Indian Journal of Agricultural Economics 80: 3 (2025):985-997
DOI:10.63040/25827510.2025.03.022

Understanding Socio-Ecological Vulnerabilities in Artisanal Fisheries: A Case Study of Chilika Lagoon

Avisweta Nandy[1], Surajit Haldar[2], Debdutt Behura[2], Nagesh Kumar Barik[3], and Dwity Sundar Rout[4]

Artisanal fisheries are a critical source of livelihood for 36 million people in developing countries, providing income, food, and nutritional security. The complex interplay between water-quality variations and socio-ecological vulnerabilities remains insufficiently explored. This study aims to establish a comprehensive framework for analysing the socio-ecological dynamics of Chilika Lagoon by identifying, categorising, and organising key variables, and to explore the roles of actors, focal action stimuli, and other influential factors shaping policy and governance within the lagoon system. The various breakpoints identified are the introduction of shrimp culture in the 1990s, artificial mouth opening in September 2000, and the period from 2019 onwards, following Cyclone Fani. The CIS Framework provides a blueprint for future interdisciplinary research that comprehensively integrates and represents all major variables in a single framework.

Bridging Inequality through Forests: A Study on the Role of NTFPs in Wayanad's Tribal Settlements

Abhishek S, Chitra Parayil, and Cenmichong Khodang[5]

Non-Timber Forest Products (NTFPs) serve as vital livelihood resources for tribal populations in India, especially in ecologically rich yet economically marginalised areas such as Wayanad, Kerala. This study explores the role of NTFPs in supporting tribal incomes and reducing income disparities. Primary data were collected from 90 tribal households across three selected panchayats, and analytical tools such as the Lorenz curve and Gini coefficient were used to examine income distribution. Additionally, Garett's ranking helped identify key challenges in NTFP marketing. Findings indicate a notable decline in the Gini coefficient-from 0.46 to 0.29-when NTFP earnings are included, emphasising their role in promoting income equality. About 36 per cent of the households earn more than 40 per cent of their total income from NTFPs, demonstrating their importance for both financial sustenance and daily subsistence. Despite this, issues such as high transport costs, unstable pricing, and insufficient institutional support limit their potential. The study suggests

[1]Sri Sri University, Cuttack, India
[2]Odisha University of Agriculture and Technology, Bhubaneswar
[3]Central Institute of Freshwater Aquaculture (CIFA), Kaushalyaganaga, Bhubaneswar
[4]MSSSoA, CUTM, Paralakhemundi, Gajapati, Odisha
[5]College of Agriculture, Kerala Agricultural University, Vellanikkara,

strategic interventions, including training for value addition, cooperative-based marketing, digital commerce, and the integration of eco-tourism. Reframing NTFPs as core elements of livelihood strategies-rather than as supplemental income sources-can advance rural development, enhance social equity, and improve forest governance for tribal communities.

Ecosystem Services and LULC Dynamics: Evidence from Eastern India

Suvangi Rath[1], Kiran Kumara T.M.[2], Ajit Kumar Swain[3], Akhilesh Kumar Gupta[4], Amarendra Das[5], and Khitish Kumar Sarangi[4]

Ecosystem services (ES) are vital for human well-being, yet their values are closely linked to changes in land use and land cover (LULC). This study assesses the spatiotemporal dynamics of LULC and the associated ecosystem service values (ESV) across irrigated and rainfed agro-ecosystems in Odisha, Eastern India, from 2005 to 2020. Using remote sensing and GIS techniques, we analysed four representative villages spanning two agro-climatic zones, quantifying changes in agricultural, forest, water body, built-up, and barren land cover. Ecosystem service values were estimated using established valuation coefficients, and statistical analysis was performed to identify significant trends. Results reveal significant increases in built-up areas and notable shifts in the extents of agricultural and water bodies, alongside a marginal decline in forest cover. Importantly, all sites witnessed substantial increases in total ESV, driven primarily by enhancements in water regulation and waste treatment functions, despite growing anthropogenic pressures. Irrigated regions exhibited higher ESV gains compared to rainfed areas. The study underscores the critical role of landscape management in sustaining and enhancing ecosystem services amid ongoing land cover transitions and advocates for region-specific valuation coefficients for more accurate ESV estimation. The findings offer valuable guidance for policymakers and stakeholders seeking sustainable land use and ecosystem stewardship in India's rapidly evolving rural landscapes.

