Plural realities of plant invasions  
**Prosopis juliflora** in the Banni grassland, India

Ramya Ravi, Siddhartha Krishnan, Abi Tamim Vanak and Ankila J.Hiremath

Ashoka Trust for Research in Ecology and Environment, Bengaluru, India

Email: ramya.ravi@atree.org

**Introduction**

Banni is one of the largest natural grassland in the Indian sub-continent, and home to centuries old pastoral system—*Maldharis*.

Rising salt-water and desertification led to introduction of invasive *Prosopis juliflora* in 1960s.

*P. juliflora* now occupies more than 60% of landscape.

**Results**

*P. juliflora* is a critical source of primary and secondary income.

1. Distribution of primary occupation choices
2. Responses to removal of *P. juliflora*

- **Charcoal Makers**
  - Pastoralists
  - Others

- **Pastoralists**
  - Charcoal Makers
  - Others

- **Others**

**Supports pastoral economy and improves household wellbeing.**

- Charcoal economy helps manage livelihood related vulnerabilities.

**Livelihood diversification i.e., charcoal income boosted milk economy.**

- Livelihood diversification in charcoal economy.

**Importance of charcoal economy**

- **Charcoal**
  - Pastoralist
  - Others

- **Pastoralist**
  - Charcoal
  - Others

- **Others**

**Methods**

- **Duration of fieldwork:** 2015, 2017-2019
- **Sampling across:** 19 village councils, 54 villages, and 21 communities.
- **Mixed method approach:** In-depth interviews, structured and semi-structured interviews, focus group discussions, income-expenditure data, vulnerability study, ethnography.

**Total interviews = 200** 
(Residents=149, Migrants=30, Key Informants=21)

**Conclusions**

- Surprisingly, charcoal economy boosts milk economy.
- *P. juliflora* addresses livelihood vulnerability.
- High socioeconomic barriers to removal of *P. juliflora*, and restoration of grassland.
- *P. juliflora* has transformed Banni into a novel social-ecological system.

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*Banni is prone to extreme climatic variability, like droughts, making Banni highly vulnerable to economic shocks. Charcoal economy helps manage livelihood related vulnerabilities.*

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**Spread of *P. juliflora* prompted calls for its removal from the landscape.**

- *P. juliflora* based charcoal economy prevalent among pastoral and non-pastoral communities.
- 60% respondents dependent on charcoal economy for primary income.
- Charcoal economy aids poverty alleviation.
- Novel dependence on *P. juliflora* for multiple uses.

**What are ecological and socioeconomic implications of *P. juliflora* removal?**

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