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Economics, Policies and Institutions

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Abstract Book

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Events

<p style="text-align: center;">Pre-conference workshop on "Tools and Methods for Decision making on Ecological Restoration" in collaboration with Foundation for Ecological Security</p>
<p style="text-align: center;">Inaugural Session Announcing INSEE Fellows (2026)</p>
<p style="text-align: center;">Jayanta Bandyopadhyay Endowment Lecture and Panel Discussion Prof. Himanshu Kulkarni, ACWADAM, Dr. Malavika Chauhan, CEDR and Prof. Anamika Barua, IIT Guwahati</p>
<p style="text-align: center;">Panel Discussion and Dialogues Dialogue on Ecological Restoration in the Indian Himalayan Region (Coordinated by GIZ) IDRC -SANDEE panel on Forest Restoration and Its Impacts – Evidence from South Asia IDRC - CRB panel on Resource Use Efficiency and Circular Economy in Ecological Restoration for Business Action</p>
<p style="text-align: center;">Screening of Short Videos Local Communities and Distributional Outcomes from Restoration Practice</p>
<p style="text-align: center;">Keynote Addresses Mainstreaming Biodiversity into Economics and Finance GBF by Dr. Pushpam Kumar, UNEP Restoration Economy by Dr. Muralee T, UNCCD Ecological Restoration: Economics and Finance by Dr. Rohini Chaturvedi, Independent Strategy Consultant Regenerative Agriculture and Restoration by Prof. Harpinder Sandhu, Federation University Australia</p>
<p style="text-align: center;">Oral Presentations Parallel Session 1: Forest Dependent Communities and Ecological Restoration [Abstract id: 021, 023, 075, 093, 109] Parallel Session 2: Gender and Ecological Restoration [Abstract id: 013, 049, 076, 112, 123] Parallel Session 3: Forests: Policy and Governance for Restoration [Abstract ids: 017, 024 104] Parallel Session 4: Ecological Restoration in Agriculture [Abstract ids: 092, 100, 125] Parallel Session 5: Restoring Urban Ecologies [Abstract id: 007, 015, 071, 102] Parallel Session 6: Institutions and Ecological Restoration [Abstract id: 012, 014, 018, 027] Parallel Session 7: Restoring Wetlands [Abstract id: 050, 110]</p>
<p style="text-align: center;">A Session on Ecology Economy and Society - The INSEE Journal</p>
<p style="text-align: center;">Book Discussion: Environmental Studies from India: Engaging with the Planetary Ecological Crisis Sudha Vasan (ed.), Publisher OUP</p>
<p style="text-align: center;">INSEE@25 and beyond: A conversation with the former presidents of INSEE</p>
<p style="text-align: center;">Post-conference field- visit</p>

Video Presentation

Bridging Community Knowledge and Scientific Tools for Landscape Restoration: A Case from the Semi-Arid Kalyanpura Watershed, Rajasthan

Himani Sharm, Anil Sarsavan, Rahul Talegaonkar, Manohar Pawar, Shiv Lal Kumawat, Narendra Singh Shaktawat

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Abstract: Land degradation in the semi-arid landscape of India is driven by various factors such as changes in land-use patterns, climatic factors, water stress, weak governance mechanisms of the commons. These factors adversely impact biodiversity and also affect livelihoods of agro-pastoral communities. This paper draws insights from community led watershed restoration and long-term social-ecological research being undertaken in Kalyanpura watershed, Rajasthan. The interventions involved participatory planning that combined local and traditional knowledge with scientific tools and digital technologies, mapping of commons, and collective rule-making with scientific assessments of soil, water, vegetation, and faunal diversity. The study uses a mixed methods approach to track changes in key socio-ecological indicators and 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 to improve the habitat of birds, butterflies, reptiles and pollinators contributing to the health of the ecosystem.

