7th India Land and Development Conference
Book of Abstracts and Session Notes
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ILDC 2023 AGENDA

DAY 1: 1st November, 2023

09:00-10:15
State Stories on Land Reforms: Administrative Innovations and Emerging Challenges
Organised By: YUS (India)

10:30-11:45
Balancing Act: Promising Sustainable Land Use for India's Clean Energy Transition
Organised By: Foundation for Ecological Security

12:15-13:30
Digital Forums for Community Engagement
Organised By: Concern

13:30-14:45
Climate Change and Actions: Tenure Implications, especially the Regenerative Agriculture
Organised By: VLAM

14:45-16:00
Lunch Break

16:00-17:15
INAGURAL Plenary (Shanthiniketan Auditorium)

DAY 2: 2nd November, 2023 | Masterclass

09:00-10:15
WGLKO’s Journey for Women and Land
Organised By: WGLKO

10:30-11:45
Voices from the Ground
Organised By: Jen Sahas, Women’s Foundation & Landesa

12:15-13:30
Coastal land tenure and governance - Community access and livelihoods
Organised By: IUCN

13:30-14:45
ILDC2023 Keynote Plenary (Shanthiniketan Auditorium)

14:45-16:00
Lunch Break

17:15-18:15
Dr Hague Memorial Lecture (Shanthiniketan Auditorium)

DAY 3: 3rd November, 2023

09:00-10:15
Acrocity and Paradoxes of Urban Land Governance: Whither Inclusion?
Organised By: School of Habitat Studies, TISS

10:30-11:45
Homestead Land: Access, Equity, Governance and Legitimation
Organised By: FLAME University

12:15-13:30
Climate Action Investment and Customary Tenure Regimes of Northeast
Organised By: Land Black

13:30-14:45
Diversification of Land Records and Access to Finance
Organised By: Terai Economic Analysis Lab (TEAL)

14:45-16:00
Lunch Break

16:00-17:15
VADECIARY: ILDC Achievers’ Round Table (Shanthiniketan Auditorium)
ILDC 2023 Partners

ILDC 2023 Conference Overview

217 Participants Attended

5 COUNTRIES REPRESENTED

46 Sessions

69 Abstracts

Attendees
- Students
- Faculty Members
- Government
- INGO/Donor/UN/Bilateral/Multilateral Organisations
- NGOs
- Professionals
- Researchers
- Schools

Participation (%) - Thematic Areas

- Land Administration: 8
- Inclusive Growth: 15
- Global SDGs and State Reforms: 13
- Climate Change and Action: 13
- Land Governance: 13
- Legalities around Land: 7
- Coastal Land Tenure: 7
- Land Uses: 13
Chapter 1
Session Notes
1. **Leveraging digital tools and technology to improve resource governance**

As the overlapping crisis around climate change, biodiversity loss and resource degradation get increasingly complex and far-reaching, there is a need to explore new pathways in which natural resources are sustainably conserved and managed. The way resources such as forests, water, and natural habitats are conserved, can have a positive impact on ecosystem services, improve air and water quality and ensure livelihood security for rural communities. To grapple such critical issues, digital technology has started to play a critical role in the past few years. There is growing evidence on how these technologies can enable community participation, shape perceptions around conservation and strengthen engagement strategies at the human-environment interface. Further, technology has also taken a leading role in considering the rights of local communities and offers a plethora of possibilities to engage diverse groups of stakeholders, leverage place-based knowledge and reward community participation in activities which directly affect them.

For instance, civil society actors, and research organizations have already initiated efforts to equip communities with better information for community-led planning, monitoring, and decision-making, with technology acting as a boundary object that mediates between different cultures or communities. Mobile-based applications built to strengthen locally owned monitoring mechanisms don’t just acknowledge the role of local communities as stewards, but also elevate their contribution by embedding local visions, aspirations, goals, and needs in these processes. By leveraging an easy-to-
use interface, and sharing analysis is a simplified format, community-based tools analyze and transform data to create meaningful representations and drive evidence-based change from below.

In this session the panelists will explore various facets of this topic, from tools that enable community stewardship, to implementing effective monitoring through collective action and natural resource governance. Discussions will focus on the following questions:
How can digital tools affect change on the ground?
What is the role of community members and local knowledge in designing such tools?
How do we address the protocols around data sovereignty and ensure the advancement of CARE principles (collective benefit, authority to control, responsibility, ethics) in a way these tools function?

2. State’s Success Stories, Learning around Land Administrative Innovations and Emerging Issues

The idea will be to have a discussion amongst bureaucrats on their experience of land issues in the regions they have worked in, in any capacity. They can illuminate one or more aspects of some good practices implemented by them (or others) or lay out the emerging issues in land-related reforms identifying specific causes of these problems. Potential solutions and possible roadmap for land reforms is another aspect the Panelists can dwell upon. Since the audience will comprise of scholars and practitioners interested in land issues, informing them about issues that are faced by the bureaucracy routinely but have not yet penetrated the public policy and research lexicon (like Rurban challenge) will be particularly useful. There is much to learn from the experience of bureaucracy, and
therefore, if the Panelists can surface their stories of success and challenges, it will add greatly to the ongoing conversations. These stories can be state level of even District/Panchayat levels, but the main idea would be to draw some research inspiration from these.

3. Balancing Act: Promoting Sustainable Land Use for India's Clean Energy Transition

The global transition to renewable energy (RE) sources is a vital response to the urgent challenge of climate change. India has also set ambitious targets of generating 500 GW of electric power from RE sources by the year 2030. However, this vision is tethered to a colossal demand for land. Projections indicate that by 2050, India will require 50,000-75,000 km² for solar and 1,500-2,000 km² for direct wind infrastructure. Existing policy measures within the RE sector are designed to stimulate deployment, attract investments, and maximize value creation. For instance, solar and wind power generation are exempt from environmental clearances under the EIA Notification 2006. States have also been directed to create action plans, particularly concerning land acquisition, to help India reach its 2030 targets.

However, as these RE technologies are deployed at scale, rapid changes in land use can bring about unforeseen costs. India’s finite land resources face governance issues such as land misclassification, fragmentation, unclear titles, a lack of transparency in transactions, and insufficient recognition of customary tenure. This can intensify the challenges of the transition to renewables. For instance, areas that are ideal for solar radiation throughout the year often coincide with officially designated
'wastelands' that are deemed fit for diversion due to their inhospitable terrain and perceived low economic value. Paradoxically, these ‘wastelands’ are often used as common lands by rural communities, with around 70% of India’s open natural ecosystems overlapping with them. Misidentification of land can thus spawn environmental concerns, such as habitat fragmentation or disruption of bird migration patterns. Simultaneously, lack of engagement with affected communities may breed social conflicts, impacting the socio-economic fabric of the communities and the financial viability of projects.

Conversely, if managed with sensitivity, RE projects have the potential to make positive contributions to the regions where they are situated. They can stimulate employment opportunities in areas where livelihoods are precarious, while promoting economic stability by supporting farm-based livelihoods. Additionally, these projects frequently nurture collaboration among diverse stakeholders, including government agencies, panchayats, and private developers, and have the potential to create sustainable land management practices. Moreover, the technology itself enables decentralized energy production, empowering local communities to take control of their energy sources and reduce energy poverty.

For enduring success of RE initiatives, a balance must be struck between the need for swift action and comprehensive planning that considers the broader environmental, social, and economic implications. In this context, the panel will discuss and provide insights for policymakers, industry leaders, and civil society to address concerns around land governance for a more just transition. The outcome will include recommendations and best practices for integrating land considerations into RE policy and decision-making, promoting a more sustainable and harmonious coexistence of RE projects with other land uses and ecosystems.

Deliberations
• What are the key issues and on-ground challenges while siting RE projects in India?
• How do India’s diverse land tenure systems impact the RE transition? What strategies can be employed to effectively navigate the complexities?
• What approaches can foster meaningful engagement with local communities dependent on common lands, to ensure their participation in decision-making processes?
• What policies and regulatory frameworks are needed to support the responsible siting and deployment of RE projects? How can governments and regulatory bodies promote transparency and accountability within the RE sector?
• For a just transition, how can collaborations between the State, developers, investors and civil society organizations be strengthened?
• What lessons can be learned from global experiences in collaborative governance and stakeholder management in RE siting and development? Can they be adapted to the Indian context?
Online forums, platforms and portals have become increasingly popular in recent years, particularly around social and ecological issues. These platforms highlight a variety of transdisciplinary issues, and provide ideational spaces to share values, narratives, evidence, and stories. They assemble a diverse sample of communities-at-large and allow them to mutually consider a range of options that appeal directly to their core interests and find ways to propel that dialogue. Further, such online spaces aim to meaningfully engage with a diverse socio-economic and cultural constituency across generations. As we reimagine these digital spaces, it is also essential that they evolve while developing a community of relationships. Being open to all, without any barriers, such spaces nurture direct contact between communities, researchers, and practitioners.

This panel session on digital platforms will bring together individuals from research and practice around digital commons, platforms, networks, and communities to discuss how digital forums and platforms give impetus for conversations around natural resources (such as land, forests, water etc.), biodiversity, ecosystem services and stewardship practices. It will focus on the power of digital spaces to shape community engagement to catalyze bottom-up change and enable rural communities, practitioners, and researchers to learn from each other and collaborate effectively. Each panelist will share experiences around designing online spaces for facilitating extensive and vibrant conversations, and then engage in an open discussion.

Topic(s) for panel discussion
1. How do digital spaces expand possibilities for exchanging ideas on socio-ecological issues?

2. What are the strategies to facilitate conversations that promote exploration, curiosity, and scientific enquiry?

3. How to design spaces which are deeply inclusive, capable of promoting exchanges and generating encounters?

4. What are the challenges around digital privacy, inclusion, and access?

5. **Realization of Forest Governance and Livelihoods in the Tribal Region under CFR: Opportunities and Challenge**

FRA-2006 is the landmark legislation which aims for more democratic and decentralized forest governance through recognition of individual (IFR) and community forest right (CFR). However, the implementation of the act presents an altogether different story. Potential of the law and its provisions are still not known to majority of the tribal communities, CSOs and even implementing authorities. Officials who are responsible for informing communities about the act, are themselves ignorant about the details of the act and the processes to be followed. Forest Department is systematically & continuously obstructing implementation of the FRA, especially the CFR. It is often creating hurdles like restricting the scope of the CFR by reducing the area claimed by the communities and curtailing purview of the collective rights. In many states, the Forest Department is keeping protected areas out from the realm of CFR. Sometimes, conflicts within the community like individual encroachments and boundary disputes among villages are also a major impediment in the implementation of the CFR at
grassroots.

Post CFR scenario is equally grim. Gram Sabhas is not aware of their responsibilities to protect and manage the forest area over which collective rights have been conferred to them. In many places, we see that the Forest Department continues to undertake development activities in the CFR areas without consulting the concerned Gram Sabhas. This is against the spirit of the act.

Despite these challenges, many tribal communities/ Gram Sabhas with the support of CSOs have successfully worked out plans to protect, manage and sustain their CFR areas. In these villages, democratic and normative governance of forests has improved livelihood of the forest dwelling communities apart from restoration of forest eco systems. These experiences can help us in deeply understand ways of community-based governance of forest areas under the CFR.

6. Navigating Food and Land Use Transformation for a Healthier, Inclusive and Sustainable Future

This session proposal seeks to address the critical issue of food and land use transformation, focusing on the delicate balance between inclusion, health, and environmental sustainability. As the global population continues to grow, and the world faces increasing environmental challenges, it is imperative to reimagine and reshape our approach to food production and land use. This session will explore innovative strategies and actionable insights to achieve a sustainable and equitable transformation while promoting human well-being.

Session Objectives:
• Explore the interconnection between food and land use transformation, social inclusion, health, and economic costs of transition.

• Showcase case studies and practical solutions that highlight the benefits of a sustainable food and land use system.

• Discuss policies and frameworks that can help create an inclusive, healthy, and economically viable food and land use transformation pathway.

• Address the challenges and trade-offs that need to be considered in this transformation process.

