

A Range Management Curriculum and Participatory Planning Project for the Tohono O'odham Nation

Maria Fernandez-Gimenez (Colorado: Research & Education Grant Program)

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Title: A Range Management Curriculum and Participatory Planning Project for the Tohono O'odham Nation

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Youth and other Tohono O'odham community members learn about watershed function at the Rangeland Ecology Workshop.

Objectives:

1. Develop and implement a Tohono O'odham range management curriculum that incorporates both science and traditional knowledge and reflects the social, cultural, political, economic and environmental contexts of livestock husbandry and range management on the Tohono O'odham Nation. Use a collaborative approach involving Tohono O'odham livestock owners, natural resource professionals, educators and community members.
2. Empower livestock producers and other community members to develop and implement range management plans for their communities by expanding the existing participatory rangeland planning pilot project to additional districts.

Curriculum project participants help out at the Tohono O'odham Youth Range Day, where youth learned about management and livestock husbandry.



Actions:

The project team operated under this guiding principle:

“We believe that resource management is most effective when local resource users are directly involved in management planning and implementation.”

Under Objective 1, developing a rangeland curriculum, the team:

- Convened a curriculum advisory committee, planned the curriculum and conducted interviews
- Implemented and evaluated the curriculum using participant observations and focus groups
- Evaluated the curriculum after its implementation through interviews and discussions with the advisory committee

They documented all project activities and participant involvement and discussion.

Under Objective 2, engaging the participatory planning process, they sought to determine:

- The relationship between historic grazing intensity and the density of perennial forage grasses on sandy loam upland ecological sites in the Sif Oidak District (an ecological field study)
- The past and current uses of livestock, livestock management practices and social institutions related to livestock management (an ethnographic study)

Results:

The project team piloted the Tohono O'odham Rangeland Curriculum with eight one-day workshops, attended by more than 130 participants, including livestock owners, elders, political leaders, natural resource managers and youth:

1. History of O'odham Rangelands
2. Rangeland Ecology in the Desert
3. Animal Health and Management
4. Grazing Management & Erosion Control
5. Vegetation Monitoring
6. Rangeland Planning
7. Business Management & Economics
8. Drought Management & Economics

The ecological and ethnographic studies, upon which a management plan was based, found that typical stocking rates have less influence on perennial plants than the variability of rainfall. The ethnographic study emphasized building upon community cooperation rather than dividing open range into allotments.



The Sif Oidak landscape, where the participatory planning project and John Hays Jr.'s research took place, encompasses Sonoran Desert upland vegetation, including saguaro cactus and many other shrubs and succulents.

Potential Benefits:

A multitude of benefits resulted from the project, including:

- The Tohono O'odham Community College has developed its Agricultural and Natural Resources Program owing, in part, to the momentum and interest created by the project.
- Interaction among livestock owners, natural resource agency personnel, educators and political leaders has increased.
- Findings of M.S. student Jennifer Arnold emphasize the importance of building social capital and forming relationships as part of an educational program rather than just handing out education materials.
- Ecological and ethnographic research by M.S. student John Hays concluded that future rangeland management should focus on maintaining palatable shrubs rather than rotational grazing and that existing livestock management strategies are well suited to the future.
- Five of nine Sif Oidak villages applied for and received EQIP funding during the project, and additional communities initiated projects after the SARE project officially ended.
- The participatory approach engendered far greater enthusiasm and engagement than past “one-size-fits-all” resource education and development interventions.

Situation:

The Tohono O'odham Nation spans 2.8 million acres of Sonoran Desert habitat, ranging from grasslands in higher-rainfall areas on the east to desert scrub that dominates the drier northern and western regions. For the last three centuries, cattle-raising has provided a source of cash, food for community feasts and ceremonies, social status and political clout.

However, cattle running in common made grazing and genetic management difficult and resulted in lower prices for livestock sold off the reservation. In the 1930s, without consulting local producers, the Nation was fenced into nine grazing districts, fragmenting grazing territories and keeping users from customary use areas. The result: resentment toward government officials and animosity among neighbors.

Perhaps these obstacles could be overcome, and rangeland stewardship and livestock production enhanced, if producers, tribal leaders and rangeland professionals participated in planning and education that recognizes the distinctive cultural and environmental context of the Tohono O'odham Nation.



Participants assess range plants on Tohono O'odham Nation rangelands.