Video Presentation

Restoring an urban lake: Design principles for a participatory socio-ecological restoration through a transdisciplinary approach

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Abstract:

In restoring a neighbourhood lake in Bangalore, we were able to operationalize a transdisciplinary approach by bringing together diverse scientific fields such as biodiversity, water quality, and social science, alongside local ecological knowledge, cultural heritage, and storytelling. Tools such as community mapping, biodiversity walks, using different narrative methods, not just for engagement but also to guide restoration priorities. These practices build social capital, foster shared stewardship, and contribute to the valuation of ecosystem services, a key principle in ecological economics. Here we present a framework where restoration is not treated solely as a technical exercise but as a participatory process that integrates ecological science, cultural values, lived experience, and creative communication that will harness the power of storytelling and community engagement. Drawing on field-based experiences, we demonstrate how restoration efforts, when co-designed with community members, practitioners, artists, and educators, enhance both ecological outcomes and social well-being.

Abstract no. 007

Contestations around nature in small towns: Case study of the Navli River in Savarkundla, Gujarat

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Abstract: Using the Urban Political Ecology framework and Amita Baviskar's conceptualisation of place-making, the once-cherished Navli River, Savarkundla town, Gujarat, which now lies degraded and invisible in public discourse, is analysed to examine the contestations between legality and informality, infrastructure and ecology, and rural belonging and urban aspirations. While urban nature is constructed through memory, ritual, and labour for older generations, the river has become a non-place and an eyesore for the youth, and an opportunity for redevelopment for state officials. The recently inaugurated Navli Riverfront Project reimagines the Navli as a recreational asset, privileging spectacle over sustainability, tourism over every day uses, and reflecting its shift from a local common to an urban river reshaped by external developmental visions. The paper argues that the 'Navli-as-a-River' is constructed differently from 'Navli-beyond-a-River', highlighting the nuances of social construction in a small urban agglomeration and offering insights to reconsider restoration as a socio-ecological process that includes the restoration of collective memory, cultural practices, and everyday relationships with the riverscapes.

Abstract no. 012

From Perception to Planning: Creating SEHAT for Measuring Commons Health through Local Indicators

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Abstract: Commons such as forests, grazing lands, water bodies, and agricultural landscapes are essential to rural life in India. These systems support livelihoods and local institutions, but most monitoring and restoration efforts depend on defined technical indicators. These often miss how communities understand change and degradation. This paper introduces the Socio-Ecological Health Assessment Tool (SEHAT), a framework that allows communities to assess the health of their commons using meaningful local indicators. SEHAT changes the focus from monitoring for communities to monitoring by communities. It combines community-defined ecological and institutional indicators across four resource systems: water, forest, pastureland, and agro-ecological systems. It uses simple scoring rubrics that turn perception into comparable evidence. Developed through ongoing field work and participatory methods, SEHAT aims to encourage collective reflection, strengthen local institutions, and support village-level planning. The tool is still in development, and a digital platform is being designed for testing and future expansion.

Abstract no. 013

**Exploring the Contributions, Roles and Challenges of Indigenous Women in Climate Smart Agriculture:
A Narrative Review of Literature from Northeastern India**

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Abstract: This paper presents a critical narrative review of indigenous women’s roles in climate-smart agriculture (CSA) in Northeastern India, a region highly vulnerable to climate variability, floods, and erratic rainfall. Indigenous women possess extensive ecological knowledge and manage seed systems, agrobiodiversity, soil fertility, and water governance such as Ruza channels. Using a narrative review of 22 selected studies from 126 records, the paper examines their roles, contributions, and challenges in CSA adoption. Findings show that women lead key CSA practices including agroforestry-based shifting cultivation, mixed cropping, composting, water harvesting, community seed banks, and low-input farming, contributing to productivity, adaptation, and mitigation. However, their efforts are constrained by land ownership inequities, limited access to extension services, heavy workload burdens, and policy invisibility. The study argues that indigenous women are active agents of climate adaptation, yet gender-blind CSA frameworks limit their potential. Gender-responsive, culturally grounded CSA policies are therefore essential for effective and equitable climate resilience in Northeastern India.