7. Climate Change and Actions: Tenure Implications, Specially the Regenerative Agriculture

The interplay between climate change and land tenure, revealing how shifts in climate can prompt alterations in land usage and the corresponding tenure arrangements. The contemporary world is witnessing significant shifts and transitions in land use and tenures, particularly affecting marginalized communities. Despite this complexity, the broader tenure landscapes, encompassing informal arrangements, customary tenures, often remain overlooked within climate discussions. Amidst these changes, diversity remains the cornerstone of land-people relations in the Global South, where customary tenure, informality, and collective tenures persist despite formal reforms. However, the emerging imperative for regenerative agriculture to mitigate the climate change requires the critical needs of tenure lens, agricultural productivity, local livelihoods, and food security. If land
Tenure nexus is left unseen, this will inevitably cast repercussions on food security, livelihoods and climate. Hence, this concept note outlines a session to explore the intricate relationship and the nexus between external transition triggers (such as climate actions) and local diversity contexts in land for regenerative agriculture.

The following are the concept objectives.

1. To bring to the attention of policy holders and decision makers on the regenerative agriculture and how it can help us get to net zero food systems.

2. To raise awareness to the state and non-state actors, large scales land investors as well as small-scale farmers on the importance regenerative agriculture. It must be emphasized here that climate-smart and regenerative agriculture measures designed to put farmers at the center can improve crop yields and turn farmland and pastures into carbon sinks, reverse forest loss, optimize the use of nitrogen-based fertilizers and rethink global and local supply chains to be more sustainable, reducing waste.

3. To strengthen the relations between Land Tenure Security, Agricultural Productivity and explore the effects of Land Registration. This is taking into consideration that Land tenure security is key component of climate change mitigation measures at the same time is one of the factors that contributes to growth of agricultural productivity because it leads to investment, provides access to finance, and allows for land transfer.

4. To advocate the adoption of regenerative agriculture as a mitigation measure of climate change. This Mitigation measures will provide direct benefits to farmers and contribute to national food security, economic development, and trade to gain political support and investment.

This concept has the following outcomes.

1. Policy holders and decision makers clearly and understood the importance of moving towards the regenerative agriculture and how it can help us get to net zero food systems.

2. Increased financing the support towards regenerative agriculture.

3. Strengthened the relations between Land Tenure Security and Agricultural Productivity and explore the Effect of Land Registration.

4. Regenerative agriculture as a mitigation measure of climate change enhanced and adopted.

5. Strengthened mitigation measures that provide direct benefits to farmers and contribute to national food security, economic development, and trade to gain political support and investment.

6. Enhancing and securing climate resilient surface-water and groundwater reserves requires sound management, including restoration of degraded watersheds, with headwaters, grasslands, forests and wetlands prioritized as moderators of surface flow and groundwater replenishment.

7. Agricultural livelihoods and ecosystem resilience are improved with the design and implementation of climate-resilient watershed management projects and programmes.
8. Improved in land-use, including ecosystem restoration and regenerative agriculture, are financed through access to robust non-grant and grant investment.

9. Programme and policies towards for regenerative agricultural management is strengthened to enhance socio-ecological climate resilience through access to, better management of and understanding/knowledge derived from climate, hydrological, agro ecological and socio-economic data and information.

**DAY 2**

1. **Automatic Feature Extraction for visible cadastral boundaries extraction**

The SDG, goal 1, target 1.4 aims for security of tenure for all, especially for the poor and the vulnerable (UNDP, 2015). Seventy percent of the world’s population has no access to the formal land administration systems and hence their rights are not formally secured. Organization of proper land rights records can help solve several related problems. Cadasters are one of the important building blocks for creating a successful land administration system. Often, however, traditional methods for cadastral surveying and mapping prove lengthy and labor intensive, making it difficult to get updated information. Remote Sensing based methods that could provide cheap, fast, and effective solutions to speed up mapping boundaries can assist and thus, are actively being investigated. The main purpose of this Master Class is to showcase the use of feature extraction methods for extraction of visible cadastral boundaries using very high resolution (VHR) satellite imagery. The session will include presentations with examples and demonstration of different feature extraction methods applied to
various country contexts.

2. WGWLO’s Journey for Women and Land Rights

In our commitment to addressing the pressing issue of women’s land rights, we propose a session that brings together diverse perspectives and narratives. This session will showcase pivotal stakeholders, including Para Legal Workers (PLWs), a triumphant Women Farmer who has secured her land rights, and the dedicated team from the Working Group for Women and Land Ownership (WGWLO), known for their innovative strategies in advancing women’s access and control over land and related resources. Entitled “Women and Getting Her Land Rights,” this session aims to illuminate the multifaceted challenges women encounter on their journey to secure land rights. These obstacles encompass deeply entrenched societal norms, legal barriers stemming from restricted access to legal services, and the complexities of obtaining familial consent, which often hinder women’s efforts to assert their land rights. Furthermore, technical hurdles, such as a lack of understanding and access to land records, compound these challenges. At its core, this session will share the inspiring narrative of a woman farmer who has surmounted these formidable obstacles to secure her land rights, symbolizing the resilience and determination of women in the face of adversity. Additionally, the session will delve into the remarkable strategies employed by WGWLO to assist women in navigating these issues successfully. With over two decades of experience advocating for Women Land Rights (WLR), WGWLO has a rich history of addressing persistent challenges and continues to work tirelessly towards securing these rights. This session offers an exploration of the intricate web of challenges women confront when asserting their land rights, celebrates their stories of triumph, and provides...
valuable insights into the strategies championed by WGWLO to facilitate and streamline this process. With a vision of creating model villages where every woman holds clear entitlements to land, WGWLO aspires to empower communities where 80% of women possess undisputed land titles, and 40% actively engage in sustainable agriculture on their own land. Through its unwavering efforts, WGWLO seeks to extend this transformation to more communities, one model village at a time.

3. Local Democracy, Self-Governance, and Panchayati Raj

Three decades have passed since the constitutional amendments in 1992 led to the establishment of Panchayati Raj Institutions (PRIs) in India, marking a significant milestone in the country’s journey towards decentralized governance. The Panchayati Raj system, comprising Gram Panchayats, Panchayat Samitis and Zila Parishads, aims to bring governance closer to the people, empowering local communities to make decisions that directly affect their lives.

PRIs play a pivotal role in land governance, addressing land disputes, facilitating land distribution, and ensuring equitable access to land resources at the grassroots level. They are instrumental in protecting common natural resources and fostering community ownership through gram sabhas. They have made significant strides in facilitating local democracy, however challenges such as resource constraints, political interference, and capacity-building gaps have hindered their full potential in land governance.

This panel discussion aims to explore the future of PRIs with a particular emphasis on land governance. It seeks to strengthen local democracy, propose reforms, and devise strategies for enhanced grassroots stewardship. Experts, practitioners, and scholars will collaboratively evaluate the
performance of PRIs in land governance, emphasizing their achievements and addressing the areas that require improvement.

**Key Discussion Points:**

What are the key challenges PRIs face in land governance, and how can the challenges be addressed?

How can PRIs be further empowered to effectively manage land governance and strengthen local democracy?

How are provisions/schemes like MGNREGA and GPDP leveraged by the PRIs and CSOs for planning and implementation of restoration activities?

What reforms and strategies can be adopted to protect land rights and encourage sustainable land use at the grassroots level?

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4. **Optimising Sustainable Land Use for Fair, Just and Inclusive Urban Development**

The event organized by FLAME University aims to raise awareness about waste management and environmental conservation. It's crucial to address the growing concerns related to plastic waste and solid waste management in India. This session will serve as an opportunity for participants to gain a deeper understanding of waste management and environmental conservation and encourage them to take proactive steps in their daily lives to reduce their environmental footprint. The event will conclude with a discussion on the inefficiencies in the current waste management system. The Okhla Dumpsite will be highlighted, emphasizing the urgency of proper waste management. The event will explore alternative waste management models, such as the UN-acclaimed zero-waste Vengurla model. Participants will discuss coastal cities reclaiming land from the ocean for development. A reflection on the need for just, fair, inclusive, and open innovation in addressing waste management
and environmental challenges.

5. Voices from the Ground

This session is a collaborative round table discussion featuring a diverse array of dynamic organizations dedicated to advancing women’s land rights. The primary objective of this session is to amplify the voices of those working at the grassroots level and shed light on the significance of women’s land rights. This session seeks to facilitate a comprehensive understanding of the challenges and successes in the field of women’s land rights while promoting active engagement and knowledge-sharing among all participants. The session is structured into three parts, with active engagement of representatives from all participating organizations and the audience.

Part 1: Voices from Below

In this segment, representatives from each of the participating organizations (Please refer Annexure 2) who are field professionals will share insights from their experiences and their pivotal roles in driving change in women’s land rights at the grassroots level. In doing so, each of the member/representative shall briefly talk about their organization, their work profile including geographical location.

Immediately following these brief presentations by each member, they will present a concise video case story (2-3 minutes maximum) highlighting the transformative journeys of women while accessing, claiming, or owning land with the support/facilitation/guidance of the field professional. The narratives will underscore the direct and positive impacts on these women, their families, and their communities.

Each presenter through this video case story will showcase a unique theme on how secure land tenure for women can foster a sense of self-respect and dignity, enhance access to education for their children, improve livelihoods, reduce poverty, ensure food security, and contribute to environmental...
preservation.

Part 2: Thematic Discussion

This segment will revolve around theme-based questions posed to the field professionals. The questions will encompass various aspects of their work on Women’s Land Rights (WLR) initiatives. Topics to be discussed include:

- Challenges encountered while working on WLR initiatives
- Strategies to address social and cultural resistance in WLR efforts, particularly in handling the intersectionality of gender, caste, and socioeconomic factors
- Approaches to tackle reluctance in enforcing existing laws concerning women’s land rights
- Strategies employed to overcome coordination challenges among stakeholders
- Handling security issues encountered while working on women’s land rights and addressing resistance from powerful interests
- Real-world examples of innovative strategies and solutions implemented in the realm of women’s land rights

6. Balancing Competing Land Interests through Theories and Evidence-Based Practices

In India, like in many countries, there are several major challenges related to land use governance, competition for limited land resources, and the lack of scientific data. These challenges can have significant social, economic, and environmental implications. Some of the major challenges include:

- Land Tenure and Ownership Issues: Ambiguities and disputes regarding land ownership and tenure
can lead to conflicts and hinder effective land use governance. In many cases, unclear land titles make it difficult for individuals and communities to make sustainable investments in land. Inadequate and outdated land records and scientific data make it difficult to assess the status of land resources accurately. Without proper data, it is challenging to develop effective land use policies and strategies.

- **Land Fragmentation:** In India, land often gets fragmented into smaller parcels due to inheritance patterns. This fragmentation can make it challenging to implement efficient land-use practices and technologies, affecting agricultural productivity.

- **Competing Land Uses:** The competition for land resources is fierce, with various sectors such as agriculture, industry, infrastructure, and conservation vying for land. Balancing these competing interests while ensuring sustainability is a significant challenge.

- **Land Degradation and Environmental Concerns:** Land degradation, including soil erosion, salinization, and desertification, is a pressing issue in India. It affects agricultural productivity and contributes to rural poverty. Land-use decisions often neglect environmental considerations. This can lead to deforestation, habitat destruction, and ecological imbalances, affecting biodiversity and ecosystem services.

Addressing these challenges requires a comprehensive approach that includes land tenure reforms, improved land records, sustainable land-use planning, and better access to scientific data. It also necessitates collaboration among government agencies, communities, and stakeholders to develop and implement effective land use policies and practices that balance competing interests while promoting sustainability and equity.

In this session, we will present some evidence on competing uses of land for food security, livestock production and biodiversity conservation.

### 7. Pastoralism and Land-Social Relations
In recent years, a growing number of organizations have actively engaged in addressing women’s access to and control over diverse types of land, including forests, agriculture, homesteads, and communal areas. These organizations working across different States in India collaborate with a diverse range of women, such as single, married, elderly women, and those from scheduled castes and tribes. While each demographic context brings forth its fair share of obstacles and opportunities, the organizations also gain valuable insights along the way. This semi-structured session aims to bring together the organizations working on women and land, fostering connections, and exploring potential cooperation and support. By collectively navigating the complex and often adventurous terrain at the intersection of women and land, this collaboration can yield more effective solutions for ensuring equitable land access for women.