[1]Indian Council for Research on International Economic Relations (ICRIER), New Delhi
[2]ICAR -National Institute of Agricultural Economics and Policy Research (ICAR-NIAP), New Delhi
[3]Space Borne, Bhubaneswar
[4]Odisha University of Agriculture & Technology, Bhubaneswar
[5]NISER, Bhubaneswar, Homi Bhabha National Institute, Anushakti Nagar, Mumbai, India

Institutional Innovations in Community-Led Water Management: An Economic Analysis of Small-Scale Irrigation Systems in the East Khasi Hills, Meghalaya

Kuldeep Singh, N. Anandkumar Singh, and Ram Singh[1]

Community-led irrigation initiatives are crucial for tackling the paradox of seasonal water scarcity in Meghalaya. This region receives an average of 2800 mm of annual rainfall but faces dry spells due to rapid runoff and a lack of infrastructure. This study, conducted in the East Khasi Hills, analyses the institutional and economic viability of small-scale, community-led irrigation systems, applying Elinor Ostrom's eight design principles to evaluate governance. The research reveals that a blend of traditional institutions (like dorbar shnongs) and formal Water User Associations creates effective hybrid governance models. Economically, these systems, including traditional bamboo drip and modern Jalkunds, show high returns and viability. The economic analysis revealed significant gains, with some systems yielding a Benefit-Cost Ratio (BCR) exceeding 2.0 and an Internal Rate of Return (IRR) of over 40%. These interventions had a substantial socio-economic impact on farm households, including an 86.7% increase in paddy yield (from 1,500 kg/ha to 2,800 kg/ha), a 50% rise in cropping intensity, and a 71.4% increase in net household income (from ₹35,000 to ₹60,000 annually). Furthermore, labour use was reduced by 25%, and fertiliser use decreased by 30%. The findings suggest that empowering these hybrid governance structures with legal and financial support can enhance water security, agricultural productivity, and climate resilience. Policy recommendations include formalising these hybrid models, investing in low-cost technologies, and aligning national and state schemes to create a cohesive support system for sustainable water management.

Influence of Common Resource Pool on the Adoption of Soil Conservation Practices in Meghalaya: A Case Study of Tribal Land Tenure Systems

Hehlangki Tyngkan, S. Basanta Singh, Ram Singh, Dipriya R. Lyngkhoi, and Kuldeep Singh[1]

This study examines the impact of land ownership on soil conservation adoption in Meghalaya, India, a region characterised by hilly terrain, high rainfall (reaching up to 11,000 mm annually), and traditional tribal tenure systems. Facing severe soil erosion from intense monsoons and shifting cultivation (jhum), conservation practices like bench terracing, contour bunding, and agroforestry are

[1]College of Post Graduate Studies in Agricultural Sciences, Central Agricultural University (I), Umiam, Meghalaya - 793103

vital for sustaining agriculture among the Khasi, Garo, and Jaintia tribes. Using data from 240 households in East Khasi Hills and Ri-Bhoi districts, the study employs logistic regression, t-tests, and Gini analysis to assess communal (Hima/Raid), individual, and sacred grove-adjacent systems. Communal ownership (odds ratio 3.74) and sacred grove lands (odds ratio 6.62) drive higher adoption due to collective governance and cultural reverence, unlike individual ownership, which is limited by economic constraints. Education, credit, training, and slope are key determinants. Adopters of soil conservation practices achieve yields 8–25% higher than those of non-adopters, resulting in an additional Rs. 16,723 in income, 42.77 extra man-days, and lower income inequality (Gini coefficient of 0.28 vs. 0.38). Challenges include modernisation and labour intensity. Policies should integrate customary tenure into programs like WDPSCA, protect sacred groves, enhance resources, and promote low-cost practices to ensure sustainable land management in Meghalaya's fragile ecosystems.