Abstract no. 014

Rethinking Degradation: A Socio-Ecological Systems Framework for Characterising Degradation Informed by Our Research in the Grazing Commons of Semi-arid Regions of Deccan Plateau, India

Rajkamal Goswami, Ranjith Kumar H T and Seena N Karimbumkara

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Abstract: Ecological restoration inherently is a socio-ecological intervention, yet its foundational diagnosis—how degradation is defined and identified—remains predominantly ecological. Global monitoring systems characterise degradation using biophysical metrics such as vegetation cover, NDVI, biomass, soil carbon, and species composition, privileging high biomass, closed canopies, and equilibrium dynamics. However, such assumptions fit poorly with socio-ecological systems like grazing commons, savannas, and community forests, where disturbance, variability, mobility, and governance institutions underpin functionality and resilience. Drawing on resilience theory, commons governance, and relational values, and our restoration work in the semi-arid grazing commons of Karnataka and parts of Andhra Pradesh, India, we argue that ecological metrics alone misclassify ecosystems, obscure social drivers of decline, and misalign policy outcomes. To address this, we propose a novel ‘Socio-Ecological Degradation Framework (SEDF)’ which integrates ecological indicators with livelihood functionality, governance integrity, and cultural-relational values – pitching degradation as a multidimensional rather than a merely ecological process.

Abstract no. 015

Urban Forests, Invasive Species, and the Contestations of Ecological Restoration in Delhi Ridge

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Abstract: In Delhi, ecological restoration has renewed focus on two key ecological assets: the Yamuna River and the Delhi Ridge. Although framed as ecologically necessary, these interventions raise critical questions about how restoration is understood, justified, and governed in urban socio-ecological contexts. Grounded in political ecology and urban governance, this study combines extensive vegetation surveys with qualitative data from participant observation and informal interviews. Stakeholders include forest officials, DDA officers, researchers, fuelwood collectors, joggers, contractors, gardeners, and labourers. The study reveals how scientific knowledge-led narratives of crisis and recovery reconfigure landscapes, redistribute power, and reshape meanings of forest conservation. Far from being merely invasive, it serves as a prism through which colonial continuities, policy ambitions, and contested futures of Delhi's environmental governance can be examined. The study highlights the need to critically interrogate how restoration agendas consolidate institutional authority and scientific expertise beyond ecological outcomes.

Abstract no. 017

Community-led and Co-management Approaches to Biodiversity Conservation: Comparative Insights from an Indian Protected Area

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Abstract:

Biodiversity loss poses a significant global challenge, especially in developing nations where many people depend on natural resources for their livelihoods. Approaches guided by community management and co-management are increasingly promoted to strike a balance between conservation efforts and community well-being, though their effectiveness varies. This research examines the impact of self-led community initiatives and government-backed co-management systems within the Similipal Tiger Reserve (STR), a vital protected zone in eastern India inhabited by forest-dependent tribal communities. Using household surveys, key informant interviews, participatory rural appraisal, descriptive statistics, and ordered logistic regression, the study compares different governance models and their results. Findings show that community-led organizations outperform co-management frameworks in boosting forest cover, decreasing fires, and curbing illegal activities, mainly due to strong local ownership. Success in co-management heavily relies on genuine participation. Enhancing access to alternative livelihoods, education, and awareness programs significantly promote conservation behaviors. This research underscores the crucial role of supportive, participatory, and livelihood-oriented conservation strategies.

Abstract no. 018

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

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Abstract: Commons include community pastures, grazing lands, village forests, and woodlots, and cover about 15% of India's geographical area. Despite providing critical ecological functions and services, these spaces have degraded in recent times. Top-down restoration efforts fail as they ignore local institutions and diverse rights regimes. This paper examines how tenure and institutional arrangements influence ecological outcomes in Thana village, Bhilwara district, Rajasthan, where four categories of commons coexist. We conducted socio-ecological assessments in 2016–17 and 2022–23 using the International Forestry Resources and Institutions (IFRI) framework. We analysed biodiversity outcomes and analysed how institutional rights correlated with these outcomes. Results show strong links between secure tenure, active local institutions, and improved ecological outcomes that meet community needs. This reiterates that ecological restoration requires addressing governance, tenure, and community agency. Institutional presence and tenurial security serve as enablers of stewardship, collective action and long-term investment in commons management.

