Playa Ecosystem Vulnerability in Future Climates: Taking Science to Stakeholders in the Great Plains
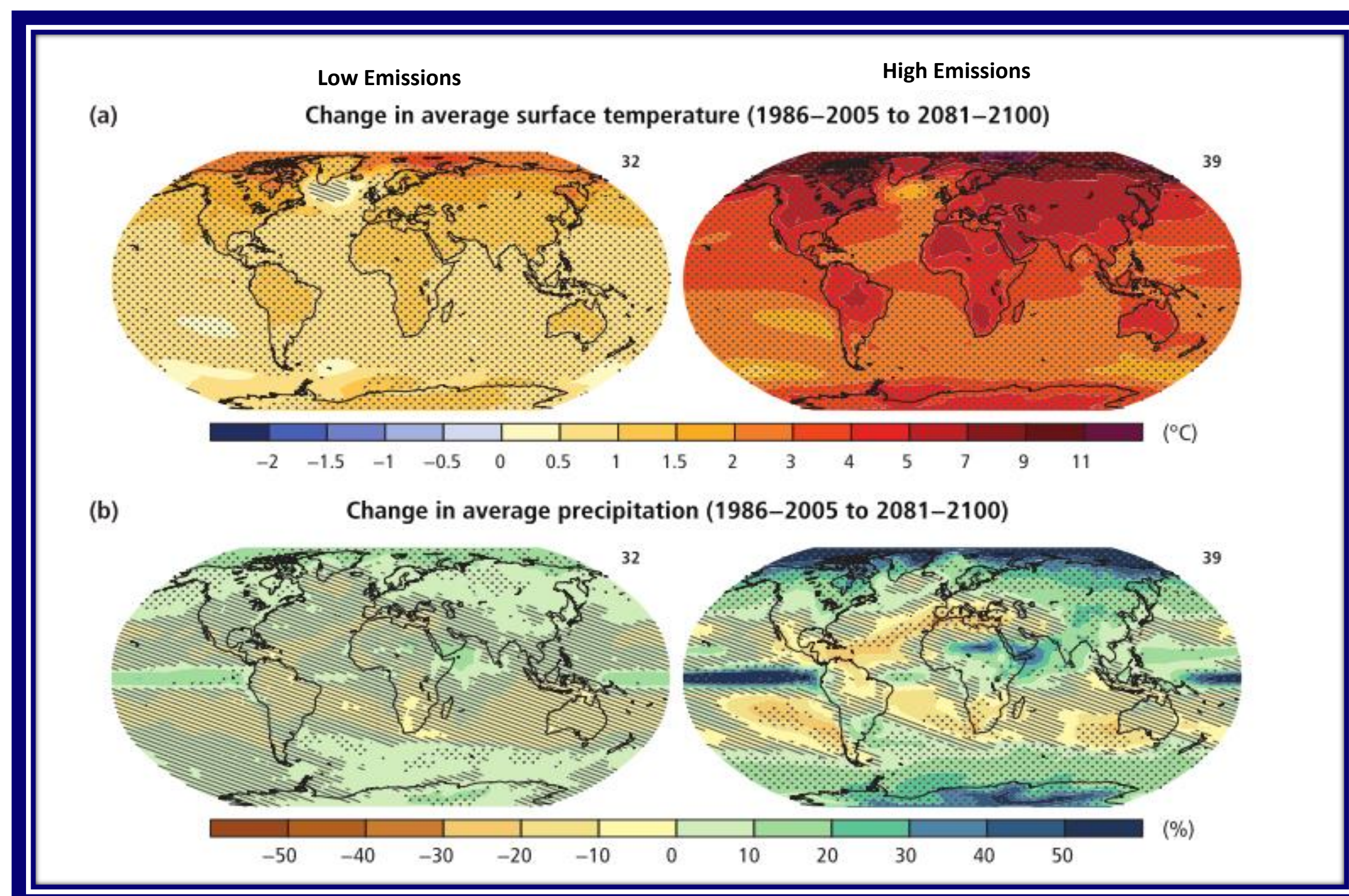
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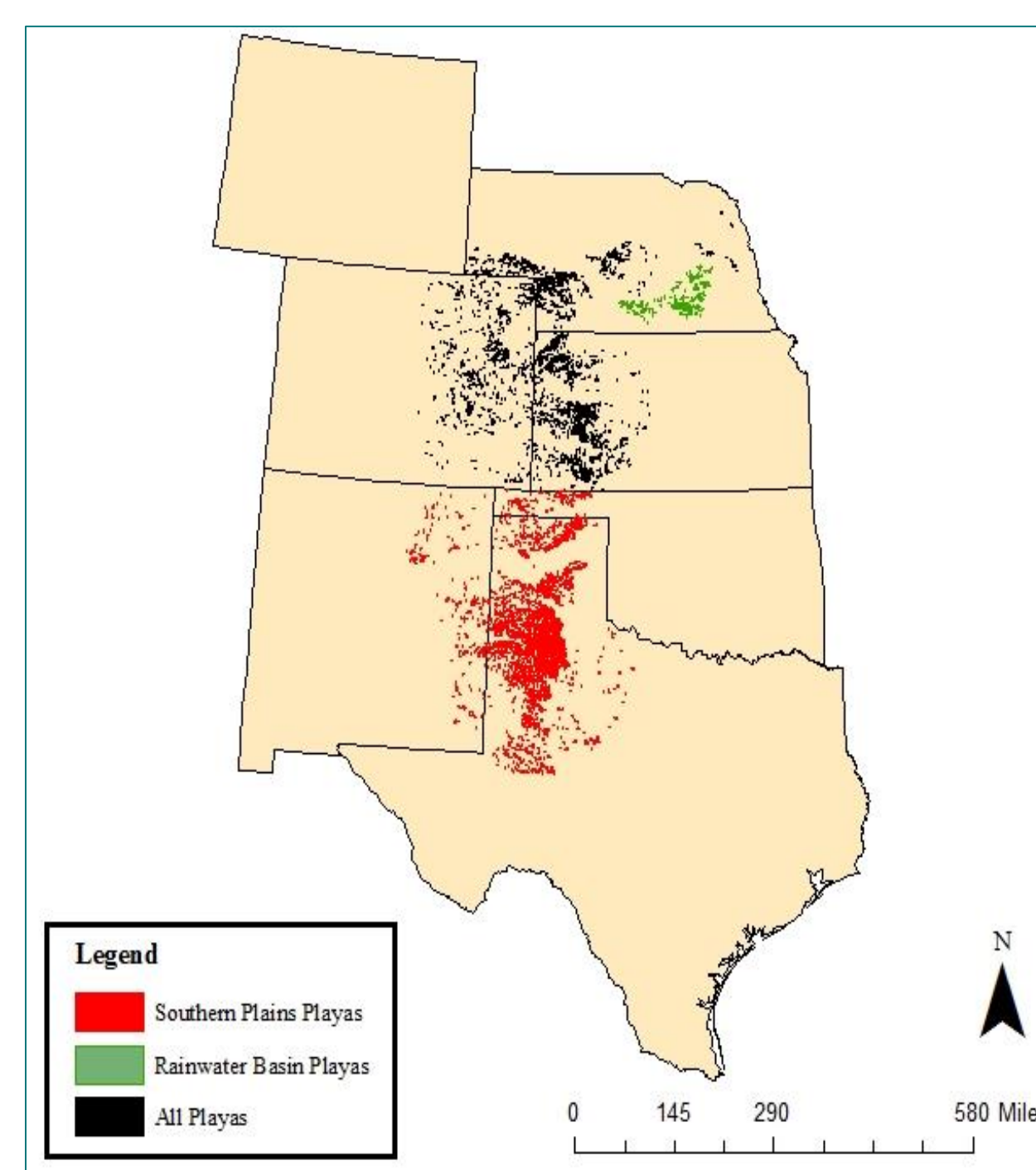
Background

