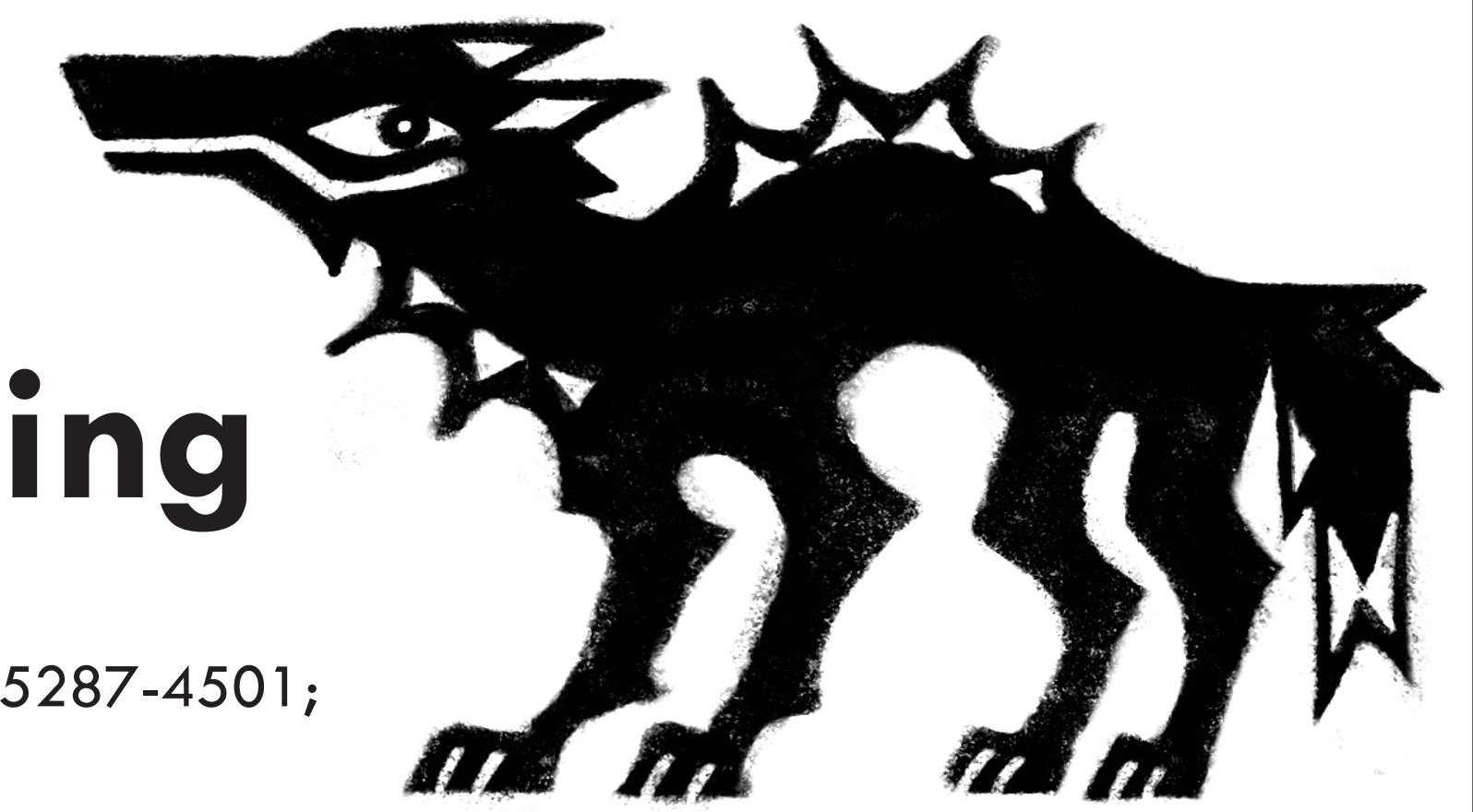




LIVING LANDS: Cultivating river stewardship through gameplay & storytelling

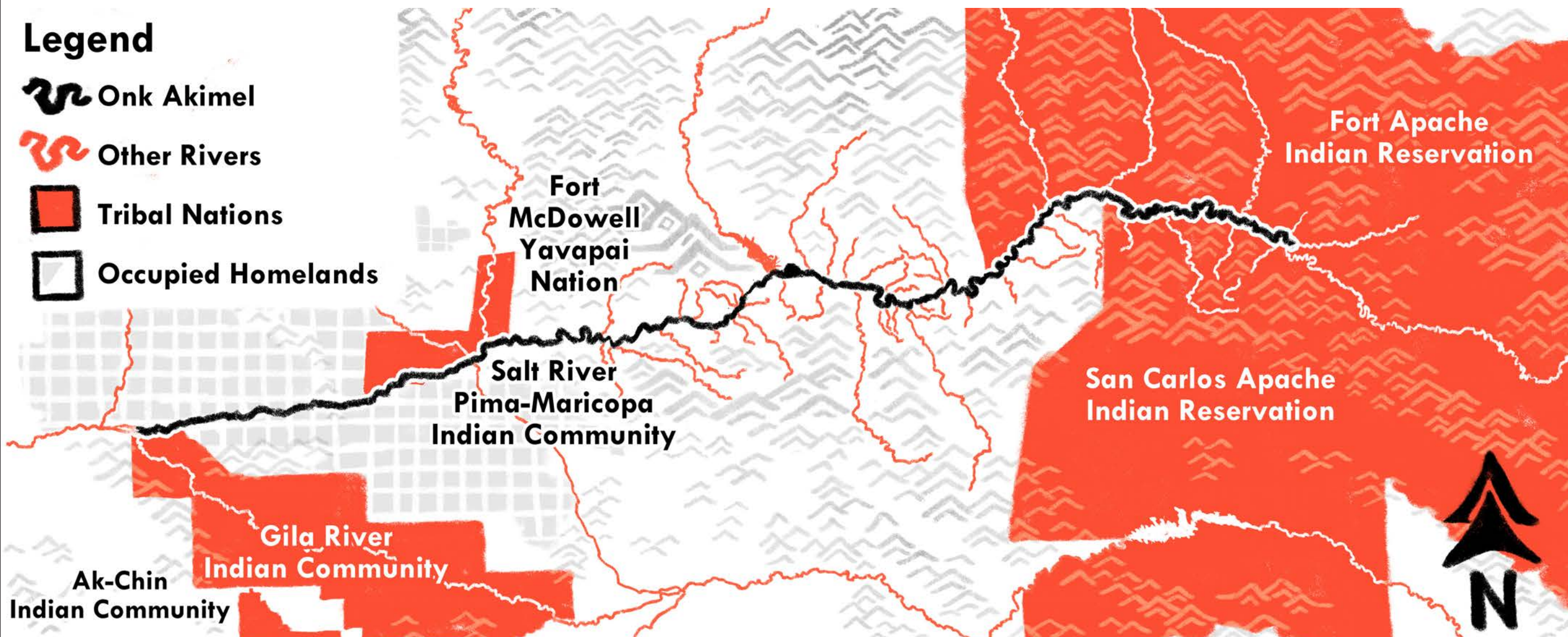


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BACKGROUND

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. **Example:**

- 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 erase and marginalize them. Still, the wounds of colonization remain, many of which are **disproportionately shouldered by indigenous youth**.

To address the interlinked issues of **cultural erasure, environmental degradation, and language loss**, we are **co-developing a game called 'Living Lands' with native teens and community advisors** to strengthen relationships with the Onk Akimel.

PROCESS + METHODOLOGY

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