Abstract no. 021

The Fuelwood Paradox in India: Balancing Livelihood Needs and Forest Conservation

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Abstract: Fuelwood, a vital energy source for rural households in developing countries, is often harvested unsustainably from forest commons, resulting in forest degradation and loss of biodiversity. This study examines the socio-economic factors influencing fuelwood collection around Similipal Tiger Reserve (STR), offering insights into household dependence on forest resources and their conservation implications. Data was collected from 350 randomly selected households in the core and buffer zones of STR. Results show that higher education levels among household heads significantly decreased fuelwood collection, emphasizing the importance of awareness and knowledge for sustainable resource use. Conversely, the number of adult females and cattle ownership are associated with increased fuelwood harvesting, highlighting gender roles and livestock impacts. Notably, owning trees on private land notably reduces reliance on forest fuelwood, emphasizing the ecological benefits of agroforestry and homestead plantations. These findings point to the necessity of comprehensive ecological restoration strategies that include environmental education, gender-sensitive approaches, and increased tree planting on private lands.

Abstract no. 023

The Potential Role of Ecological Identity in Forest Conservation: A Study of the Forest-dependent Village Community in Himachal Pradesh, India

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Abstract: Ecosystems are the physical environment where living organisms interact with each other and with the surrounding environment. Forests offer multiple Forest Ecosystem Services (FES) i.e. direct and indirect benefits contributing to human sustenance. The study, using a case study in the Chamba district of Himachal Pradesh, India, explores the ecological identity (EI) of the forest-dependent rural community, the largest and most rooted stakeholders of FES, flaunted as crucial but overlooked in operation. The study depicts the contextuality of EI and how the recognition of the community's EI can help forest conservation. Against the present system's limitations in doing so, the study unfolds the community's continuous dilemma where they fail to identify themselves as per their perceived ecological identity. Alienation of the dissatisfied community troubles the forest's sustainability. Pointing to the untapped utilisation of EI in Indian forest management, the study suggests assimilation of EI in forest management.

Abstract no. 024

Title: Ecological Fiscal Transfers: Assessing Compensation for Forest Conservation in Indian States

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Abstract: This paper evaluates the adequacy of India's Ecological Fiscal Transfers (EFTs) introduced by the 14th Finance Commission in 2014, as a part of the horizontal fiscal devolution to compensate the states for forest conservation. We estimate the opportunity cost of conserving one square kilometer of forest land for each state using data on carbon stock, carbon emissions, GSDP and the GSVA from forestry. These opportunity costs are then compared with the EFTs allocated by the Union Government. The results show that EFTs are significantly lower than the compensation required for states to maintain their forests, with differences ranging from US \$0.04 million to US \$5.5 million per square kilometer. This gap highlights the fiscal and ecological inequity in India's area based EFT allocation. We argue that EFTs should be value-based Pigouvian transfers that internalize the ecological externalities of forest conservation.

Abstract no. 027

Power, Inequity, and the Challenges of Commons Governance in Watershed Development: A Case Study from Bhilwara, Rajasthan

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Abstract: Integrated watershed development (IWD) in India promotes “ridge-to-valley” ecological restoration and community institutions to govern land and water commons. Drawing on qualitative fieldwork in the Kalyanpura watershed (Bhilwara, Rajasthan)—including focus groups, key-informant interviews, participatory mapping, and net-actor analysis across ridge, middle, and valley villages—this paper examines how power, caste, gender, and livelihood differentiation shape equity in watershed governance. While project rules mandated proportional representation of women and marginalized castes in Village Natural Resource Management committees, participation was frequently tokenistic: women’s voices were mediated by male relatives, and dominant families steered decisions and benefits. The study contrasts such externally designed committees with culturally rooted collective practices (e.g., annual pond cleaning) that generated stronger legitimacy and long-term sustained cooperation. It also finds that social heterogeneity and unequal resource dependence intensify conflict and weaken rule compliance. We argue that moving beyond procedural inclusion toward recognition justice is essential for durable, equitable commons governance.