8. Coming Together for Women and Land (Round Table)

In recent years, a growing number of organizations have actively engaged in addressing women’s access to and control over diverse types of land, including forests, agriculture, homesteads, and communal areas. These organizations working across different States in India collaborate with a diverse range of women, such as single, married, elderly women, and those from scheduled castes and tribes. While each demographic context brings forth its fair share of obstacles and opportunities, the organizations also gain valuable insights along the way. This semi-structured session aims to bring together the organizations working on women and land, fostering connections, and exploring potential cooperation and support. By collectively navigating the complex and often adventurous
terrain at the intersection of women and land, this collaboration can yield more effective solutions for ensuring equitable land access for women.

9. Scaling up FRA Implementation: Possibilities and Challenges

The Forest Rights Act has, at the minimum, the potential to secure rights and livelihoods of at least 20 crore Adivasis and other traditional forest dwellers over 40 million ha (50% of India’s forest land) covering 177,000 villages. However, till now individual and community rights have been recognized in over 10-13% of the minimum potential area and the recognition of Community Forest Resource rights is merely 3 to 5% of the actual potential. The implementation challenges include capacity building, institutional and budgetary support, procedural hurdles, conflicting laws, and others.

Scaling up the implementation of FRA, particularly the recognition of CFR rights has emerged as a key challenge. Civil society organizations, government, and support agencies have been exploring possible strategies to scale up FRA implementation and there are a few initiatives for scaling up FRA implementation which offer important learning and insights such as the initiatives in Maharashtra, Chhattisgarh, and Odisha.

The session is proposed to have a discussion on the experiences and initiatives for Scaling up FRA implementation in the states, the learning and insights from ongoing initiatives, the strategies and actions that are required, and on the challenges/gap areas in upscaling initiatives. This discussion will be with a panel sharing experiences and initiatives and a group of participants engaged in FRA-CFR implementation in the states.
10. Empowering Communities Through the FRA: Cadasta & Partners’ Efforts to Document and Secure Community Forests in India

Engaging in a discussion that sheds light on the collaborative efforts of Cadasta and its partners to secure individual and community forests under the Indian Forest Rights Act (FRA). This panel will delve into the technical approaches, challenges, and successes in empowering local communities to map, document, and claim their forest rights, protect vital ecosystems, safeguard cultural and spiritual sites, and promote sustainable resource management.

Key Discussion Points:

1. Understanding the FRA: What is the FRA, and how does it recognize the rights of individuals and communities over customary and community forests?

2. Technological Solutions to Documenting Forests: How does technology, such as mapping tools and land documentation, aid in demarcating and registering community forest lands? What are the specific benefits of technology in this context?

3. Partnerships for Impact: What critical role do partners, including local NGOs, government agencies, and grassroots organizations, play in supporting FRA provisions and community-led forest management? How does collaboration with Cadasta benefit these partners in their work?

4. Challenges and Solutions: Can you share real-world case studies illustrating how FRA implementation and technology tools have empowered communities to secure their forest rights,
enhance livelihoods, and conserve biodiversity? How has technology been a catalyst for community empowerment?

5. Sustainable Forest Management: How does the recognition of customary and community forests contribute to sustainable forest management, climate change mitigation, and rural development? What are the long-term benefits of securing these vital ecosystems for both communities and the environment?

6. Indigenous Knowledge and Cultural Preservation: How do partnerships with indigenous communities contribute to the preservation of traditional knowledge and cultural heritage within forest management? Can technology play in preserving and sharing this knowledge?

7. Gender Equity and Inclusivity: In what ways are gender equity and inclusivity promoted through FRA implementation, and how do partners address gender-related challenges in forest management?

8. Monitoring and Evaluation: How is technology used for monitoring and evaluating the impact of FRA implementation and community-led forest management initiatives? What specific tools or approaches are employed?

11. Customary Tenure Regime and Peace Building

Manipur is divided into valley and hilly areas. Settlement and Land-owning system differs from valley to hilly regions. In valley areas most of the lands are individually owned and they have Pata (govt. Issued land document) but in the hilly region’s lands are owned by the landowners also differ from Naga to Kuki. Landownership in Naga society is governed by village head that authorize and give permission for settlement in the village in a particular plot. They practice customary land tenure
system which differs from village to village also have lands owned by clan (clan land), community land. In Kuki society, the village Chief has complete authority over landownership and village affairs. He is the sole owner of the land, distributes the land to the villagers and has the power to expel any villagers from the village. Comparatively, density of the population is increasing thus, accessibility and availability of land in tribal villages have become limited. Access to land varies among the tribal communities under the prevailing customary tenure regimes. The land tenure systems vary across communities, clans and many times among villages deciding access to land which is critical for livelihoods as well as resilience of hill ecosystems. Land issue in Manipur is not different from other parts of the country. As land itself is a vast subject, land issue is one of the crucial issues facing in the society between one community to another, between neighboring villages and within the village. Due to improper or no demarcation of the land and no documentation conflicts arises among the tribal communities residing in the hills of Manipur. To enhance the resilience of hill ecosystems, settled agriculture and farming is required to be encouraged along with forest conservation. Overlapping land tenure is the rule in the prevailing customary tenure regimes, with land relations spatially and temporally overlapping vis-à-vis uses. Customary tenure regimes also lack provisions for equal land rights for women. Therefore, considering all the above issues RNBA over last years have brought in substantive changes around perceptions and practices of land tenure in many villages in Manipur. Entry points among customary authorities now have been carved around scope of improved tenure security around long-term land uses (viz. orchards, terraces etc.) through individual and group rights. Willingness to extend joint rights to spouses and exclusive rights to single women have been also agreed to by many village authorities, so as the provision of group rights to women SHG. Following mapping of such land tenures along with homesteads, authorities and households are now willing to explore a system of village registry with provision of land tenure certificates as evidence of documented tenure to help access public services entitlements. The initiatives begun around documentation of customary tenure also need to continue particularly in an interdisciplinary and action research mode to bring out right and adaptive reforms around women land rights, overlapping tenure documentation and building village registry. The plots are mapped by seeking the consent (Free and Prior Consent) from the villagers, landowners, and Village authorities. Village authorities, Youth, women, holder, and neighbors participated during mapping of plots/parcels to ensure that no conflict arises due to the mapping. Trainings on mapping were provided for the Youths in the village for assisting the Field data collectors (FDC) while collecting information and maps. This ensures participation of community in mapping process. During such engagements, it is now learnt that interfacing with church leaders is also equally important as that with clan leaders, village authorities, as churches over years, have been playing critical role in mapping and recording land uses and tenures, particularly during periodic celebrations. Moreover, they are found to have strategic reformist influence over political power structure and with their receptivity to change, can play a catalytic role
to reform land tenure. RNBA is also critically engage in strategic advocacy by building and strengthening state level networks and aiming activities around evidence building and engaging with state, financial institutions and connecting to national and international platforms. Therefore, RNBA diligently working on putting more efforts to add values in terms of process in improving land rights of the community.

12. Land Tenure and Urban Commons: Status, Challenges & Opportunities

In independent India, the urban is a legacy project of colonization and postcolonial experiments. To this end, land and water ecologies have undergone transformations under different planning regimes that have come to govern society and ecology. This panel discussion serves as an expansive forum to explore the tenure legacies of urban commons and the possibilities they hold to reimagine urban futures in India. Today, urban commons emerge as a vital nexus for advocacy, practice, research, and policy. Such a layered mandate encourages us to focus on historical contexts and contemporary challenges together as they secure, shape, and occupy our imagination and spatiality. At its essence, this conversation embodies a collective effort to unravel the complexities of urban commons, exploring their profound intersections with issues such as land tenure, rights paradigms, aesthetics, and relationship between human and non-human life. Through this panel, we can focus 1.) towards a legal-policy-practice framework of urban commons: global south perspectives, 2.) mitigation and adaptation in surface air temperature: implications for urban heat islands in global south, 3.) more-than-human urbanism and
nature: urban transformations in global south 4.) the nexus of food, urbanization, and open spaces, and 5.) the limits of urban commons. Crucial to our discussions is the assertion of diverse rights and imaginations within urban commons. Further, conversations on urban commons should transcend human life, delving into the coexistence of urban commons and non-human life in Indian cities. Urban commons present a possibility for such a future.

In cities, the focus should be on a conscious engagement with colonial and postcolonial legacies and being sensitive towards local trajectories of place and time in our approaches. Such engagement is possible by giving time to communities and ensuring the process is reflective of the cultural imaginations of people who see themselves in the projects as active and primary. While there is a call for setting the “core criteria of citizenship and civility” to address the cause of ecological justice in the city (Baviskar, 2021, p. 163), changes in caste form the central nature of this civility (Waghmore, 2019). Therefore, it is critical to discuss the commodification of commons in cities by engaging with notions of caste and civility and changes over time and space. In addition, citizenship has been a major area of interest in scholarship on democratic politics and public space. Therefore, claim-making, required for securing citizenship (Baviskar, 2021), is discussed by several authors across caste and class lines in India. The panel critically engages on the growing literature on the water-land ecologies in urban areas, open spaces, and recreation-leisure activities in urban areas to understand commons and their urban underpinning. The growth of city centers has led to their integration into the global market economy, flow of capital and dependencies between cities and regions. This urban restructuring is a visible feature of the Global South and Global North, but these transformations make the cities in the Global South more vulnerable to exclusion and privatization at different levels.

In summary, such an agenda would require engagement not just from an interdisciplinary perspective on urban commons but, at the same time, require practice and policy to work in congruence. This leaves a large amount of work that needs to be done, not just by academic institutes in India, but also by donor agencies and practitioners to work with governments to map tenurial practices related to urban commons. What does a future of urban commons look for India beyond the colonial and postcolonial legacies is an important intellectual project that requires understanding 1.) tipping points in urban commons, 2.) LULC data over time and long-term engagement with communities to document practices and relations, 3.) critically engage with planning and state formation and 4.) legal and cultural dimensions. Such as understanding will be a timely reflective exercise Indian cities shall engage to plan, keeping urban commons as primary to its future.
1. Anamolies and Paradoxes of Urban Land Governance: Whither Inclusion?

One of the most interesting paradoxes in Indian cities is that while cities are the source of innovations in digital governance systems; their own data bases and governance mechanisms, particularly in relation to land are full of several anomalies and paradoxes. These anomalies and paradoxes have multiple dimensions: those linked to the status of property titles, record keeping, the multiplicity of laws governing land, the practices linked to land allocations and distribution, the management of public land and the role of informal occupancy and claim making.

This curated panel bases itself in this anomalous context and seeks to engage with the question of inclusion and access to cities. Conventionally, it is the route of informal occupancy that has paved the way for vulnerable groups to stake some claims to the city. Benjamin (2008) argues that this in fact is perhaps a radical mode of practice. The question is however whether such anomalies continue to work in a similar manner in the present day where there are increasing trends of judicial activism, prioritization to aesthetics and emphasis on formal housing as a way to include as opposed to land based programmes. Is the way forward for the vulnerable then in improving land governance mechanisms, making them democratic and transparent?

The panelists in this session locate themselves in a multiplicity of perspectives and experiences from varying city contexts in the country and will bring their rich engagement and research experiences to respond to the above questions.
2. Strengthening Farm-Based Livelihoods for Rural Youth

India is currently undergoing a significant transformation through rapid urbanization, agricultural intensification, and industrial expansion. Despite advancements driven by modernization and technology that are reshaping traditional ways of life, this transition is struggling to absorb the growing number of young job seekers. Consequently, India’s unemployment rate within the 15-29 age bracket stands at 12.5%, significantly higher than the national average of 4.1%, indicating the immense strain on its demographic dividend. A considerable portion of India resides in rural areas where agriculture remains a vital source of income. Although government initiatives to enhance employability have been commendable, they have primarily focused on skill development in non-farm sectors. This approach often overlooks the potential of farm-based livelihoods to provide sustainable income and social stability. However, engaging in such livelihoods is also riddled with challenges, as evidenced by the declining rates of youth participation. In a country where land is typically owned by older generations or divided into fragmented plots, acquiring land can be a formidable challenge. Moreover, rural youth frequently find themselves excluded from institutions that provide access to financial services, including credit and insurance, making it difficult for them to secure the necessary capital for agricultural ventures. The unpredictability of weather patterns due to climate change further complicates their path. Limited resources, opportunities, and influence over policies governing their lives often propel or ‘push’ many youths to migrate to urban settings. Simultaneously, the allure of cities – where opportunities for white-collar jobs and a modern, consumer-driven lifestyle beckon – serves as a prominent ‘pull’ factor for the youth to leave their homes. This interplay of factors is shaping the aspirations and choices of young people in India, which further contributes to the decline
in the attractiveness of farming as a career choice.

