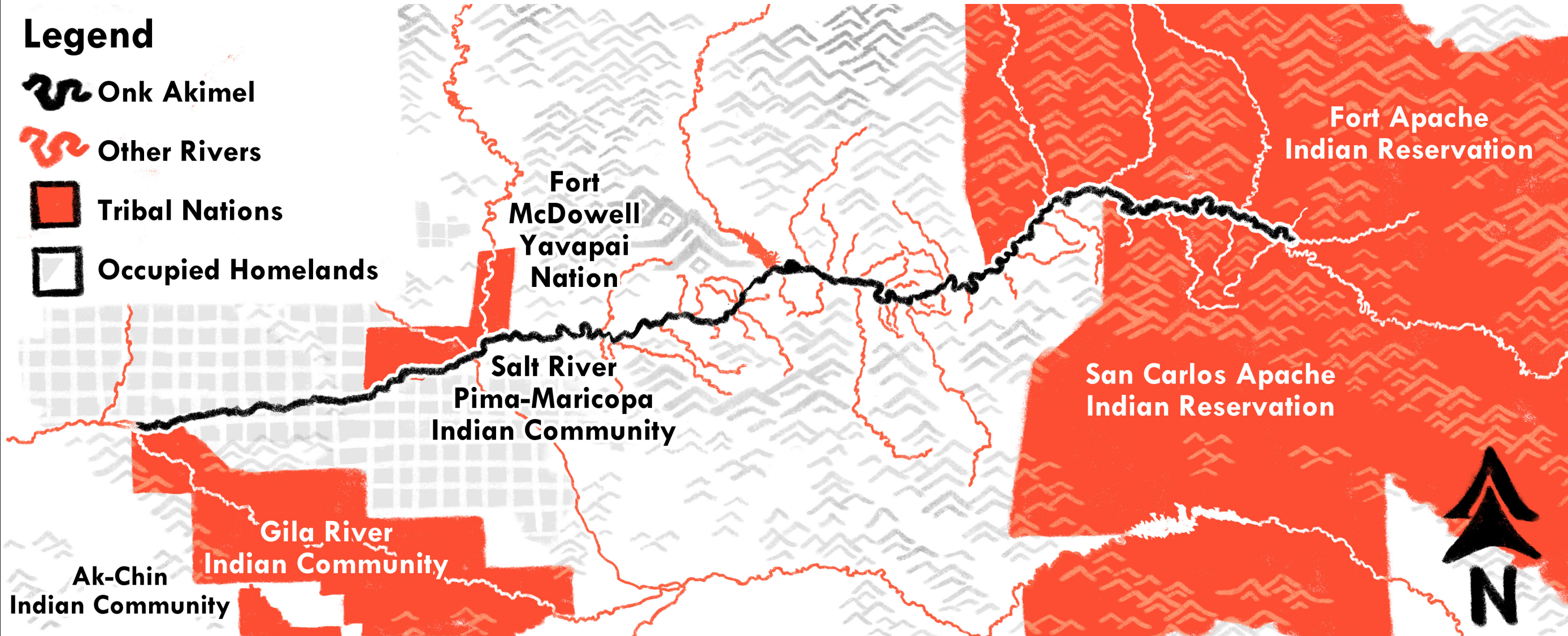


Gentry, Zoe^{1,4}, Arshonne Cázares^{1,4}, Savage Cree Hess², Michele Clark², Liliana Caughman², Michelle Hale³, and Nancy Grimm².

¹New College of Interdisciplinary Arts and Sciences, Arizona State University - West campus P.O. Box 37100, Phoenix, AZ 85069-7100; ²School of Life Sciences, Arizona State University, PO Box 874501, Tempe, AZ 85287-4501; ³School of Social Transformation, Arizona State University, PO Box 874501, Tempe, AZ 85287-4501; ⁴Undergraduate Student

BACKGROUND

The 'Onk Akimel (or Salt River) once flowed through what we currently call the greater Phoenix Metro. These lands are the homelands of the Akimel O'odham, Piipaash, Yavapai, and Ndee peoples, among others.



Though the 'Onk Akimel holds great significance to these communities, **colonization has left deep wounds** on the river and its people. **Examples:**

- Diversion of Lower Salt River into maze of dams, canals, and urban sprawl.^{1,2}
- O'odham and Piipaash farms divested of water.^{1,2}
- Degradation of riparian habitat.^{3,4}
- Erosion of ability to maintain relations with the river.⁵

Despite these injustices, the communities of the river are alive and well. Victories such as the fight against Orme Dam and the Arizona Water Settlement Act tell **vibrant counter-stories**⁶ in the face of dominant narratives that attempt to silence them. Still, the wounds of colonization remain, many of which are **disproportionately shouldered by indigenous youth**.