Abstract no. 049

Restoring Futures, Rewriting Margins: Gendered Ecologies, Digital Disparities, and the Unequal Politics of Resilience

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Abstract: In the context of climate uncertainty and rapid technological expansion, ecological restoration must be understood as a political process shaped by gendered and digital inequalities, rather than a purely biophysical intervention. Restoration initiatives framed as technocratic solutions risk reproducing historical marginalisations when disparities in access, recognition, and participation remain unaddressed. Drawing on feminist political ecology and critical data studies, this paper argues that resilience envisioned under the United Nations Decade on Ecosystem Restoration (2021–2030) is unachievable without addressing gendered politics embedded in ecological and digital governance. Empirical evidence shows that women, particularly in the Global South, are key holders of ecological knowledge yet remain excluded from decision-making (UNEP, 2016), and are less likely to use mobile internet (GSMA, 2023). Focusing on peri-urban India, the paper introduces the concept of digital ecological citizenship to argue for a gender-just, digitally inclusive restoration grounded in justice, recognition, and redistribution.

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Abstract no. 050

Living with the Rivers: Livelihood Strategies and Land Use Challenges in the Char Regions of Assam, India

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Abstract: Assam's char regions, ephemeral river islands and sandbanks (chapori) of the Brahmaputra, are fragile landscapes marked by recurrent flooding, erosion, and weak infrastructure. Communities here remain socioeconomically vulnerable and politically marginalized. This study examines livelihood strategies across four agroclimatic zones, using the Sustainable Livelihoods Framework and climate vulnerability scholarship. A mixed-methods design combined household surveys (n = 394), focus group discussions, and a multivariate probit model to analyze determinants of household participation in agriculture, allied farm activities, non-farm labour, and salaried services. Results show nearly 80 percent of households diversify livelihoods, combining agriculture with wage labour, livestock, and petty trade. Spatial disparities are evident: island chars retain stronger agricultural ties, while chapori dwellers depend more on non-farm labour due to land scarcity. Environmental shocks such as erosion and crop loss drive diversification, though fertile silt deposits sustain resilience. The study proposes flood-resilient agroecology, commons-based grazing, restoration infrastructure, and strengthened local institutions to reposition char dwellers as co-creators of ecological restoration.

Abstract no. 071

A Critical Analysis of Multi Stakeholder Collaboration in the Restoration of Turahalli Forest, Bengaluru

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Abstract: The sustainability of multi stakeholder collaborative restoration efforts in Bengaluru's Turahalli Minor Forest, a 597-acre forest notified in 1934, can be evaluated through the Stakeholder Salience Framework (SSF). Although the commitment of stakeholders including the Forest Department, NGOs, CSR contributors, environmental activists, and local community is evident in the ongoing conservation programmes, the ultimate effectiveness of their engagement and dynamics is shaped by the 'Sense of Place' (SOP) concept. Qualitative evidence reveals a range of engagement, yet a persistent gap remains between active restoration efforts and its sustainability. This discrepancy is also driven by resource scarcity and the ubiquitous dilemma between urban development and environmental preservation. Furthermore, a lack of transparency in project planning and evaluation methods limits the overall effectiveness of these collaborative efforts, mirroring the challenges faced in other urban forest contexts. Using the SSF, through the SOP, this study critically analyses the effectiveness of multi-stakeholder collaboration in restoring Turahalli Minor Forest.