The Promise of Commons for Resilient Farming Systems: A Case Study from Rajasthan

Pratiti Priyadarshini, Anil Sarsavan, Himani Sharma, Rahul Talegaonkar, Shiv Lal Kumawat, and Narendra Singh Shaktawat[1]

Commons, as resource systems and a form of governance, have been foundational to the sustenance and growth of farming in India's rainfed regions. Commons provide ecosystem services-such as water, nutrients, pollination, and pest control—critical for the viability and growth of smallholder farming systems. Similarly, cultures of commoning have manifested in practices such as seed sharing, livestock penning, resource pooling for agricultural operations, and norms that regulate water usage, all of which have been integral to the social fabric of farming communities. This paper draws insights from long-term social-ecological research being undertaken in the Kalyanpura watershed, Rajasthan, highlighting the complex web of interactions within the farming system and urges to re-imagine farming from a 'Commons' perspective. The study employs a mixed-methods approach to track changes in key socio-ecological indicators, identify the causal mechanisms, and examine the potential role of Commons in enhancing the resilience capacities of the farming system. Results highlight that secure tenure and community-led restoration and governance of Commons can contribute to improving the biomass, biodiversity, and hydrological regime in the watershed. This can help improve the habitat of birds,

[1]Foundation for Ecological Security, Anand

butterflies, reptiles, and pollinators, contributing to the health of the ecosystem in which farming is embedded.

Women as Stewards in Governance of Forest Commons

Swapnasri Sarangi and Niranjan Sahu[1]

Systemic discrimination and structural inequalities have long restricted women's ability to access, control, and govern Commons such as community forests. Often perceived as "beneficiaries" or "labourers" rather than "decision-makers," women remain excluded from governance, reinforcing cycles of marginalisation, violence, and denial of dignity. Yet, their participation in decision-making is vital for sustainability and conservation. The Forest Rights Act (2006) enables communities, including women, rights to manage and govern forests. For rural and tribal women, who rely on forests for food, fuel, medicines, and livelihoods, this provision offers immense potential. However, women's participation in Community Forest Rights Management Committees (CFRMCs) is frequently tokenistic, with little real influence. In the Dhenkanal district of Odisha, efforts to strengthen women's agency in forest governance have begun shifting this pattern. In more than 100 villages with community forest titles, women contested leadership roles in CFRMCs. Their deep ecological knowledge proved invaluable - women typically spend 185–195 days in forests compared to men's 95–105, identifying 140–150 species versus 90–100 by men. Today, women lead in 60–65 villages, actively protecting forests, preparing management plans, and promoting restoration. Recognising and institutionalising women's leadership ensures equitable governance, strengthens communities, and fosters resilient, sustainable Commons.

Commons, Communities, and Conservation: Role of Social Institutions in Ecological Restoration in Thana, Rajasthan

Himani Sharma[1], Somya Patel[1], Shaurabh Anand[2], and Narayan Singh Chaundawat[1]

Common Property Land Resources (CPLR) cover approximately 15% of India's geographical area, including community pastures and grazing lands, village forests and woodlots, and other areas. Commons serve critical ecological functions (and services) contributing to carbon sequestration, biodiversity conservation and maintenance of hydrological and nutrient cycles. They meet critical livelihood needs,

[1]Foundation for Ecological Security (FES), Anand, Gujarat-388001
[2]School of Development, Azim Premji University, Bengaluru

including food, fodder, medicine, firewood, and small timber. Despite their ecological, social, and economic significance, commons have been neglected, resulting in widespread degradation. Restoration initiatives that fail to recognise the role of local institutions and the diversity of rights regimes often result in top-down solutions which are not sustainable. This paper examines how different tenure and institutional arrangements influence ecological outcomes in Thana, a village in Rajasthan's Bhilwara district, where four categories of commons coexist. Using the International Forestry Resources and Institutions (IFRI) framework, two rounds of socio-ecological assessments were conducted in 2016–17 and 2022–23. Findings from the study indicate a strong correlation between secure tenure, active local institutions, and improved ecological outcomes. The case of Thana also illustrates how locally rooted institutions can contribute to national and global conservation objectives while meeting the needs of local communities. The findings reaffirm that ecological restoration cannot be separated from questions of governance, tenure, and community agency. Institutional presence and tenurial security serve as enablers of stewardship, collective action and long-term investment in commons management