To strengthen youth relationships with the 'Onk Akimel, address localized cultural and ecological challenges, and encourage communities to tell their own stories, we are co-creating a storytelling game called 'Living Lands' with members of our community.

PROCESS + METHODOLOGY

Games and stories are among the oldest and most powerful ways to learn.

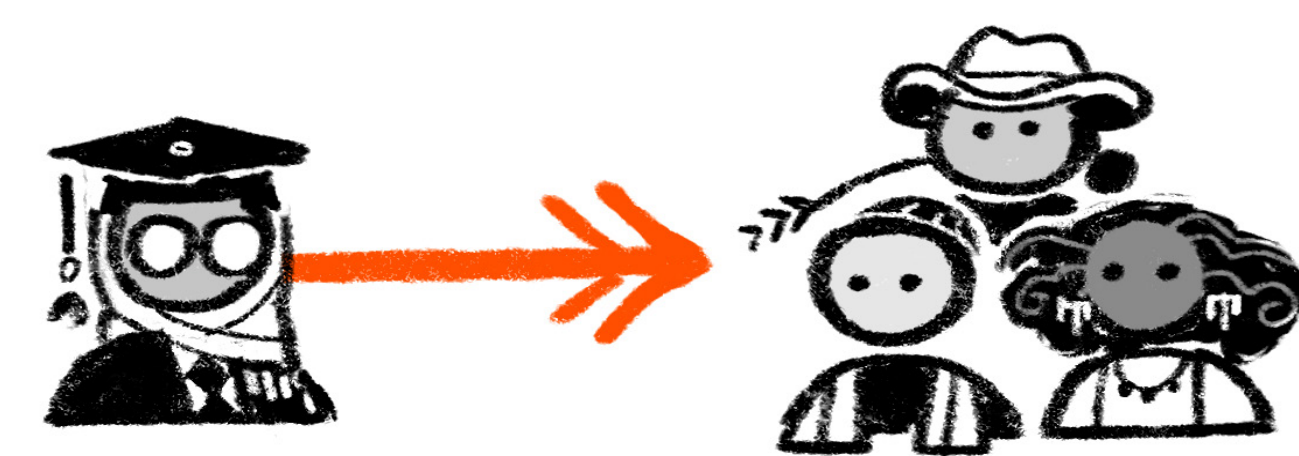
Examples:

- Indigenous Storywork as a way of teaching and learning.⁷
- Inuit children playing games to learn Inuit qaujimatatuqangit (or wisdom gained from life experiences.)⁸

But only recently has science communication been elevated by games and stories...

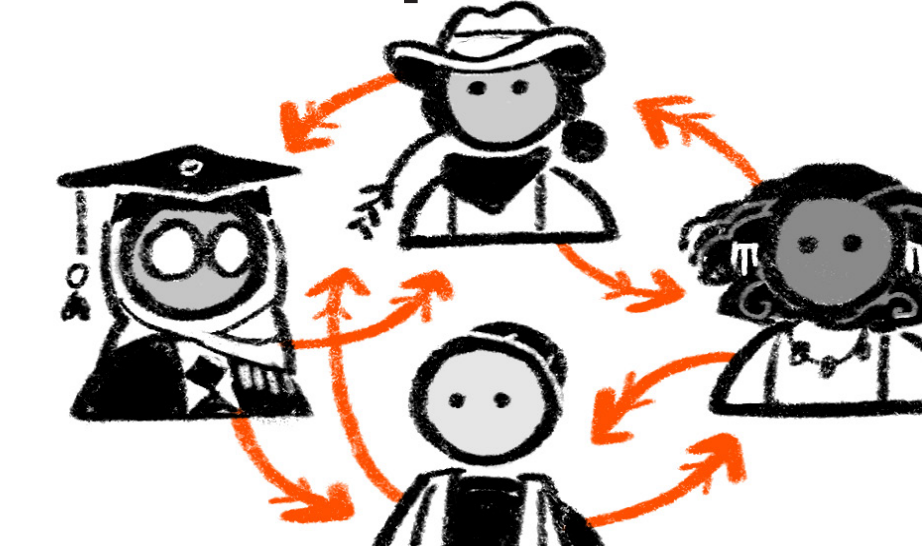
... In Western science, knowledge may move through existing hierarchies:

Dissemination Paradigm



Knowledge transmitted in **one-way direction**

Public Participation Paradigm



Knowledge **shared** between all participants
(Adapted from Kappel and Holman⁹)

In contrast, **games are participatory**. They can challenge knowledge hierarchies and foster an **equitable learning environment**.

