Involvement of land users in restoration activities: the role of paraecologists in ecological restoration

https://desertrestorationhub.com

Degradation of dryland systems is a major challenge worldwide. The reasons for degradation are complex and differ among areas depending on the past or present land tenure, governance and socio-economic and natural conditions of the respective area. If the current drivers of the degradation are not attended to they will continue to take effect and counteract the restoration effort. Sustainable and ecological restoration of farmland thus needs the involvement and ownership of the custodians of the land: the land users. Close interaction with land users requires skills that typically do not form part of the training of natural scientists and are thus experienced as challenging.

Involving paraecologists can bridge the gap between scientists / practitioners and land users. A paraecologist is a local resident and a professional (i.e. employed member of a professional team). Paraecologists do not need to have formal schooling in ecology or other sciences, but they bring their local knowledge, an expertise by itself, to the work. They are then trained on the job in one or more fields of ecological science. They contribute to scientific research, outreach and implementation of research results as well as local capacity development, thus enhancing communication between local and scientific communities. Paraecologists support restoration activities through site selection, allocation of local resources for restoration material, help with the implementation of trials, monitoring and evaluation of the restoration effects. As a member of both the local community and the professional scientist/practitioner team, paraecologists facilitate the implementation of innovations and sustainable land management practices by translating languages and sharing local, traditional and scientific knowledge norms and perceptions, as well as religious beliefs between scientists /practitioners and local land users.

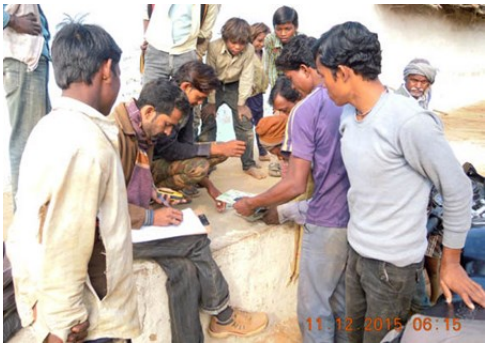

Figure (1): Left: Paraecologist in Central India talking with land users about traditional natural resource management.

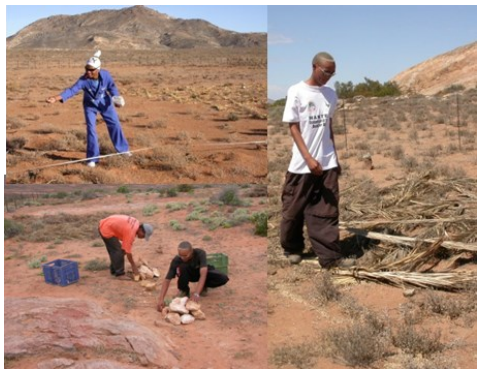

Figure (2): Right: Paraecologists in South Africa implementing and inspecting restoration trials.

Fact Sheet Topic Area:
Stakeholder involvement

Keywords:
Knowledge sharing, participation, transdisciplinarity.

Authors:
Ute Schmiedel
University of Hamburg,
Ute.schmiedel@uni-hamburg.de

Shekhar S. Kolipaka
Leiden University,
Kolipaka.s.s@gmail.com

COST is supported by the EU framework Programme Horizon 2020

EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

This factsheet reflects the work of COST Action ES1104, supported by COST (European Cooperation in Science and Technology)

COST ES1104
QUICK REFERENCE SHEET 5
April 2017

Example (1): Northern Madhya Pradesh, India: Uncontrolled and increasing direct dependence of rural people on semi-arid ecosystems is responsible for habitat degradation, transforming large stretches of government forests into unsuitable areas for human and wildlife use. Further, prevailing traditional local practices of natural resource extraction and livestock management embedded in old practices and strong traditional beliefs and norms pose severe challenges for external agents who aim to address change towards more sustainable natural resource management. To study and address these complex and sensitive topics three paraecologists were trained by the Caracal Conservation and Research Project to engage with local villagers. Between 2012 and 2015 the paraecologists systematically collected information on local people's land use practices, their traditional ecological knowledge and interactions with environment and local wildlife (Kolipaka et al. 2015). The paraecologists also identified innovative and sustainable local strategies of livestock husbandry, corralling and other measures that were developed by one group of land users, and shared these innovations with land users in other parts of the region who were not aware of such innovation.

Example (2): Southern Africa: The BIOTA Southern Africa project (BIOTA-Africa.org) employed and trained eight paraecologists as fulltime project members for over six years. The paraecologists supported the environmental monitoring but also facilitated the ecological restoration activities within the communal farmland. Based on their local knowledge the paraecologists helped to select appropriate sites for the restoration trials, identified areas where material for brush packs can be harvested, arranged with the livestock owners for the local transport of manure as mulch and fertiliser. The paraecologists implemented the restoration trials supported by other community members. Subsequently, they conducted regular monitoring of the sites and communicated the restoration results with the entire farming community during field days and farmer meetings.

SELECTED KEY REFERENCES

- Schmiedel U, Araya YN, Bortolotto IM, Boeckenhoff L, Hallwachs W, Janzen DH, Kolipaka SS, Novotny V, Palm M, Parfondry M, Smanis A, Toko P. in press. Contributions of paraecologists and parataxonomists to conservation and social development. Conservation Biology.
- paraecologist.org
- Kolipaka S.S., Persoon G.A., de Iongh H., Srivastava D.P.. 2015. The Influence of People's Practices and Beliefs on Conservation. Journal of Human Ecology, 52(3): 192-207.

The manifold benefits of the involvement of paraecologists:

Benefits to the external agents from engaging paraecologists

- Increased awareness about the values, needs and visions of the rural land users.
- Access to critical local information on the drivers of degradation and local ecology.
- They receive local assistance to select sites suitable for restoration trials from the land-management perspectives.
- They benefit from local technologies and restoration measures that use locally available material and follow culturally and economically adapted processes.

Benefits for the community

- Paraecologists enhance the understanding within land-user communities for the advantage of restoration measures and sustainable management.
- They work alongside local people (paraecologists) who have the advantage of knowing local languages, understand local culture, and are thus better able to connect with local communities.
- They create awareness among local school children of the value of nature resources.
- They can help to facilitate the communication with researchers / practitioners and thus enhance mutual understanding.

Benefits for paraecologist

- Increased social standing within their community as result of their new role (bridge between community and external agents).
- Continuous personal development through formal and informal learning opportunities and increased earning capacity.