Abstract No: 075

Restoring Resilience through Tribal Traditions: A Case Study of the Halma Watershed Models in Jhabua, Madhya Pradesh, India

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Abstract: Jhabua district in western MP is tribal-dominated region facing ecological fragility and socio-economic marginalization due to rainfed farming, undulating land and weak groundwater systems. The Bhil tribal community initiated a traditional collective practice known as Halma to restore degraded watersheds through community-led action. This study examines the impact of Halma-based watershed interventions on changes in cultivated land and cropping patterns in Jhabua. A mixed-method approach was used by combining surveys from 90 households, observations, and key interviews. The results show a significant increase in cultivated areas across all crops, with the most notable expansion observed in rabi crops, particularly wheat and gram. Regression results indicate a positive and significant relationship between improved access to water sources and the expansion of cultivated land. Interventions contributed to improved water availability, reduced seasonal migration, enhanced food security, and strengthened community cohesion. The study highlights the effectiveness of culturally rooted community-driven watershed management as a sustainable and resilient model for rural development.

Abstract no. 076

Gendered Dimensions of Ecological Restoration: Empowering Rural Women for Climate-Resilient Livelihoods in South Asia

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Abstract: Rural livelihoods in South Asia are changing at a rapid pace due to ecological degradation. The women in rural areas are the most impacted by the decline in environment. Women also nurture and care for the environment, which do not find recognition in the policy space. As nations chart out restoration plans, this paper looks at ecological restoration as a gender-empowerment approach to the environment. Grounded in Feminist Political Ecology and Environmental Justice frameworks, the research analyses gendered vulnerabilities, women's leadership in restoration, and policy inclusiveness across three ecologically fragile regions Sundarbans Delta, Bundelkhand and Chitwan. The study results show that there are high gendered effects of degradation, high women led restoration results and gaps in policies concerning gender inclusion. The paper proposes institutional reforms for gender-equitable, climate-resilient restoration aligned with India's LiFE agenda and global inclusive recovery goals

Abstract no. 092

Adoption of Solar Pumps for Irrigation and Livelihood: Does it lead to Groundwater restoration? A Reality Check

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Abstract: West Bengal is now facing a severe groundwater crisis. This is primarily attributed to excessive groundwater extraction for irrigation, especially during the summer or Boro paddy season. The government has distributed solar-powered pumps with the dual objective of reducing greenhouse gas emissions and reducing the rate of groundwater extraction. This paper attempts a reality check through a primary field-level survey to understand whether the twin objectives are being fulfilled. From the regression analysis, it is observed that although many farmers are willing to adopt solar pumps, the poor maintenance of solar pumps and non-cooperation among farmers themselves pose problems. The study finds that solar pumps have helped farmers make a profit in the Rabi (winter) season, albeit at the expense of the Boro (summer) season. As far as groundwater conservation is concerned, it depends on institutional mechanisms, such as solar pump maintenance and cooperation among farmers.

Abstract no. 093

Negotiated Ecologies: Rethinking State-led Eco-restoration and Tribal Development in Attappady, Kerala

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Abstract: This study analyses the unintended consequences of the state-led eco-restoration program in Attappady, Kerala, and investigates how environmental governance, moral rationalities, and everyday frictions shape their meanings and outcomes. Employing qualitative interviews, field observations, and document analysis, findings show that the impacts of restoration are not limited to the intended objectives but also have unintended implications. Restoration projects reproduce exclusions, dependencies and ecological implications and modify the ecological subjects. Ecological restoration produces new forms of material reality, subjectivity, and renewed inequality at the convergence of developmental and ecological rationalities. The negotiated ecologies operate in everyday frictions of the restored landscape. The study argues for a nuanced understanding of eco-restoration as a negotiated ecology and offers implications for policy design that integrates material feedback and local knowledge systems. The study also emphasises the need for mechanisms for the sustainable function of the restored landscapes.