COMMUNITY CO-CREATION

Living Lands' development also follows a participatory framework. As a free print-and-play boardgame, its components are publicly available for anyone to utilize.

Our co-creators include **Earth Systems Science for the Anthropocene** (ESSA), a diverse network of scientists from many different fields. Through ESSA, we also partner with the **Phoenix Indian Center** (PIC) and their Youth Council to playtest the game.

To create a localized version of the game that serves Indigenous youth, we work with educators from **Salt River Schools** in the Salt River Pima-Maricopa Indian Community. They have identified focus areas where they can adapt the game to **teach community-relevant concepts**, like **language, culture, and local ecology**. This version of the game was created by the educators and is held privately, within the community.

DATA SOVEREIGNTY + ACCESSIBILITY

Living Lands is designed for **accessibility**...

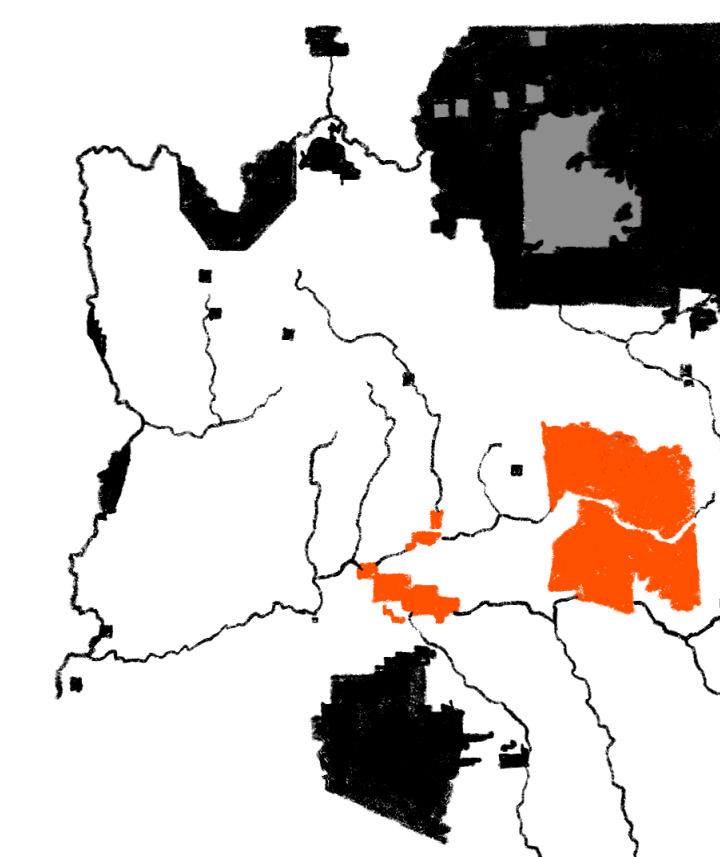
- Freely available.
- Print-and-play format.
- High-contrast design for low-vision readers.
- Flexible ~45 minute playtime.



... but it is critical that this **respects indigenous data sovereignty**. For this reason, we have created **public templates** of the game's components that anyone can modify.

This allows for:

- Ease of access and editing.
- Full creative freedom.
- Autonomy over distribution of the modified game.
- Mitigated risk of harm from institutional handling of traditional knowledge.



Accessibility is key, but it must respect indigenous data sovereignty.

IMPACT

Communities have used *Living Lands* to:

- **Challenge dominant narratives** about the river and its people through self-representation.
- Teach fundamental **ecology** concepts, **language**, and **local history**.
- **Build relationships** between communities, human and non-human.

But like the river, we wind ever onward! By providing the framework of *Living Lands* as a free resource, other communities can adapt the game to teach about their own homes.

LOOKING FORWARD

In the future, we wish to explore *Living Lands* as a community visioning tool with activists, non-governmental organizations, and city officials who are navigating climate change in the Salt River Valley—and beyond!

In the meantime, we continue to share *Living Lands* with communities and classrooms along the 'Onk Akimel. **We hope to share it with you, too!**

Play *Living Lands*: tinyurl.com/LivingLands

(or scan that QR Code!)

Living Lands is only possible through collaboration, and it belongs to everyone who plays it. **We welcome your feedback!**

ACKNOWLEDGEMENTS

Salt River Schools, Central Arizona-Phoenix Long-Term Ecological Research, Phoenix Indian Center, Labriola National American Indian Data Center, Earth Systems Science for the Anthropocene, Humanities Lab, ASU-Leonardo, Global Futures Laboratory, our playtesters, and the 'Onk Akimel.

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