Example: Inuit children play games to learn Inuit qaujimaqatatuqangit (Or wisdom gained through life experiences, contextualized within the Inuit community.)⁷

But only in recent years have games been explored in the context of science communication...

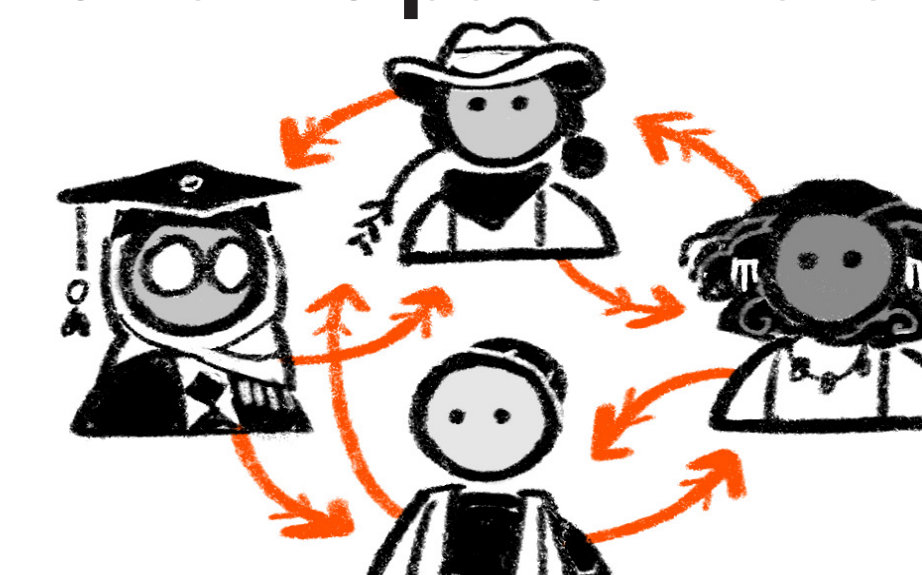
... In this context, knowledge may move through existing hierarchies:

Dissemination Paradigm



Knowledge transmitted in **one-way direction**

Public Participation Paradigm



Knowledge **shared** between all participants
(Adapted from Kappel and Holman⁸)

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

PARTICIPATORY DEVELOPMENT

Living Lands' development also follows a participatory framework. To vet the game's scientific accuracy and efficacy as a teaching tool, we work with **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)** to playtest the game.