Recognizing the ILDC’s impact and reach, we are eager to organize a panel discussion focusing on “Strengthening Farm-Based Livelihoods for Rural Youth.” Experts, practitioners, and researchers can convene to shed light on innovative strategies, best practices, and policy interventions for the multifaceted challenges highlighted above. This discussion would also benefit from the insights of accomplished youth who possess experience in this domain. The panelists can exchange ideas on themes such as:

❖ Social Enterprises for Youth in Non-Violent Local Economies: Youth engagement in social enterprises can empower them to drive change through innovative, community-driven initiatives. Rooted in non-violent local economies and grassroots livelihood initiatives, these ventures exemplify the potential of youth-led endeavors to transform rural landscapes. Strengthening the value chain of these grassroots initiatives is important to support livelihoods as well as to contribute significantly to the socio-cultural fabric of rural communities.

❖ Policy Perspectives on Youth and Livelihood: Policies play a crucial role in shaping the trajectory of youth involvement in the agrarian sector. By advocating for supportive policies, an enabling environment can be created for the youth to foster entrepreneurship, skill development, and access to resources. Moreover, this aligns with the growing market demand for climate-resilient livelihood models, where young farmers play a vital role in adopting sustainable agricultural practices.

❖ Customary Knowledge and Technology: Integrating customary knowledge and technology further enriches this landscape. By leveraging traditional wisdom in tandem with modern information and communication technology, youth-led farm-based livelihoods become more robust and adaptable. This synergy not only preserves cultural heritage but also enhances the efficiency and effectiveness of agricultural practices. Through this, we intend to examine strategies to make land-based livelihoods more appealing and accessible to young people, considering the evolving economic landscape, environmental imperatives, and the need for inclusive and sustainable development. To spark up a discussion, some leading questions that can be explored during the session are:

What are the key challenges rural youth face in securing stable and sustainable livelihoods? What opportunities exist to address these challenges? ● Are there examples of successful youth-led land-based livelihood initiatives? What lessons can be drawn from these experiences? ● What innovative strategies can enhance young people’s access to land and financial resources? How can land-based livelihood options be better integrated into policies and government initiatives? ● How can technology and digital solutions be leveraged to enhance the productivity and profitability of farm-based livelihoods for youth? ● How can collaboration between governments, the private sector, civil society, youth organizations, and other stakeholders be encouraged to drive meaningful change? ● What possibilities can be seen at the policy level from the perspective of youth and climate-resilient
Community efforts, enabling legislation and supportive role of NGOs has led to many village communities obtaining better protection of their tenurial rights over common lands and have been able to restore several lands across the country. The improved ecological health and strong community stewardship helps communities to be resilient in the climate crisis and rising economic inequalities. The upcoming opportunity in carbon markets and other PES markets can help the community stewards in ensuring sustenance of the efforts.

However, several barriers restrict the agency of the communities like lack of clear tenure on commons, low recognition of community institutions and local governance mechanisms by the government as well as markets. There are barriers to knowledge too. Indigenous knowledge systems about conservation and sustainable land use are not recognized by the markets or by the Governments. There is more reliance on carbon-centric and third party-based assessments for carbon which are not fully understood by communities. Some ecosystem services, including carbon sequestration, are not well understood by communities. There is also a lack of equitable platforms which can provide a level playing field for Community stewards for forests and Civil society vis a vis Markets and Government agencies. The very high costs of project registration and verification in carbon markets also make them dependent on special expertise. This creates big entry barriers for communities and impacts transparency due to the increased dependence upon intermediaries (like project developers, facilitating NGOs) in the market.
In view of these barriers, there is a need for running a collaborative process of learning towards PES markets. Such a process would bring challenges and opportunities for communities in PES markets. It will also support efforts to boost appreciation by markets and government agencies of indigenous knowledge systems and their incorporation in ecosystem service payment programmes. It will also help build a clear understanding of challenges, suggest design improvements and larger responses to existing programs.

Learning Agenda for the round table:
During the round table, we will try to look for answers to the following questions:

1. Community Stewardship for natural resources – How can we understand community stewardship for natural resources especially in the context of ecosystem service payment mechanisms? What are the challenges faced by women and the marginalized in decision making, control and use of resources and income at the household and community level in the context of PES markets? What are the most effective ways to improve the collective and individual agency of community stewards at scale? What are the enabling factors?

2. Science and methods – What are the methodological challenges that put stewardship for resources on the backfoot, when it comes to leveraging PES schemes? What would be a community-friendly methodology to measure different ecosystem carbon sequestration (Carbon stocks)? Can indigenous knowledge offer some solutions for methodological problems?

3. Markets – Are there any PES schemes which are working well for people? To what extent are innovations to generate economic opportunity also reinforcing efforts to secure community tenure and restore degraded lands? And vice-versa? How can these linkages be strengthened? What are the community-based payment for ecosystem services mechanisms in different contexts and how is this work contributing to the long-term conservation of resources?

4. Civil society and PES markets – What are the challenges before civil society in rising PES markets? What should be the role of civil society in PES markets? How would Stewardship be improved in the entire ecosystem of PES markets that includes all actors, government, markets, community, NGOs and others?
India is the world’s most populous country, seventh largest in area, with the fifth largest economy, third highest carbon emissions and 24.62% of land under forest cover. India’s continental size, enormous diversity, high population density, civilizational pedigree, colonial history, and high biodiversity have resulted in a complex, multilayered land governance regime consisting of “communal, imperial, feudal, colonial and modern systems, gradually moving towards individualization and conclusive titling.”

Current land tenure in India consists of complex “mosaics of customary tenure and community ownership in tribal and hilly areas and dwindling rural common lands amidst the expansion of privatized spaces in urban and industrial areas converted from once predominant forest and agricultural landscapes.” How India manages to unlock the full potential of its land while safeguarding its environment and ensuring social justice will carry important lessons for students of land governance in India and the world.

Technology-focused initiatives have gained increasing prominence in India’s attempts at comprehensive land reform. A case in point is India’s massive, ongoing digitization of land records through the Digital India Land Records Modernization Programme (DILRMP) which aims to develop an “integrated system which will...provide real-time information on land, optimize use of land resources, assist in policy and planning, reduce land disputes, check fraudulent transactions, obviate the need for physical visits to Revenue/Registration offices and enable sharing of information with various organizations/agencies.” The objectives are sought to be achieved through the “completion of digitization of Record of Rights (RoRs) and Cadastral Maps and the integration of the two” and the
“computerization of Sub-Registrar Offices (SRO’s) and the integration of SRO’s and Revenue Offices by March 2024.”

Another salient example is the SWAMITVA scheme which aims to achieve “clear ownership of property in rural inhabited (‘Abadi’) areas, by mapping of land parcels using drone technology and providing ‘Record of Rights’ to village household owners with issuance of legal ownership cards (Property cards/Title deeds) to the property owners.”

This massive wave of digitization and use of technology such as drones has complex implications for land governance in India. How has the use of technology-based solutions at speed and at scale impacted land tenure in India? Has it reduced land disputes, facilitated the optimal use of land resources, prevented fraudulent transactions, fostered seamless information-sharing, and enabled the push towards conclusive titling? Has it managed to do all the while ensuring social justice for economically and socially marginalized communities? Has the process of technology design and development been inclusive, and citizen focused and if yes, in what specific manner? How have gender, participation and trust-related aspects been integrated into the design, development, and deployment process? The session on Land and Technology will aim to encourage an in-depth discussion on the multifarious implications of the technologization of land governance in India.

5. Community-Based Ecological Restoration: Potentials And Challenges In Maharashtra

India is home to over 17% of the world’s population on just 2.4% of the world’s land (UN DESA 2023, FAO nd). Forest landscapes, interspersed with other land-uses such as grasslands, plantations, agriculture etc., provides habitat to nearly 8% of the global biodiversity (MoEFCC 2019). These mosaic
landscapes also support nearly 700 million people with key provisioning services in the form of minor forest produce, fuelwood, wood for construction, fodder etc. (MoEFCC 2015). Despite their importance, these critical forests, agricultural landscapes, and other natural ecosystems in India are facing threats of degradation, fragmentation, declining productivity, biodiversity loss, and soil erosion. Climate change is exacerbating the vulnerabilities of dependent communities, which also include the majority of the 85% of the small and marginal land holders (< 2ha) (MoEFCC 2015, MoAFW 2015).

To protect the livelihoods of vulnerable communities and to make production systems resilient, India needs integrated management of its natural resources. Integrated management also helps in maintaining the health of natural ecosystems. To be effective, any solution intending to address the challenge of land degradation must involve local voices, especially of women, tenant farmers and other marginalized sections of society. The UN Declaration on Rights of Indigenous People provides for the right of self-determination to indigenous people for the development/use of their land or territories and other resources (Daes 2008; UN 2008). Recognition of communities’ rights over forest resources has been recognised as one of the tools to fight climate change (Stevens et al 2014) and has proven to be effective in conflict avoidance (Reyes 2018) by ensuring benefit sharing. A step in this direction, i.e., the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, has empowered forest dwelling communities in India to take management decisions over their community forest resource (CFR) rights (MoTA 2014). Evidence suggests that with recognition of resource use rights, communities aggregate to capitalize the power of collective bargaining and better manage natural resources (Pathak, 2022).

Against this background and aligning with the theme of ILDC 2023, the session aims:

- to discuss conditions necessary for evolution of a successful community-based institution
- to discuss experience of involving communities for managing natural resources.
- to highlight the role of community-based organizations in addressing inclusion, resource access and benefit sharing concerns.
- to learn approaches for community mobilization for making agricultural systems more productive, having naturally regenerating forests, and deriving associated co-benefits
- to discuss challenges faced by these institutions
- to discuss the efforts needed to strengthen the community-based institutions to realize the ecological restoration potential.

6. Climate Action Investment and Customary Tenure Regime of Northeast
Over centuries, indigenous communities have developed interdependent systems of agriculture and forestry that are uniquely suited to their ecological and cultural requirements. Also called Tribal, these communities depend on land/forest for food, medicine, construction materials and even source of income, while at the same time, the ecosystem is sustainably managed. In fact, forest is life for them. One of the major findings across the globe is that there is positive correlation between indigenous people and density of forest cover. Culturally, the Tribal people are extremely conscious and aware of the natural resources available around them be it for food intake, medicine, building houses and more. There are undocumented indigenous knowledge systems about the forest – flora and fauna and its uses– which are part of the oral tradition and gradually forgotten as more and more youths are becoming distant from the forests and land to find employment and income opportunities elsewhere. Additionally, with deepening poverty and precarity, intra-village conflicts and tensions have risen based on land and its use. Therefore, RNBA has considered maintaining, conservation and restoring forest lands to support and accelerate the function of wide range of ecological services that forests provide and come up with “Forest Restoration with Locally Important Species (FORLIS) to promote rural resurgence where community and local economy thrive by restoring locally important species while keeping the communities native forest intact.

7. How improved land data availability can streamline access to agricultural credit for smallholder farmers?
Plurality of different forms of tenure, widespread tenancy across the country and lack of clear titles by many rural households is an accepted reality in India. It is estimated that anywhere between 25% to 40% of farmers are tenants in the country. These farmers often operate on modest plots of land and face numerous challenges, one of the most significant being limited access to agricultural credit. The primary factor impeding their ability to secure credit is the lack of comprehensive and accurate land data. Many smallholder farmers in India lack proper land documentation, making it difficult for financial institutions to assess the value and ownership of the land. Without this essential information, the farmers are deemed risky borrowers, which leads to loan rejections or high-interest rates. In many cases, land ownership in rural India is not officially recorded. This leads to disputes, unclear titles, and difficulties in proving land ownership, further complicating the process of securing credit. Insufficient credit also hampers their ability to invest in modern equipment, quality seeds, and other inputs that could significantly boost their agricultural productivity.

