Constraints and opportunities of dairy production to provide ecosystem services in urban India

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Background

Agroecosystems under pressure

Linkages between production and consumption are becoming more complex
Background
Agroecosystems under pressure II

Linkages between production and consumption are becoming more complex and looser
Methodology
Dairy Production Baseline Survey

Location
Two transects in the Rural-Urban Interface (RUI) of Bangalore

Urbanization assessment
Survey Stratification Index (Hoffmann et al., 2017)

Survey
337 dairy households across 32 locations, incl. 30 surveys across 8 urban areas
Results
Bangalore urban dairy farmers

- Similar within the whole RUI
  - Socio-economic profile
  - Family-based production

- Specific to urban areas
  - Landless
  - Alternative marketing channels
  - Higher production potential
Results
Provided Ecosystem Goods & Services

Provisioning Services

- High-value product possible
- Preference for native breeds
- Landless husbandry
- Low productivity
Results

Provided Ecosystem Goods & Services II

Supporting Services

Nutrient cycling

- Waste conversion
- Nutrient recycling
- Manure management

Regulating Services
Results
Provided Ecosystem Goods & Services III

Cultural Services

Spiritual and religious

- Cultural status
- Integration in urban landscape
- Everyone drinks milk

Social links
Conclusion

From Ecosystem Services to Social-Ecological System (SES)

Social framework needs to be taken into account

Integration of dairy farmers into urban landscape
India - specific constraints and opportunities

Conclusion

Sustainability of Urban Dairy Production

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