We are looking to expand our partnerships, too! (See: Looking Forward)

How can we move beyond consultation through community co-development and collaboration?

ACCESSIBILITY

Navigating the **ability** to participate is another challenge of *Living Lands*. The game is designed with two major forms of accessibility in mind:



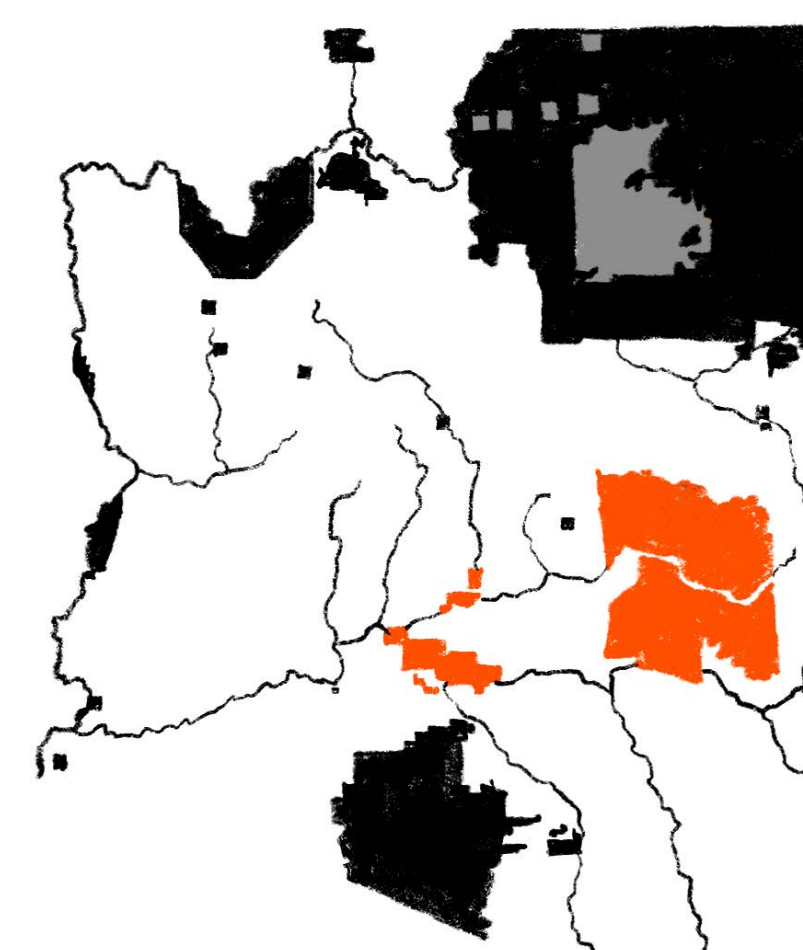
Access Across Ability

- Large reading font, designed for low vision readers
- High contrast, black-and-white design
- Easy to assemble
- Simple vocabulary

Access Across Setting

- Print-and-play format
- Available for free
- <45 minute playtime
- Context-specific game versions
- Spanish and O'odham language translations*

*Work-in-progress; O'odham components may contain culturally restricted information, so these game versions may only be distributed within the community.



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

IMPACT

Within the community, *Living Lands*:

- Tells stories that **challenge dominant narratives** about the river and its people.
- Is a **cheap, accessible teaching tool** that can be used to teach fundamental ecology concepts; local history.
- May be used as a **language-learning tool**, fostering new opportunities for O'odham language learners to gather and practice speaking the language.

But it may grow into **something bigger**. By providing the framework of *Living Lands* as a free resource and development tool, other communities could transform the game to teach about their own, local ecosystems.

LOOKING FORWARD

There is still so much more to accomplish. With the aid of 'Seize the Moment,' an initiative of the Humanities Lab, ASU-Leonardo, and the Global Futures Laboratory, we are in the process of hiring a **board of indigenous collaborators and O'odham-language consultants**. With their help, we will finish developing the game.

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: bit.ly/3Qhd4zD (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

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