Commons, Conflict, and Coexistence: A case study from Satkosia Landscape

Abhilasha Panda[1], Aneree Dhebar[2], Rahul Talegaonkar[2], Debolina Paul[2], Pratiti Priyadarshini[2], Mahesh Jadav[2], Dron Kumar[2], Mayadhar Mishra[2], and Susanta Pal[2]

Forests in Odisha are a mosaic of shared commons—a landscape where local communities and wildlife actively negotiate for space and resource use. Habitat fragmentation and anthropogenic pressures are forcing wide-ranging species to disperse beyond their traditional ranges, increasing direct conflicts with local communities. An integrated, landscape-level, community-led approach is required to restore ecological connectivity. This study employs a qualitative research methodology, supported by spatial and temporal analysis, to explore how shifting land-use patterns and anthropogenic pressures reshape interactions, underscoring the urgency of integrated conservation strategies that reconcile ecological integrity with human well-being. Findings from our study in the periphery of the Satkosia Wildlife Sanctuary reveal that habitat fragmentation caused by linear infrastructure, industrialisation, the spread of invasive species, and conflicting land uses continue to have a negative impact on forest quality and access. We emphasise the non-linearity and layered nature of human-wildlife interactions through a systems dynamics lens,

[1]Foundation for Ecological Security (FES), Nayapalli, Bhubaneshwar, Odisha-751012
[2]Foundation for Ecological Security (FES), Anand, Gujarat-388001

reinforcing the necessity for institutional innovations that are inclusive, participatory, and aligned with traditional ecological knowledge and the commons.

From Perception to Evidence-Based Planning: Co-Creating SEHAT (Socio-Ecological Health Assessment Tool) for Measuring Commons Health through Local Indicators

Aditi Tirkey, Aneesh Deshpande, Himani Sharma, Pratiti Priyadarshini, and Hemalatha Reddy[1]

Commons are vital for sustaining the livelihoods of tribal communities, pastoralists, landless, and marginalised families. Despite their critical role, these often remain unrecognised and managed through top-down approaches, overlooking place-based knowledge. Communities are not just passive users, but also capable stewards, and they must have the ability to monitor what matters to them. Most monitoring systems in natural resource governance focus on biophysical indicators, such as forest cover and soil type, often sidelining lived experience and the wisdom of communities. This paper introduces the Socio-Ecological Health Assessment Tool (SEHAT), a participatory tool designed to help communities monitor the health of their Commons through indicators that are valuable to them. SEHAT shifts from 'monitoring-for-communities' to 'monitoring-by-communities' by incorporating four key resource systems: water, forest, pastureland, and agricultural connections. It integrates ecological and social dimensions. The use of simple scoring rubrics along with colour-coded results supports collective reflection and evidence-based planning. A forthcoming mobile and web platform will further support scaling up and integration into formal planning processes, such as the preparation of Gram Panchayat Development Plans (GPDP). SEHAT highlights that community-led monitoring can also be methodologically rigorous and contribute to better planning processes at the village level.

[1]Foundation for Ecological Security (FES), Amul Dairy Road, Anand, Gujarat-388001, India

Understanding Women's Agency and Leadership in Governance of the Commons: Avenues, Challenges and Interventions

Apurwa Kachhap[1], Marlène Elias[2], Miranda Morgan[2], Khanjan Ravani[3], Deepanita Mishra[3], and P S Madappa[3]