Ensuring sustainable agricultural practices is crucial for India’s food security and environmental well-being. Smallholder farmers, with better access to credit, could invest in sustainable farming methods, such as crop diversification and organic farming. The digital revolution has opened new opportunities for land data management and credit assessment. However, the implementation of such technologies is still a challenge, especially in remote rural areas. Therefore, improved land data availability is not just a solution; it’s a fundamental requirement for addressing these challenges and creating a more equitable and prosperous agricultural sector in India.

Through this session we aim to bring together private sector companies, nonprofits and experts working in the field of land data to discuss the pathways and challenges in consolidating and utilizing different forms of land-based data for better credit assessment. Apart from credit assessment we also
want to explore how addressing land tenure data gaps can help us address issues of marginalization of women through better tenure info, easier access to land based investments and much more. Ultimately, the session will work towards developing a roadmap for addressing this issue. It will foster discussions on practical steps, policies, and actions that can be taken to enhance land data availability, leading to improved credit access and, by extension, the empowerment of smallholder farmers in India.

8. Digitisation of Land Records and Access to Finance

Land and property record digitization efforts in India have spanned almost four decades now. Have they allowed financial institutions to better lend against property collateral thereby expanding access to finance? The goal of this roundtable is to bring lending practitioners together with government officials and experts to discuss what has worked and prospects for future progress. The discussion will focus specifically on:

- Banking perspective on the effectiveness of digitization efforts across states
- Key pending areas of reforms
- Major bottlenecks and scope for change
- Best practices in ensuring public access to information with adequate safeguards for individual privacy

One reason for the under-utilization of real estate collateral in India has been attributed to the information asymmetries around title and disputes. With limited land records and long-drawn
litigation, lenders avoid properties where it is difficult to ascertain ownership or discover encumbrances. There has been a long ongoing effort to bring about greater digitization of land records across the country by both the center and different state governments, but significant challenges remain. This roundtable discussion aims to bring together a panel of senior government officials, practitioners from the financial sector, and independent experts to help identify the extent to which limited land data inhibits financial inclusion and identify an action plan to resolve the bottlenecks.

9. Land Law and Technology

Technology is viewed as a catalyst for transformation in various aspects of human life, society and economy. In the field of land, technology has been used to improve governance efficiency, access to information, delineation of rights and the transfer of property. Some key areas where law and technology converge include:

- Blockchain and land records
- Smart contracting
- Digital signatures and authentication
- Property due diligence
- Online markets
- GIS for zoning, land use planning and property rights delineation
- Property tax assessments
Dispute resolution

While using technology may bring a variety of benefits, it cannot solve deeper problems that require changes in the law, procedures, and the institutional structure. Further, the use of technology requires that we create a legal environment that fosters its use and abates misuse. For instance, the use of technology also has implications for privacy, data management and security, which will not be possible without the right frameworks and implementational capacity. There is a need for deep thinking that is rooted to examine some key issues in this field.

In this session, we will explore some key issues on land law and technology in the myriad contexts of developing countries including communal land tenures, sustainability, and women’s land rights. Key themes we will explore in the backdrop of the technological advances in land highlighted above include:

(i) Are current land rights and administration systems compatible with the use of technology in the field of land?

(ii) What should be the role of the legal framework in fostering the use of technology in the field of land?

(iii) How can we balance this with protection to society and inclusivity?

(iv) How can we make land legislation more responsive to technology use?
The session addresses just, and fair compensation associated with infrastructure development. The focus is how to minimize impoverishment risks for extractive industries (mining), hydropower development, transmission line, and other infrastructure projects that need to be built in large numbers as a source of alternative energy to achieve Net Zero and Just Transition. This area has a poor track record in restoring livelihoods and living standards of project affected people, especially when initiated in the developing world. The session will discuss challenges in determining what may, at minimum, ensure the principle of equivalence for involuntary resettlement of Indigenous communities and compulsory acquisition of informal/customary lands, given the unique challenges they present due to their complex dependencies on lands as a source of livelihoods, identify, social fabrics and security. The limitation of compensation for physical assets in restoring livelihoods, and the question of non-physical/market values that are not captured in the “market value” but are important to the affected local communities, will be highlighted, and alternative approaches to better recognize them will be explored. Concrete examples from Asia, Africa and Latin America which sought to go beyond the reconstruction of physical assets to restore livelihoods based on participatory approaches, challenges they face including due to limitations in prevailing legal and regulatory frameworks, and potentials for improvements will be sought. The session will limit the presentation to three so sufficient time can be allocated for discussion among practitioners to share experiences and explore ways to improve the practice on the ground.
Session Summary: The session addresses the challenge of involuntary resettlement of Indigenous communities, a critical risk to achieve sustainable development, Net Zero and Just Transition which needs construction of multiple infrastructural developments, that often require large-scale displacement of vulnerable local communities.

11. How Media Covers Land in Changing Climate

Land and its resources are heavily contested. Businesses, communities, and the state often have conflicting needs, aspirations and positions about the use and control of natural resources. Climate Change complicates these contests. Marginalized communities that depend on land for livelihood are also most vulnerable to the climate-change impacts.

How well does the media play its role of a watchdog while covering these contests? How do journalists connect the dots to show how citizens’ lives are shaped by India’s land, its political economy and climate change? Seasoned reporters from the global, national, and regional media and communicators who work at the intersection of science and policies come together to discuss.

12. Mainstreaming Sustainable & Inclusive Urbanisation: Exploring Tactical Urbanism and the future of Land Use in Indian Metropolis
Indian cities are confronting intensive challenges of bare livability. As metropolitan region expansion reaches its stretch, the essence of vibrant urban living is overshadowed by the looming challenges of congestion, lack of green spaces, insufficient drainage infrastructure and unchecked construction activities. The proliferation of built up environments juxtaposed with underutilized open public spaces under the prerogative of Land Use & Zoning leading urban areas being particularly susceptible to heat island effect thereby deteriorating living conditions & undermining the overall habitable spaces in these urban centers. According to one news report, only 1.24 sqm of open space per person is available to every Mumbaikar. Almost 40 percent of Mumbai’s population lives in densely populated slums, as per the 2011 census. As per one estimate, the figure inflated up to 55 percent of the population living in informal settlements and is routinely excluded from urban planning. The Sustainable Development Report 2022 ranks India 121 out of 163 nations and gives an SDG Index score of 60.3 assessing the performance
based on prescribed indicators for an ease of livability. Among the 17 Sustainable Development Goals (SDGs) endorsed by the United Nations, SDG 11 is dedicated to focus on cities, aiming to “make cities and human settlements inclusive, safe, resilient and sustainable” with its 10 targets. Of the ten targets, i) Inclusive and sustainable urbanisation; ii) Provide access to safe and inclusive green spaces; iii) Strong national and regional development planning; are three main targets where the situation is worsening and of pressing concern due to deteriorating conditions.

In the face of these escalating challenges, there is a dire need for innovative, adaptable, and sustainable solutions. Addressing these urban challenges requires not just administrative will but also community participation. The haphazard urbanisation not only hampers the daily life of citizens but also impacts the economic vitality of cities.

Proposed Solution

An adaptable solution to deal within this framework is the effective utilisation of spaces that are currently underused within existing city limits. The spatial planning or land use & zoning which divides the city into differently coloured zones for enabling different activities, like the yellow for residential zones, red for business districts in the development plan influences the development potential of different lands. The approach of Tactical Urbanism emerges as a beacon of hope in this context. Tactical Urbanism is a pivotal strategy to deal with the manifestation of these escalating challenges of unplanned development. This method emphasizes short term, low-budget, and easy to adapt interventions within the existing scenario and serve as a prelude to instigate lasting impact in urban transformation. Tactical Urbanism offers a pathway to repurpose urban spaces to make them resilient, inclusive and sustainable for a brighter future. Urban dwellers through participatory design approach can engender innovative, adaptable and sustainable solutions. The Tactical Urbanism framework can be a true catalyst for social interaction and community engagement that serves as a panacea for the menace of unplanned growth by generating an efficient solution. Having said that, to embrace Tactical Urbanism framework as a pragmatic approach for an effective utilisation of spaces underused within city limits. This proposal invites for a panel discussion bringing together elected representatives, urban planners, civil society organisations, policymakers etc. to deliberate and harness the potential of Tactical Urbanism.
Key Objectives

The key objectives of this panel discussion would be:

i) Awareness and Knowledge sharing: To raise awareness about the concept of Tactical Urbanism among stakeholders, emphasizing its benefits and potential to mitigate unplanned growth.

ii) Discussing Best Practices: To share successful case studies and best practices so far in Mumbai & other metropolises where Tactical Urbanism interventions have led to positive urban transformations.

iii) Ideating Collaboration through PPP: To facilitate an open exchange of ideas between different stakeholders, encouraging collaborative brainstorming on the most effective ways to apply Tactical Urbanism principles within the local context.

iv) Policy Integration: To discuss ways to integrate Tactical Urbanism strategies into existing urban planning policies, ensuring that short-term interventions align with long-term city development goals. By bringing together diverse perspectives in a panel discussion, this initiative aims to pave the way for practical solutions that utilize Tactical Urbanism to address the conundrum of spatial planning & land use. Through such collaborative efforts, we can foster vibrant, sustainable, and inclusive urban spaces that cater to the needs and aspirations of present and future inhabitants.
Chapter 3
Session Abstracts
Day 1

1. Land Relations Transitions in the wake of Climate Change and Action

7th India Land and Development Conference 2023

Land Relations Transitions in the wake of Climate Change and Action

*Chair*

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Mr Dhanej Thapa,  
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1 November 2023  |  09:00-10:15 am  |  Hall: VKS 001

*Hosted by:*
Discussions on renewable energy investments and land economics in the body of literature

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Keywords: Land; Renewable Energy; Investments; Spatial Planning; Multi-Criteria Decision Making

It is interesting how closely related and important the fields of land economics and energy economics interact. Energy economics is an academic discipline that focuses on the examination and evaluation of the processes involved in the generation, utilization, and cost determination of energy commodities. On the other side, the study of land economics investigates how land resources are used, valued, and managed overall. The process of energy creation often requires the exploitation of land resources. Land is essential for many things, including building power plants, constructing infrastructure for renewable energy sources, and extracting fossil fuels. The discipline of land economics plays a pivotal role in assessing the accessibility, suitability, and economic value of land for energy producing purposes. Several considerations, such as land ownership, land-use regulations, and environmental concerns, have an impact on the feasibility and economic efficiency of energy production initiatives. The domain of land economics is closely intertwined with the accessibility and importance of energy resources obtained from land. This includes fossil fuel reserves, which are often found below the surface of the Earth and require exploration as well as extraction of land-based resources. These include petroleum, natural gas, and coal. An analysis of these resources’ economics includes aspects like land ownership, leasing agreements, and the probability of resource scarcity or depletion. Land use often plays a significant role in advancing sustainable energy sources, including solar, wind, and hydroelectricity. The discipline of land economics plays a crucial role in assessing the suitability of land for the execution of renewable energy projects. The assessment encompasses the examination of multiple factors, such as solar radiation levels, patterns of wind, proximity to water resources, and potential environmental impacts. Furthermore, land economics is a crucial topic in figuring out how much land is worth and how to divide it up so that renewable energy facilities like wind turbines and solar farms may be built. Infrastructure related to energy, such as transmission lines, pipelines, and power plants, can affect the value of nearby land. The study of land economics looks at how energy infrastructure affects a variety of factors, including property rights, land values, and patterns of land use. Land development decisions, land use limitations, and property values may all be impacted by a location’s proximity to energy infrastructure. In terms of environmental issues, the domains of land economics and energy economics overlap. The extraction and use of energy resources may have a significant negative impact on the environment, including pollution, habitat...
disruption, and land degradation. The assessment and management of these environmental effects through land-use planning, environmental laws, and conservation tactics are greatly aided by land economics. The cost-effectiveness and accessibility of energy resources can have an impact on land-use decisions and land economics. Differences in the cost of energy, including energy from renewable sources and traditional fossil fuels, can affect land values and how land is used in different places. Energy economics include the analysis of the economic implications related to land use policy, such as the impact of restrictions on zoning on energy production and the economic benefits that local communities obtain from renewable energy initiatives. The present work discusses the important literature in the body of knowledge by scrutinizing the Scopus database and maps the trends and themes in the field of energy and land nexus. Scopus database was searched for keywords ("renewable energy investments" ) AND ( "land" ). 480 papers were shortlisted by applying relevant selection criteria in terms of subject areas, and language. Bibliographic coupling was used to understand related documents in the literature. When two works both list a third work in their bibliographies, this is called bibliographic pairing. This is a sign that there is a chance that the two works are about the same thing. When two documents mention the same one or more documents, they are said to be bibliographically coupled. To understand this, VOS viewer software was used. The minimum citations of a document were fixed at 10. Out of the 480 documents, 214 met the threshold. However, only 55 documents were connected that were analyzed. The documents were grouped into 9 clusters each with a common theme. 11 prominent articles are related to finance and investments for renewable energy projects, 8 to lifecycle and techno-economic assessments of renewable energy systems, 7 to spatial planning and land suitability studies for renewable energy projects, 6 each to multi-criteria evaluations systems and site planning for renewable energy, environmental and economic assessments of renewable energy generation systems, reviews and policy analyses, and 100% renewable and zero emission targets for regions. 5 articles each on Low carbon and renewable economies and multi-criteria decision making for renewable energy projects planning are observed while 4 articles specifically assess renewable energy projects across Europe.