Abstract no. 100

Hunted Allies: A Review of Vertebrate-Mediated Pest Regulation in Agroecosystems

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Abstract: Biodiversity loss in agricultural landscapes has weakened natural pest regulation processes that historically supported food production. This review assesses the ecological and socio-economic contributions of three underrepresented vertebrate groups, raptors, reptiles, and amphibians, to ecosystem services in India's farmlands. Using a targeted literature review, we examine the regulating, supporting, provisioning, and cultural services provided, with emphasis on biological pest control. Raptors act as apex predators, suppressing rodent populations, while reptiles and amphibians reduce insect and invertebrate pests across terrestrial and aquatic systems. Together, they form a multi-trophic network that contributes to soil fertility, nutrient cycling, and ecosystem stability. The review identifies key research gaps, including limited species-specific evidence and weak integration of these taxa into agricultural and biodiversity policy. Most quantitative evidence derives from non-Indian, temperate systems, with few directly comparable studies from Indian agroecosystems. By synthesizing available evidence within a unified socio-ecological framework, this review highlights valuation gaps and pathways for vertebrate-inclusive pest management aimed at reducing dependence on chemical pesticides.

Abstract no. 102

Developing benchmarks to assess the effectiveness of lake restoration activities in urban catchments

Priyanka Jamwal

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Abstract: Urban lakes in rapidly developing cities like Bengaluru face severe degradation from unplanned urbanization and untreated sewage discharge. Despite significant investments in restoration, the absence of context-specific benchmarks makes it difficult to evaluate restoration effectiveness. This study develops a practical assessment framework using data from 32 Bengaluru lakes, focusing on three key indicators: Secchi depth (water clarity), total phosphorus concentration (nutrient loading), and plant species diversity. A composite scoring system with weighted metrics revealed that fewer than 20% of restored lakes currently meet the proposed benchmark threshold of 0.6. Results show that nutrient enrichment remains the primary constraint, while community engagement (present in 91% of lakes) significantly influences restoration success. This approach shifts evaluation from unrealistic universal standards toward achievable, catchment-aware thresholds, providing an empirically grounded template for outcome-oriented lake management in rapidly urbanizing regions of the Global South.

Abstract no. 104

Harnessing Social Capital for Ecological Restoration and Energy Transitions

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Abstract: Forest villages represent a strategic nucleus for restoring ecological balance due to their rich natural endowments and embedded social capital. This study examines the role of structural, cognitive, and relational social capital in enabling clean energy transitions and ecological restoration. A qualitative case study was conducted in Dhanagarwada, Dhamane S Bailur village (Belagavi taluk), where a 15-kW solar–wind hybrid stand-alone microgrid with battery storage has been installed. Findings reveal that collaborative engagement and structural social capital significantly enhance clean energy access and support ecological restoration, while cognitive social capital remains underdeveloped, limiting broader progress. Relational social capital improves energy access but has limited influence on restoration outcomes. Existing microgrid frameworks inadequately incorporate community priorities, contextual realities, and seasonal demand variations, constraining their transformative potential. The study highlights the need for context-sensitive institutional mechanisms that leverage social capital to advance clean energy transitions, ecological restoration, and inclusive development.

Abstract no. 109

**Ecological Restoration through Indigenous Knowledge and Practice: Insights from Indian Sundarbans
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Abstract: This study explores Indigenous Knowledge Practices (IKPs) in ecological restoration within the Indian Sundarbans, a climate-vulnerable region rich in cultural heritage. Using qualitative methods and eight focus group discussions with 57 diverse stakeholders, the research identifies six thematic domains of IKP: climate forecasting, disaster preparedness, water management, resource optimization, ecological conservation, and sustainable land use. Findings reveal IKPs as dynamic, adaptive systems rooted in lived experience and intergenerational transmission. Practices such as cyclone prediction, saline-resilient agriculture, and rooftop farming demonstrate ecological ingenuity and community resilience. However, challenges persist, including gendered hierarchies, knowledge erosion, and limited policy recognition. A stakeholder mapping framework highlights fragmented collaboration and power asymmetries. The study advocates for participatory governance, flexible funding, and legal safeguards to integrate IKPs into restoration agendas. By emphasising indigenous voices, restoration can become more inclusive, culturally resonant, and aligned with global sustainability goals.