- Playas are shallow, rain-fed wetlands throughout the Great Plains that provide crucial ecosystem functions.
- Despite conservation efforts by agencies and incentive programs, playas continue to be degraded and converted to other land uses.
- Climate change poses an additional threat to already vulnerable playa ecosystems

(a) Low Emissions / High Emissions — Change in average surface temperature (1986–2005 to 2081–2100) (°C)

(b) Change in average precipitation (1986–2005 to 2081–2100) (%)

To **assist existing outreach** efforts in the Great Plains, the <u>objective</u> of this project is to **develop educational materials and plan stakeholder visits** in the playa region to describe playa sensitivities to climate change and discuss conservation efforts that may help to mitigate further degradation.

Playa Wetlands

- Playas **recharge water** to the underlying Ogallala aquifer, **filter nutrients and chemicals** from the surrounding watershed, and **add recreational value** to the region.
- When wet, **playas provide crucial habitat** for many wildlife species that depend on water to survive.
- When dry, playas also support several other Great Plains wildlife species because they are often **the only remaining habitat in a region dominated by agricultural production**.

Legend
- Southern Plains Playas
- Rainwater Basin Playas
- All Playas

0 145 290 580 Miles

Engaging Stakeholders

Land Owners | Policy Makers | Scientists | General Public

Interested in contributing your thoughts on how we can protect playas in future climates?
Use this QR code to fill our brief survey!

@RachelKSoils

Field Days & Workshops

- "Boots on the Ground" meetings with managers and land owners
- Survey to gauge perceptions and barriers
- Distributing knowledge about sustainable playa management

Online Resources

- Video series with playa scientists
- Website or blog to encourage discussion
- Regular e-newsletter to stakeholders

Educational Materials

- K-12 materials to teach about playa conservation
- Leave-behind materials for playa managers
- Advocacy briefs to empower discussions with policy makers

Popular Media

- Press releases for events
- Articles for farm magazines and local media outlets
- Social media campaign #PlayaWetlands

Expected Outcomes

Stakeholders and scientists can work together on effective solutions for conserving playas and mitigating climate impacts to these valuable natural resources.

This project will inform, empower, and connect the playa community to advance conservation efforts and generate enthusiasm about playas in the Great Plains.

Acknowledgements