More than 150 million rural women in India directly depend on the Commons for food, fodder, water, and energy. Tribal households acquire 40 to 60 per cent of their earnings from the sale of non-timber forest products (NTFP), most of which are collected by women. Yet, despite state policies that seek to increase women's representation in decision-making (such as reservations or quotas in governance bodies), women are poorly recognised and less likely to participate fully and take on meaningful leadership roles in the governance of the Commons. As such, this study aims to understand community perceptions of women's leadership, the motivations and challenges faced by women leaders, and their contributions to Commons governance. The aim is to inform efforts to support women's full and effective participation and leadership in decision-making over common-pool resources. The study was conducted in 20 villages across four states - Madhya Pradesh, Rajasthan, Karnataka, and Odisha - using a qualitative methodology that included semi-structured interviews, life histories, and focus group discussions. In the interviews, men and women leaders reveal deep-seated discriminatory attitudes and norms around women's leadership, hindering their leadership in governing common-pool resources. These include the gendered division of labour. Findings suggest that strategies such as facilitating mahila sabhas, supporting women cadres, working with women's groups, and securing tenure, among others, have contributed to progress in women's leadership in natural resource management.

Role of Perceived Tenure Security for Land Restoration: The Case of the Prohibitory Order Book in Andhra Pradesh

Pooja Chandran[4]

Across much of the Global South, tenure security remains one of the most critical yet unresolved dimensions of land governance, particularly for Indigenous Peoples and local communities who manage extensive commons without formal recognition. In India, non-forest common lands, such as pastures, wetlands, and so-

[1]Foundation for Ecological Security (FES), Nayapalli, Bhubaneshwar, Odisha-751012, India
[2]Alliance of Bioversity International and the International Center for Tropical Agriculture
[3]Independent Researcher
[4]Foundation for Ecological Security (FES), Anand, Gujarat-388001

called ‘wastelands,’ cover approximately 15% of the national territory and are vital for the livelihoods, cultures, and ecological resilience of over 350 million people. Yet these lands suffer from ambiguous tenure regimes, limited legal safeguards, and widespread ecological degradation. Unlike forest lands governed under the Forest Rights Act (2006), non-forest commons lack a comparable legal framework, leaving communities with insecure, de facto rights that expose them to the risks of dispossession. This paper examines the Prohibitory Order Book (POB) in Andhra Pradesh as an administrative tool that, although not conferring legal ownership, provides a form of perceived tenure security. Drawing on a survey of 207 village institutions across four districts, we analyse how the POB shapes community perceptions of land rights and influences resource use, management, and conservation practices. Our findings highlight the critical role of informal and hybrid governance mechanisms in contexts of legal vacuum, demonstrating that perceived tenure security can facilitate ecological stewardship. The study aims to contribute to debates on commons governance and tenure pluralism, offering insights into how administrative innovations, such as the POB, can bridge the gaps between customary practice and formal recognition.

Old Roots and New Leaves: Role of Youth in the Governance of Commons

Seema Vigneshwar Shastri, and Pratiti Priyadarshini[1]

The large majority of the Indian population stay in rural areas. Their changing aspirations and challenges in rural livelihoods have put the agriculture and the governance of the commons at risk. Understanding youth aspirations and addressing their challenges is crucial to building a resilient rural economy and a promising future. Rural livelihoods are highly dependent on the health and governance status of their common resources, such as forests, grazing lands, and water bodies. Efficient governance of common resources has enormous potential to provide resilient livelihoods for youth, thereby reducing distress migration. The study employs a mixed-methods approach to examine youth awareness, participation, and motivation in Commons governance across parts of Karnataka and Andhra Pradesh. Using the Commons-Commoning Framework as a lens, the study highlights the process of youth involvement in the governance of Commons and positions Commoning at the centre of social transformation. The study shows that the lower interest of youth in rural livelihoods is driven by a perception of high risk and low income, as well as a perceived low dignity, despite the current dependency of households. Awareness of Commons is higher among young males than young females, with community

[1]Foundation for Ecological Security (FES), Bangalore -560010

members and village institutions seen as primary governance actors. Drawing on the insights from the study, the paper reiterates the untapped potential of rural youth in Commons governance and discusses potential pathways to harness it.