Abstract no. 110

Towards a balanced wetland restoration: Exploring ecosystem disservices in the kole wetlands of Kerala
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Abstract: Wetland restoration initiatives have traditionally focused on enhancing ecosystem services, but often overlook ecosystem disservices. The present study investigated ecosystem disservices at kole wetlands in Kerala and analysed stakeholder perception towards the severity of identified ecosystem disservices, based on the primary data gathered from randomly selected 580 stakeholders belonging to 5 major groups. The study identified 10 ecosystem disservices such as greenhouse gas emission, agrochemical use, saltwater intrusion, solid waste pollution, fringe area flooding, unpleasant odor, soil and water pollution, over presence of mosquitoes, rodents and reptiles, invasive alien species invasion and crop raiding. The study valued 5 ecosystem disservices amounting to an annual aggregate value of ₹21,211.11 lakhs. The stakeholder perception analysis revealed that these disservices affected local livelihoods and may cause significant barriers to community engagement in restoration initiatives. Rather than undermining restoration, recognizing and valuing ecosystem disservices presents an opportunity for more nuanced and sustainable conservation planning.

Abstract no. 112

Women, Tourism, and Ecological Stewardship: Homestay Economies in the Indian Himalayas and Northeast Plateau

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Abstract: Homestay tourism has become a central pillar of rural development strategies in India, yet its gendered ecological dimensions remain insufficiently examined. This working paper explores how women sustain homestay tourism in two ecologically fragile destinations—Raithal in Uttarkashi district, Uttarakhand, and Laitlum in the East Khasi Hills of Meghalaya—while remaining largely invisible within tourism governance and policy frameworks. Guided by political ecology and feminist institutionalism, the study investigates (a) the formal and informal roles women play in regulating tourism and maintaining environmental balance, and (b) the extent to which national and state tourism schemes align with women’s lived realities and local governance institutions. Drawing on qualitative fieldwork conducted between 2023 and 2025, the findings reveal a persistent misalignment between policy priorities and the ecological practices embedded in women’s daily work. Despite contrasting kinship and governance systems, both regions exhibit similar patterns of institutional exclusion, wherein women function as de facto ecological managers without formal authority or recognition.

Abstract no. 123

Valuing Nature, Empowering Women: Gendered Insights from Econometric Analysis of Ecological Restoration in Post-Mining Odisha

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Abstract: This paper investigates the socio-economic including gender and demographic determinants of the perceived importance of ecological restoration and the willingness to pay (WTP) among rural households in the post-mining landscapes of the Purnapani area, Sundargarh district, Odisha, India. Using structured household survey data, we employed two econometric models: an ordered logistic regression to assess community perception and a Tobit regression to estimate censored WTP values. Both models incorporated frequency weights derived from respondents' stated willingness to contribute labour days to restoration activities. The results show that gender, age, education, family size, occupation-based ecological dependence, and restoration income significantly affect both the perceived importance of restoration and the financial willingness to contribute. The findings provide policy-relevant insights for designing inclusive, participatory, and livelihood-linked ecological restoration strategies in forest-fringe and post-extraction landscapes.

Abstract No:125

Restoring Paddy Ecosystems and Livelihoods through Resilient SRI Practices: Performance, Gender, and Governance in Odisha, India

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Abstract: Rice is increasingly vulnerable to climatic aberrations that accelerate land degradation and threaten rural livelihoods. The System of Rice Intensification (SRI) aims to enhance yield, reduce chemical dependency, and improve soil and water health. This study, based on farm-level survey in Odisha, examined adoption dynamics, performance, and sustainability outcomes. Despite a decline in the number of SRI users, the area under SRI cultivation expanded, indicating perceived agronomic and ecological benefits. During the severe drought year, SRI plots outperformed conventional rice fields, while significantly reducing chemical uses. A composite sustainability index revealed that SRI adopters achieved higher net returns and greater resource-use efficiency. Probit regression identified institutional and governance factors as key drivers of adoption, while land topography, irrigation constraints, and labour scarcity hindered uptake. Gender analysis showed that SRI reduces traditional female labour demand, particularly in transplanting and weeding, but also presents opportunities for inclusive skill development among rural women.

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