The research implies that there is a scope for wider and deeper research in land as investment for renewable energy projects. The spatial resolution can play a significant role in the total landscape of renewable energy generation by giving methodologies for selection of locations and
suggesting area of land parcel for adequacy of such projects. The present work highlights the need for understanding various ways in which researchers have addressed land as a factor of renewable energy production thereby making it a technically, economically, and environmentally significant.
Exploring Climate Trends, Hazards, and Strategies for Sustainable Agriculture in Bihar
Shashidhar Kumar Jha, Manager, Climate Program, WRI India
Saransh Bajpai, Associate Director, Climate Program, WRI India

Keywords: Risk Assessment, Extreme Events, ACZs, Adaptation, Technological Advancement.

The historical climate analysis in Bihar reveals significant changes from 1951 to 2018. Winter minimum temperatures are rising in the eastern and central districts but decreasing in the western districts. Average Rainfall has exhibited a declining pattern; monsoon rainfall is increasing in the northern and northeastern districts but decreasing in the southwestern districts. Conversely, winter rainfall has consistently increased, particularly in the southern and northwestern districts. These climate changes pose additional challenges to Bihar's natural and life support systems, especially in agriculture, which sustains over 76% of the population. Small and marginal farmers, constituting 97% of the farming population, own 75% of operational holdings, with an average landholding size of just 0.3 hectares, approximately one-fourth of the all-India average, and these lands are often subdivided further to be rented out in sharecropping arrangements. The dependency on vulnerable ecosystems increases the susceptibility of dependents.

Moreover, a comprehensive hazards map, incorporating data on extreme events such as droughts, floods, heatwaves, and cold waves, has been developed. This map indicates that >65% of the districts are affected by multiple hazards (3 or more), with a significantly higher prevalence in the northern districts. Risk assessments incorporating climate, land, and development parameters, following the IPCC 2014 protocol, reveal that approximately 55% of the districts fall into high to very high-risk categories, with a higher concentration in north Bihar. Specifically, the ACZs of north Bihar (northeast and northwest alluvial zones) face very high risks of floods, high heatwaves, and cold waves, while the south Bihar ACZs are exposed to very high heatwaves and droughts.

To mitigate these risks and transform its agriculture, Bihar can harness technology for information dissemination and exchange. Real-time monitoring of vital indicators such as soil moisture, irrigation scheduling, nutrients, insect infestations, and weather patterns can equip farmers with timely data to make informed decisions in response to potential climate change scenarios. By leveraging these actions, Bihar can enhance agricultural productivity, optimize resource utilization, and secure sustainable livelihoods for farmers.
Land-People Relations in Indian Sundarbans: Diversity and Transitions
Sourav Kumar Chandra
Program Manager, Landesa

Keywords: Land tenure security

The Sundarbans, nestled in the heart of India’s West Bengal state, is a remarkable place where nature and people have shared a profound connection for centuries. It’s a haven for biodiversity, home to the countless species of plants and animals. But it’s more than just a forest, it’s a lifeline for the people who call it home. For generations, the communities around the Sundarbans mangrove forest have relied on this forest land for their livelihoods. Fishing, crabbing, and collecting honey have been the means of survival for these resilient people. They also grow crops right where they live. They have crafted a unique way of life, deeply entwined with the rhythms of the mangroves.

The largest Mangrove Forest in the world, situated in Sundarbans covers an area of about 10,200 sq. km. Bangladesh occupies about 6017 sq. km forest area and in India it extends over 4264 sq. km approximately. A non-forest area of about 5400 sq. km also lies in India, along the north and north-western fringe of mangrove forest. Hence, the total land cover of Sundarbans region in India is about 9664 sq. km. The entire Sundarbans have been declared as Biosphere Reserve during 1989. The Sundarbans Biosphere Reserve is divided into core, buffer, and transition zones.

The land of the core area, which is densely mangrove forest managed by the Forest department and no human activities are permitted without prior permission from the Forest department. This core area has restricted land use and resource access for the local communities. This has led to conflicts, particularly regarding fishing rights in the numerous water channels in between the core area.

The land of the buffer zone bridges the core forest area and human settlements. It typically includes numerous water channels, rivers, and flat mud lands. The buffer zone remains uninhabited but fishing and other activities permitted. While not as strictly regulated as the core area, the buffer zone is still subject to conservation guidelines aimed at protecting the fragile ecosystem. It has been observed that many fishermen lack fisherman registration cards, which means their access to this zone is illegal. They do not receive any compensation in case of unfortunate incidents that occur during their access to land of the buffer zone for fishing or crabbing purposes. Boat registration with the Fisheries Department is still pending for many fishermen. Unregistered boats result in their access to buffer zone land being deemed illegal, exposing them to potential fines. Additionally, unregistered boats may not comply with safety and environmental regulations, posing risks to both fishermen and the fragile mangrove ecosystem.
The transition zone is densely settled and includes intensive agricultural land use and other economic activities. Agriculture plays a crucial role in the livelihoods of the residents. However, these areas also face challenges such as land erosion and salinity intrusion, which can impact land productivity. It has been observed that when saline water intrudes into agricultural land, crop production is halted for a minimum of two years. This phenomenon has resulted in significant migration from the affected region.

On the other hand, due to the reduced availability of fish resulting from the effects of climate change, fishermen in the region are increasingly interested in engaging in inland fishing within the transition zone. However, they encounter a significant obstacle, as numerous ponds in the settlement areas are classified as agricultural land. This misclassification hinders their access to various government benefits, including subsidies, financial assistance, and other resources provided by the Fisheries department.

In conclusion, addressing land tenure security in the Indian Sundarbans necessitates a comprehensive approach that carefully balances conservation imperatives with the essential requirements of local communities. To effectively confront these multifaceted challenges, it is imperative to establish robust channels of communication and collaboration between government departments and the local populace. The Fisheries Department should expand its outreach to the villages, ensuring that every fisherman secures the necessary registration cards, including fisherman registration and boat registration, which are vital for asserting their land access rights within the core and buffer areas. Concurrently, the Agricultural Department should actively promote the cultivation of salt-tolerant crops, thereby enhancing the region’s sustainable agricultural productivity. Moreover, expediting the resolution of pending misclassification cases by the Land and Land Reforms Department is crucial, as it would enable vulnerable families to access government benefits tailored to the specific needs. Granting land ownership rights to landless individuals will be a vital step in supporting their crop production efforts. Additionally, local governance bodies, in collaboration with Self-Help Groups, should undertake community awareness campaigns aimed at encouraging the sustainable utilization of resources within the core and buffer areas. Collectively, these initiatives will foster a harmonious coexistence between conservation endeavors and the overall well-being of the local communities in the Sundarbans.
Strategies for Sustainable Management of Ramsar Wetlands in Kerala
Anita V, Professor, Department of Economics, University of Kerala

Introduction
Wetlands are an invaluable resource, providing all the ecosystem services such as provisioning, regulating, supporting and recreation. Thus, the benefits of wetlands are multidimensional and hold an ecological and social balance. Hence, implementing sustainable practices and techniques is very important to conserve the system. The wetland areas of Kerala are higher than those of the all-India averages. Three wetlands in Kerala, Asthamudi Wetland, Sasthamkotta Lake and Vembanad Kol Wetland, have come under the Ramsar wetland list. However, the wetland area and storage capacity are declining continuously in the state due to pollution, encroachment, and urbanization. Several studies considered different degrading aspects of these wetlands and suggested measures to overcome those issues. But still, due to many reasons, the degradation and depletion are continuing. Recently, the National Green Tribunal (NGT), in March 2023, imposed a penalty of Rs 10 crore on the Kerala government for failing to protect the Vembanad and Ashtamudi Lakes. Here arises the question: what are the problems associated with protecting these lakes? What are the bottlenecks in implementing policies and programmes to protect these lakes? What is the loss, especially through regulating and supporting services to the land, associated with these lakes? Against this background, the objectives of the study are to assess the extent of current issues of the lakes and to develop policies and programmes to protect these lakes.

Based on the ecosystem services of Millennium Ecosystem Assessment (2005), wetlands have provisioning, regulating, supporting and cultural services. Generally, the value of such ecosystem services is calculated based on the direct and indirect contribution to the socio-economic development of human beings. The indirect benefits of wetlands are usually estimated based on regulating and supporting services to land and livestock. Hence, degradation in the lakes affects the inhabitants not only near the lakes but also all those who depend on the system for their survival.

Theoretical perspectives
The sustainable management of wetlands includes different aspects like administrative, legal, technical, economic, ecological, social aspects and landscape management. Empirical reviews of the Lake showed that the issues crossed the scientific progress part completely and almost completed the focus on part, that is, accelerator type 1 and accelerator type 2, respectively (Figure 1).
The need of the hour is a transformer type 1, which has transformative goals to overcome the current issues associated with the Lake, and the high demand for coordination with cross-cutting responsibilities like land and wetland management. The management goals associated with the Lake have several failures due to information asymmetry, market failure, institutional failures, and externalities. Overcoming all these issues through focus and scientific progress does not give any transformative change in Lake management. To achieve long-lasting transformation or sustainable management of the river, the mission needs behavioral change of different stakeholders associated with the Lake. That is a comprehensive change in the socio-behavioral aspects along with technological aspects.

Data and methods
With the support of empirical evidence, the study tried to assess the current issues and the failures of the programmes implemented to achieve the sustainability of the two lakes, Vembanad and Ashatamudi. Studies are identified with keyword searches. Multiple responses to the same issues are identified and classified. The study used types of mission approaches applied in the empirical application of the typology to the German High-Tech Strategy (Wittmann, et al., 2020).

Conclusion
The sustainability of wetland services is an important issue for Kerala, where tourism, one of the main
sources of income, is associated with wetlands. Since wetland comes under the public good category, people think it is the government's duty to protect the resource. It is noted from the empirical works that the degradation of the wetland is from multiple sources with multiple causes. Based on the value of the services provided by these resources and listed in the Ramsar, different stakeholders should be aware of their importance and a concerted effort from the government and different stakeholders is necessary to protect the wetlands. Due to multiple sources of pollution having non-uniform pollutants and the interlinkages between land and wetlands, the resilience of the water body is very difficult, which is essential for the ecosystem sustainability of the lake. Hence, environmental education and rejuvenation are vital to reducing pollution sources and the quantum of pollution.
2. Land Administration, Records & Data: Efficiency, Inclusion & Sustainable Development

Chair

Dr Serene Ho,
Senior Lecturer in Land Administration, University of Melbourne

Dr Gaurika Chugh,
Assistant Professor, Jaypee Institute of Information Technology

Mr Dhiren Swain
PhD Candidate, IIT Madras-

Mr Sethu CA,
Senior Research Assistant, Foundation for Agrarian Studies

Mr Akandwanaho Emmanuel,
Land Economist, Cities Youth Initiative

Mr Freeman Ali,
Researcher, University of Zimbabwe

1 November 2023  |  10:30-11:45 am  |  Hall: VKS 002

Hosted by: FLAME UNIVERSITY
Examining the implementation of land records digitization in Rajasthan

Dr. Gaurika Chugh
Assistant Professor, Jaypee Institute of Information Technology, Noida

Keywords: Digitization; Land; Revenue; Technology.