Common Pool Resources in North-East India: Governance, Livelihoods, and Sustainability – A Review

Chikkathimme Gowda H. R.[1], Ram Singh[1], Amrutha T[2], Kamni P Biam[1] and Pavithra K. N.[3]

Forests, wetlands, grazing grounds, and shifting cultivation landscapes constitute vital common-pool resources (CPRs) in North-East India, supporting local livelihoods, food security, and cultural identity. These resources provide indispensable ecosystem services, including fuelwood, fodder, biodiversity conservation, and water regulation, while sustaining customary governance institutions that have historically ensured equitable access and prudent use. Yet, CPRs in the region face mounting stress from demographic pressures, expanding market linkages, deforestation, land-use transformations, and climate variability, compounded by the weakening of traditional institutions. This review synthesises theoretical perspectives from Ostrom's design principles, Wade's irrigation governance studies, Jodha's livelihood frameworks, and Singh's CPR analyses, contextualising them within the socio-ecological realities of the region. Findings reveal the resilience of community-based governance structures, while also highlighting critical gaps that necessitate hybrid approaches that integrate customary norms with statutory frameworks. Persistent challenges include shortened fallow cycles in shifting cultivation, unsustainable forest extraction, limited policy recognition of traditional rights, and gendered inequities in resource management. At the same time, opportunities emerge through adaptive governance, the blending of indigenous ecological knowledge with scientific innovations, and the creation of sustainable livelihood pathways. Policy priorities include legal empowerment of communities, fair benefit-sharing mechanisms, inclusive participation of women and youth, and innovative instruments such as payments for ecosystem services and community enterprises. The study concludes that durable CPR governance in North-East India requires participatory, flexible, and culturally attuned frameworks that secure ecological sustainability, strengthen livelihood security, and promote social equity for present and future generations

[1]Central Agricultural University (Imphal), Umiam, Meghalaya- 793103
[2]ICAR-ATARI VII, Umiam, Meghalaya
[3]ICAR-IARI Jharkhand, Goria Karma, Hazaribagh

Common Lands in India: Where are they and who uses them? A socio-spatial analysis

Hagar El Didi[1], Ritika Khurana[2], Wei Zhang[1], Mahesh Jadav[3], Chiranjit Guha[3], Pratiti Priyadarshini[3], Zhe Guo[1], Harpinder Sandhu[4], Harini Nagendra[5] and Ruth Meinzen-Dick[1]

Common lands provide important socioeconomic and ecological benefits. In India, commons help meet the subsistence and livelihood needs of at least 350 million rural poor, providing various types of ecosystem services beyond rural communities. Yet, India‘s commons face widespread degradation and are often misconstrued as-wastelands‖ because their true extent, value, and users are unknown. We provide a national assessment of the spatial extent and usage of land-based commons across districts and biogeographic zones, utilising data from the 2011 Census of India and the Household Census. We find that, as a conservative estimate, India has nearly 67 million hectares of land-based commons (26% of the country‘s total area), half of which are forests. Commons are spatially spread out, with multiple types often present within a biogeographic zone or single district. Various districts in the northern Deccan Peninsula, the Himalayas, the Western Ghats, the Islands, and Semi-arid biogeographic zones have the highest concentration of land-based commons. Further, marginalised Indigenous Peoples and Local Communities‘ livelihoods rely on forest commons, barren lands, pastures and culturable wastelands, including the extraction of non-timber forest products for housing, cooking, and grazing. Our study highlights the need for more detailed and disaggregated commons mapping, which could inform land-use policies and conservation planning.

Biodiversity as Commons: Institutional Pathways for Governance with Chalcididae of Chhattisgarh as a Case Study

Kriti Arpana Minz[678], A. Amarender Reddy[6], Ankita Gupta[7] and Vikas Singh[8]

Chalcid wasps play a crucial role in regulating pest populations, but are poorly studied in Central India. This study presents the first comprehensive taxonomic assessment of Chalcididae across the three agroclimatic zones of

[1]International Food Policy Research Institute, Washington, DC, USA
[2]PNC, Tysons Corner, Virginia, USA
[3]Foundation for Ecological Security (FES), Anand, Gujarat-388001
[4]Federation University, Australia
[5]Azim Premji University, Bengaluru 562125
[6]ICAR-National Institute of Biotic Stress Management, Raipur, Chhattisgarh
[7]ICAR-National Bureau of Agricultural Insect Resources, Bengaluru, Karnataka
[8]Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh

Chhattisgarh, based exclusively on morphological methods. From 2019 to 2023, collections across three agroclimatic zones of Chhattisgarh yielded 354 specimens representing 70 species, 11 genera, and four subfamilies from diverse habitats, ranging from natural forests to cultivated fields. Diversity indices consistently revealed higher richness in natural ecosystems compared to agroecosystems, although both showed significant declines between 2019–2020 and 2021–2023. Importantly, several species abundant in cultivated fields- such as *Dirhinus anthracia* and *Antrocephalus cariniceps*- have potential as natural enemies of dipteran and lepidopteran pests, underscoring their utility in Integrated Pest Management (IPM). This research supports sustainable agriculture by documenting regional parasitoid diversity and promoting the use of native biological control agents as alternatives to chemical pesticides. Framing parasitoid diversity as a biodiversity commons, this study calls for participatory monitoring, integration into People's Biodiversity Registers, and recognition of parasitoids as bioindicators to sustain agricultural resilience.

Evolving Governance around Ponds

Yashwini Chandra[1], Giriraj Verma[2], Kuldeep Nagar[3], Somya Patel[3] and Chetan Chetan Balaji Bhalke[4]

In semi-arid India, village ponds remain critical yet under-researched institutions shaping agricultural sustainability, water security, and rural livelihoods. This paper examines the governance of ponds across three villages- Deori, Nogawan, and Itmariya- in Shahpura block, Bhilwara district, Rajasthan, to understand how institutional arrangements influence resilience and equity. Employing a mixed-methods approach, the study utilised household surveys (N=168), focus group discussions, and key informant interviews to trace thirty years of transformations in pond functionality, access, and governance. Findings indicate that while Dharmi Talabs continue to be culturally protected for drinking and cattle use, Gavai Talabs face elite capture, institutional fragmentation, and inadequate state support. Ponds remain indispensable for irrigation during the Rabi season, livestock survival, and supplementary income through maintenance works. However, weakened institutional arrangements around the pond have been one of the main factors leading to distress migration. The study argues that strengthening pond governance requires inclusive institutions that balance traditional norms with state support, technical inputs, and equitable participation, thereby positioning ponds as resilient Commons for sustainable rural transformation.

[1]TERI School of Advanced Studies, New Delhi- 110070
[2]Tata Institute of Social Sciences, Hyderabad, Telangana-500030
[3]Foundation for Ecological Security (FES), Bhilwara, Rajasthan- 311001
[4]Indian Institute of Technology Bombay, Mumbai, Maharashtra- 400076

Understanding the Dynamics of Fallow Land Expansion in Rayalaseema: Insights from a Social-Ecological Systems Perspective

Seema Vigneshwar Shastri, and Pratiti Priyadarshini[1]

Despite the growing need for food security, the abandonment of farming, especially during the Kharif season, is an increasing concern in India's semi-arid regions. The current study examines the social, ecological, and economic factors that contribute to the increasing extent of fallow land in the Rayalaseema region of Andhra Pradesh. The insights of the study are situated within the Social-Ecological Systems (SES) framework. The study reveals a complex interaction of factors including (i) recurring incidents of crop failures driven by ecological drivers like untimely rainfall, human-animal conflicts, soil degradation, (ii) socio-economic shifts like increased cost of cultivation, disengagement of youth, and reduced availability of labour, and (iii) institutional constraints including limited access to credit and the failure of reciprocal labour systems as the primary reasons for abandonment of farming. The study highlights the interlinkages between Commons and the drivers of increasing fallow land, bringing farmers' perspectives to the forefront. The health of the Commons plays a vital role in supporting and sustaining agriculture and livestock rearing in semi-arid regions. Addressing this complex challenge requires multiple actors to come together to enhance ecological resilience, revitalise community-based traditional practices, promote collective action, and strengthen institutional support.

[1]Foundation for Ecological Security (FES), Bangalore -560010