The genesis for land management in Rajasthan can be traced back to 1822 when Col. James Tod prepared the first survey map of the state. The magna carta of land and revenue administration in the state of Rajasthan is governed by the Rajasthan Land Revenue Act, 1956. This act primarily deals with maintenance of the record of rights (RoR), collection of revenue, land management and conducting survey and settlement operations. The efforts to bring reforms in the land records management system in Rajasthan can be traced back to the year 1996 which saw the implementation of Land Record Computerization (LRC) project in 10 districts of Rajasthan. This policy was introduced under the aegis of the state government and with the help of National Informatics Centre (NIC) and its primary purpose was to develop ‘chausala jamabandi’ that was to be updated after every four years by the tehsildar/patwari at the tehsil/village level. The sole purpose of the LRC project was to do away with the hand written textual records maintained by the tehsildar/patwari at the tehsil/village level and to maintain and update the textual land records with the help of software developed and maintained by the NIC. After the implementation of the Digital India Land Records Modernization Program (DILRMP) in 2008 the state government has developed ‘e-dharti’ 1.0 windows based software which is implemented across all the districts in the state.

The primary aim of this paper is look at the implementation of the digitization policy initiatives carried on in the districts of Rajasthan through the implementation of the Centrally Sponsored Schemes (CSS). Its aim is to further delve into the question of how technology and digitization has been used as a tool to streamline revenue administration in the state that was engulfed in the problems of transaction cost, lack of coordination among revenue agencies, unclear land titles that resulted in litigation. This research paper looks at the implementation of land records digitization in Rajasthan through field work in the district of Udaipur and Dungarpur, interviews and focused group discussion with communities living in the Panchayat Extension to Scheduled Areas (PESA), survey and settlement officials and through examination of secondary resources. The research aim was to understand the governance of land records modernisation programme, envisage the role of various agency involved in the modernisation
of land records and to apprehend the use of modern scientific tools like ETS, HRSI, DGPS and its impact on land governance in Rajasthan. Through the findings, it was found that Rajasthan has made tremendous progress in computerization of land records through the introduction of ‘e-dharti’ 1.0 software and digitization has helped in easy access of information at Common Service Centre kiosks at the village level. However, during interaction with the tribal communities it was found that technology remains only a tool and has not been able to completely replace the trust and sense of security the tribal communities have on the revenue officials. There are also infrastructural constraints in the remotest areas of tribal villages that impact the functioning of digitization such as poor internet connectivity, power cuts which results in unprecedented delay in obtaining land record information. The revenue officers at the village level are overburdened with the task of making the information at tehsil level online through segregation and verification of the cadastral maps with the ground information. There is also paucity of revenue and survey officials at the lower level which leads to unprecedented delays in the implementation of digitization of cadastral maps, verification of ground information with cadastral maps and satellite data. In order to remove the anomalies in land administration, it is important that the agencies involved in coordination, segregation and verification of land record information should work in tandem with each other. It is also important to empower the grassroots functionaries as they are the immediate responders to any information, error or query to land record information. Tribals share a deep social and ethereal relationship with land and its surrounding and therefore it is important to empower the grassroots functionaries as they repose their trust and confidence on the Patwari for obtaining any information.

The reform initiatives by Rajasthan primarily focused on the use of ICT management and technological imperatives to overcome the malfunctioning of revenue administration. However, technology alone cannot be a sole prerogative for addressing the anomalies in land administration as its implementation may encounter the same age-old political processes, land based powerful bureaucracy, impunity enjoyed by the revenue officials and private agencies and therefore there is a necessity to build an equilibrium between the use of scientific technology and implementation of institutional reforms.
Bureaucratic Manouvering and Urban Poor's Community based practices of Countering in a land titling program

Dhiren Swain
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Keywords: Land titling, Participatory Development, Informality, Committees, Local State

After expanding state capacity through local governments and welfare programs, there has been a shift in thinking about the cities. The aim has been to be part of the global cities and, hence, part of global financial markets. Urban renewal through policy missions like JNNRUM emphasized this goal. Integrated approaches to health, housing, and employment are the key components of these policies. "Participatory development" has been one approach that has been central to many of these welfare policies.

In my paper, I look at a program called 'Jaga Mission,' primarily an in-situ slum upgradation and land titling project adopted by the government of Odisha in India. This project aims to give livable habitats and regularize claims to the spaces in the urban local bodies. Several governments like Punjab and Assam have adopted this policy idea. This policy is popular because it claims to give land tenure rights to the urban slum dwellers and develop their houses by considering their opinions through a 'democratic process.' This mission brings private industries, NGOs, and technology solution-based frameworks to policymaking.

My research work finds that this urban land policy, in practice, gives power to executive bodies of the State and bureaucratic experts within a 'participatory governance.' Here, I also analyze how neo-liberal policy missions prioritize 'results' over the complexities of democratic processes. It pushes everyday politics to the background and tries to achieve the goals through 'other' means and parallel legitimation of authority. The paper also comments on why 'land titling' programs are challenging and contentious and why, in such contexts, there is likely more executive power during implementation.
The bureaucrats create parallel authority through the 'Slum Development Association.' (SDAs), which tries to take away the 'actual' demands of urban renewal from the community and maneuvers its decision on the communities. This displays entanglements of power and expert knowledge at the ground level. However, in these communities, through informal associational groups and collectives, they find their way out to challenge the decision-making. These communities, through informal channels at many times, work together to find a way to have conversations and work with the government. The engagement of these informal committees is not only with the government bodies but also civic activism through courts around changing the status of land type. The engagement of these informal bodies also differs from group to group. Some semi-formal bodies like self-help groups restrict themselves from bringing more services and developmental works to the settlement by engaging with the bureaucracy through different channels. However, other informal groups strategically raise land titling questions through institutions like media, courts, social media campaigns, and signature campaign mobilizations. This study presents material from a settlement where the kiss am/type of the land is administratively categorized as 'untenable. This will give insight into informal committee activities, organizational work, and their tactics to claim their rights over land in a' untenable settlement'. My paper theoretically contributes to the debates on 'patronage-clientelism' by pluralizing the 'associational life' of the urban poor.

This paper is a part of my doctoral thesis. I have done five months of fieldwork in the settlement. I started surveying and interviewing bureaucrats from the small-town local bodies to get a sense of the program and context. I chose at least two small towns to interview and discuss the issues around land titling. Government officials, public representatives, and people were involved in the activity. I started my field study in Bhubaneswar, Salia Sahi, using those preliminary ideas. I selected the slum development associations (formal committee), political party organizations, youth clubs, religious committees, and self-help groups to survey. I aimed to find their activism and claim-making on the local state vis-a-vis each other. The paper emphasizes how formal committees function in a land titling program and how diverse the field of claim-making is when it comes to informal committees. This comparison in the land context also gives a clear idea of the state of 'participatory' development. I use interview methods, document analysis, and photography in my paper. I looked at day-to-day discourses through focused group discussions, legal documents, and cases around local-level meetings, financial negotiations, and land tenure regularization to show how different committees function in the context of these negotiations in an 'unauthorized' settlement.
Insights and Limitations in Understanding Change through Official Land Records in India: A case study of Palakurichi village, Tamil Nadu
Sethu C. A., Foundation for Agrarian Studies

Keywords: land records, land ownership patterns, rural change, Tamil Nadu, village studies, caste and land ownership, social change

This paper examines official land records of a village in Tamil Nadu, from 1983 and 2019. The paper first discusses some limitations of official land records in reflecting ground reality and reflects upon the changes in land ownership patterns in the two time periods, on the basis of other data from village studies of this village.

Land revenue, including the maintenance of land records, is a State subject in the Indian Constitution. The State governments inherited different systems of land records which varied based on the histories of land revenue settlement. Land record systems and the state of their maintenance vary across States in India today. In Tamil Nadu, for every parcel of agricultural land in each village, information on the area, assessed land tax, and names of patta holders, are collated along with some other things in a document called A-register.

This paper examines the A-registers of Palakurichi village from 1983 and 2019, located in the lower Cauvery delta region of Tamil Nadu. Additional information was collected from a retired Assistant of Palakurichi Village Administrative Office – on whether each patta holder in the 2019 record was alive, was a resident of the village, and their caste. To provide more context, primary data from two studies are used, from 1983 and 2019 respectively – a village study of Palakurichi by S. Guhan from Madras Institute of Development Studies conducted in 1983, and a census-type household level survey conducted by the Foundation for Agrarian Studies in Palakurichi in 2019 as part of its Project on Agrarian Relations in India.

First, through an examination of the official land records from 2019 along with the collected additional information, we show that there are limitations in their ability to reflect ground reality. We find that information of more than a third of agricultural land held by individuals was not up to date in 2019, for instance one fifth of the agricultural land was registered against people that are not alive. We also discuss other limitations of the system, such as the lack of standardized names for individuals, household-wise information, and information regarding the share of the parties in jointly held land.

Second, we examine the records from 1983 and 2019 to see the changes in land ownership pattern. Institutions such as temples hold more than a fifth of the agricultural land in the village, in both 1983 and 2019. We set this land aside for the next calculations. In what follows, by ‘all land’ we refer to agricultural land in the village that
is not under the ownership of temples or such institutions.

In 1983, 80 per cent of all land was held by Naidus, while Dalits at the other extreme owned 0.2 per cent. By 2019, this changed to 61 per cent with the Naidus and 16 per cent with the Dalits. Among the land owned by the Naidus in 2019, 72 per cent was owned by non-residents of the village. The castes that come under the definition of Most Backward Classes (MBC), such as Padayatchis, owned 5 and 10 per cent of the land in 1983 and 2019 respectively.

Women owned 24 per cent of all land in 1983, and an impressive 40 per cent in 2019. The most striking change is that compared to no land owned in 1983, Dalit women owned 14 per cent of all land, which is also 84 per cent of all Dalit owned land. Almost all of these Dalit landowners were residents of the village. This striking change is the result of interventions by a non-profit organization called “Land for Tillers’ Freedom” (LAFTI) in the late 2000s, which we will discuss. Even as land held by Naidus declined between the two points in time, Naidu women held 11 per cent more land in 2019 compared to 1983, growing from 18 to 21 per cent of all land. Further, among the land owned by Naidu women, 72 per cent was owned by non-residents in 2019. Land owned by non-Naidu, non-Dalit women remained mostly unchanged, forming 6 per cent of all land.

For context to read the changes in ownership pattern discussed, we turn to the village studies. Naidus comprise 6 per cent of the resident population in 1983 and 3 per cent in 2019, while Dalits form 49 and 61 per cent in the respective years. MBC population in 1983 was 18 per cent and remained 19 per cent in 2019. In 1983, less than 15 per cent of the working population engaged in non-agricultural work, but in 2019 this figure is a striking 54 per cent. Notably, in 2019, for more than half of such workers, the site of work was outside the village. Further, income from crop production forms only 7 per cent of the household income for the village residents. Dalits in the region and the village are organized under the Communist movement since the middle of the twentieth century and have continuously pushed back against oppression. In the late 2000s, through interventions led by the non-profit organization LAFTI, one acre each of agricultural land was sold to over a hundred landless Dalit women in the village, with a 50 per cent subsidy from the government and a loan for the remaining amount.

We interpret the following from this exercise. First, Naidus who owned most of the agricultural land in an entirely agrarian economy of 1983, have since been moving out of the village, as evidenced by a decline in residential population coupled with a high share of non-resident Naidus owning land in the village. Parallelly, ownership of land by Dalits, which carry immense symbolic and economic importance for them, has taken place in a limited scale in the context of their organization as well as limited direct returns from crop production. In sum, as Palakuruchi, a village in the green revolution belt of Tamil Nadu, has shifted away from an agrarian economy, we see the upper caste leaving the village, while the Dalits become a bigger share of the resident population as well as gain more ownership of agricultural land.
Integrating Geospatial and Statistical data in monitoring Land Tenure Security in Uganda
Akandwanaho Emmanuel, Land Valuer, Cities Youth Initiative and three others

Keywords: Geospatial data architecture, tenure security, land rights, SDG Indicator 1.4.1

In Uganda, land tenure security is a critical issue where, a significant portion of the population depends on land for their livelihoods and economic activities especially women. Recognition of this, and the increasing stress on land from the world’s growing population and changing climate, has driven demand for strengthening tenure security for all. This has created the need for a core set of land indicators that have national application and global comparability, which culminated in the inclusion of indicators 1.4.2 and 5.a.1 in the Sustainable Development Goals (SDGs) agenda.

As such, the national statistical organization like Uganda Bureau of Statistics (UBOS) are responsible of collecting statistical data to report on the state of land ownership, access and use rights in relation to SDG Indicators 1.4.1 and 5.a.1. This data is obtained from UBOS repositories; Uganda Demographic and Health Survey (UDHS) 2016, National Service Delivery Survey (NSDS) 2021, Uganda National Household Survey (UNHS) 2019/2020, Annual Agricultural Survey (AAS) 2020, Uganda National Panel Survey (UNPS) 2019/20, and administrative data from Ministry of Lands, Housing and Urban Development.

It only captures the statistical element such as land ownership represented in percentages for both female and male while the spatial aspect necessary for a comprehensive understanding of the status of land ownership in Uganda is scarcely integrated. More so, it rarely reports on the progress made when it comes informal and customary land ownership such as Certificate of Customary ownership since they are not recorded in the official registry despite their dominance in Uganda and Sub-Saharan Africa at large. This poses a huge risk for marginalized groups especially women and children whose land rights need to be protected, and yet with no visual print, they can lose their source of livelihood.

The research methodology adopted is a qualitative approach to analyze literature, policy documents and a case study of Botswana on the integration of Geospatial Information Framework, together with statistical data (population census data) to provide accurate and consistent information on land tenure security. Literature review of the qualitative studies and surveys done by UBOS to understand the available statistical data on land ownership in Uganda and identify the existing gaps. Analysis of survey tools following a 5-days’ Technical Workshop on “Availability of Land Tenure Data on SDG Indicators 1.4.1 and 5.a.1 by various stakeholders from; Civil Society, Government, and Academia. Focused group discussions with land experts from UN-HABITAT, UBOS, and MLHUD to discuss the potential benefits linking geospatial and statistical data in land tenure.
monitoring.

This research sets out to outline the current state of the statistical data framework, ascertain the linkages between geospatial and statistical data and develop a geospatial architecture of geocoded data that can be assigned to every statistical unit record collected. As a result, a geospatial architecture (geo-referenced datasets) that can be linked with the available statistical data from UBOS to provide accurate and consistent information, promoting evidence-based decision and ensuring the rights of the poor and marginalized groups are captured and updated to the given standards was developed. In conclusion, this study contributes to more accurate and actionable insights for policymakers, development practitioners, and stakeholders committed to advancing land tenure security and gender equality in land ownership for marginalized groups, ultimately promoting sustainable development in Uganda and beyond.

Research Objectives:
1) To assess the current statistical data collection framework on land tenure security in relation to SDG Indicators 1.4.2 and 5.a.1
2) To ascertain the linkages between geospatial and statistical data in relation to SDG Indicators 1.4.2 and 5.a.1
3) To develop a combined geospatial and statistical architecture of geocoded data in relation to SDG Indicators 1.4.2 and 5.a.1
Capacity building in Fit-for-Purpose Land Administration (FFP-LA) in Zimbabwe; Opportunities and challenges for Rural District Councils
F. Ali, Geomatics Engineering Department, University of Zimbabwe
J. Useya, AeroEye Solutions Pvt Ltd
T. Muparari, Geomatics and Surveying Department, Midlands State University

Keywords: Capacity building, fit-for-purpose, Land Administration, Land tenure

In the last decade, Fit-for-Purpose Land Administration (FFP-LA) has gained popularity particularly in the developing countries where conventional land administration systems have failed to yield satisfactory results in securing land tenure for women and the youths. Conventional land administration systems in most sub-Saharan countries bear vestiges of colonialism and suffer from colonial hangover. These land administration systems have disfranchised the rural poor in participating in formal land markets. These systems are highly formalized, centralized, and exclusive to the poor and vulnerable particularly the women and the youths in rural areas from accessing land. Over 60 percent of the population in Zimbabwe reside in communal areas. This presents a huge percentage of land that remain undocumented in the formal land registers. Tenure insecurity, non-efficient land governance and complicated land registration processes exacerbated by effects of climate change further impacts the livelihood of most rural communities. Climate change, mitigation and adaptation initiatives have faced impediments due to unavailability of data particularly spatial-temporal data on land resources. In Zimbabwe, hard hit are normally the communal areas where Rural District Councils are mandated with the management and administration of land and natural resources. Tenure security has been identified as a major catalyst in the attainment of most of the Sustainable Development Goals and is central to the socio-economic development of Zimbabwe. In the last four decades, Zimbabwe has embarked on several land reform programmes to improve access to land to the previously disadvantaged population. Although these land reform programmes have been successful, over the years land degradation has been rife and conflicting land uses have ensued especially in the communal and peri-urban areas. The inherited conventional land administration system has failed to economically empower the rural landholders. Documentation of land rights particularly in the communal areas has been slow and recently boundary disputes have been on the rise. Mapping of land parcels in communal areas as espoused by the Traditional Leaders Act has been somewhat slow due to complexity of the conventional tools and approaches currently being used. The main challenge faced in undertaking the land rights documentation activities has been the high costs involved in the acquisition, storage, and management of the land information. Additionally, lack of human capacity in organizations mandated with the administration of land has been a major drawback. In the last decades, Rural District Councils
Capacity Building Programmes have been initiated to improve the operations of Rural District Councils (RDCs). These initiatives have had both successes and failures especially in the domain of land administration. Thus, an assessment of the human capacity development of the organizations involved in the land management and administration was conducted in this research using purposive sampling. The research included administering semi-structured questionnaires to key informants. Eight out the total 60 Rural District Councils were sampled. Past capacity development initiatives on land administration conducted in Zimbabwe were assessed and evaluated through examination of official records and documentation. It was observed that capacity development in land administration has not been given major attention in the last decades. The results indicated that a scanty 20% of land professionals across government departments were aware of the fit-purpose land administration as well as the associated benefits. This process of evaluating the past capacity building initiatives enabled the development of a curriculum for fit-for-purpose land administration. Subsequently, the developed curriculum was trailed on selected 30 land professionals from five Rural District Councils, Department of Surveyor General, Ministry of Lands, Agriculture, Fisheries, Water, Climate and Rural Development and the Civil Society Organizations. The training revealed there is an urgent need for increased capacity building particularly for Rural District Councils to enable them to sustainably document and administer land in the rural areas. The FFP-LA presents an opportunity for the RDCs to improve the documentation of land rights in communal areas. However, the adoption of the fit-for-purpose land administration requires huge political will and capacity building initiatives will accelerate the adoption process.
3. Women and Land relations: Data and Technology
Gender Inequality in Land Ownership in India: Evidence from National Sample Survey
Rakesh Kumar Mahato, Arindam Das, and Bheemeshwar Reddy A

Keywords: Land, Inequality, Inheritance, HSAA-2005, India.

Women’s property ownership rights, especially ownership of land, are essential for fostering their economic and social well-being. There is a significant gender-based disparity in property ownership in India as women have been historically denied the right to inherit property, including land. Despite legal reforms to address such gender discrimination, deeply rooted socio-cultural norms have continued to impede women's access to and control over land. It is, hence, crucial to assess the impact of legislative interventions like the Hindu Succession Amendment Act of 2005 for moving towards the goal of ensuring equitable property rights for women. Due to a lack of nationally representative data, studies on gender inequality in women’s land ownership are limited in India.

This study examines the data from a recent round of the All-India Debt and Investment Survey (AIDIS), 2019, conducted by National Statistical Office, to understand the pattern of land ownership by gender in India. AIDIS of 2019 is the first-ever nationally representative and reliable database that provides land ownership by gender. In addition to land ownership, the AIDIS data provides additional information of land such as its location (rural/urban), irrigation status and value which can be used to assess the quality of land. This paper examines gender-based land inequality at the household, individual and regional levels using multiple indicators including the disparities in the quality of land owned by women and men.

The study finds substantial inequality in land ownership between women and men in India. 18 per cent of rural households and 26 per cent of urban households have at least one woman aged 15 years and above owning land, while it is for 87 and 81 per cent for men respectively. Even at the individual level, only 17 percent of the landowners among rural households and 24 per cent of the landowners among urban households are women. Plot level analysis also shows the stark inequality in land ownership as only 10 per cent of the plots in rural households and 18 per cent of the plots in urban areas are owned by women.

The paper also studies the probable factors affecting female land ownership in India using a linear probability model (LPM). Individual, household, and regional level factors were examined. The study finds that an increase in the age, and a woman being the head of the household increases the likelihood of a woman being a landowner. On the other hand, household characteristics such as caste and religion
do not explain the low level of female land ownership in India. There is substantial variation in gender disparities in land ownership across Indian states. Southern Indian states have a higher percentage of female landowners, while it is the lowest among states in eastern and northern regions. Despite having several reform acts, female landowners are extremely low and own little land compared to males.

What explains inter-regional differences in gender differentials in land ownership? This could be due to inter-state differences in the temporal exposure to gender-equal inheritance laws. In a few Indian states, the Hindu Succession Act was amended much before 2005 and might have a longer duration of exposure. Using the propensity score test (PSM) estimation approach, the study estimates the duration of exposure of the Hindu Succession Act on the ownership of land across the regions. Results show that women from states with longer exposure to reform laws have a higher probability of being a landowner than the states that do not have such reforms prior to HSAA 2005.
Women in Agriculture, Land rights and Empowerment: Evidence from Gujarat

Itishree Pattnaik, Associate Professor
Department of Professional Studies, CHRIST (Deemed to be University)

Keywords: Land rights, control over land, empowerment, decision-making, women

Integration of Land Tenure and Land-People Relations:
According to Census 2011, as many as 65% of the total women workforce are engaged in agriculture-related activity either as cultivators or agricultural labour compared to just 49% of men. Yet, only 14% of land holdings are in the names of women. In the absence of the land holding title, woman are deprived from accessing to a number of benefits such as institutional credit and barred from further government schemes for agricultural benefits, which can help in alleviating poverty. Thus, land ownership is an important step towards enhancing women’s economic and social empowerment and reducing multi-layered discrimination. Further mere increase in land ownership without having control over land might not lead to what scholars have explained as ‘effective rights’. Agarwal (1994) termed as ‘effective right’ implying ability to retain land, take decision regarding the disposal and ability to take decision regarding use of land. Nevertheless a few studies have shown that with the amendment of the Hindu Succession Act (HSAA) there is also increase in women's perceived ownership of household land, women's self-reported bargaining power in the household, and women's probability of inheriting land. In this context the study aims at examining the link between women land ownership rights with empowerment and poverty reduction. This study aims at investigating the link between women land ownership with agricultural farm management (measured in terms of cropping choice, investment in soil, irrigation etc.), intra household bargaining power (decision making related to farm, household and human capital development) and livelihood (choice of livelihood farm or non-farm). All these indicators, together will impact on poverty reduction of the household and empowerment of the women. There are limited evidence on association between women land rights and credit, technology adoption and agricultural productivity. Analyzing agricultural productivity per se is difficult in Indian context but an assessment can be made on the women involvement in various knowledge gaining activities, extension services, investment of land, which are some of the indicators that might untimely help in increasing agricultural productivity. Impact of land rights on women’s farm related decision making, decision related to household consumption pattern, decision related to health and education of the children are
analysed in one of the high agricultural growth states in India: Gujarat. The study was conducted in 20 villages spread across five districts in Gujarat. Top 5 agriculturally advanced districts from the five agro-climatic zones were being covered in the state. Two blocks from each district were selected, based on their agricultural performance. Two villages from each block were selected. The respondents were selected randomly across various strata after conducting a house listing/census of the selected villages. Total 400 sample survey was conducted during January-February 2023.

To better understand the mechanism by which land, empowers women, the measure of land rights must go beyond self-reported ownership or even possession of a document; investigations of women’s control over the use and revenues from this land and how she acquired it are needed. This information helped to answer why or how land rights helped in increase women’s power in her relationship, in household decision making, food security. There is scanty of literature and empirical study, especially in Indian context by directly investigating the link between women land ownership and poverty reduction, through the channel of feminization of agriculture.

A house listing/Census was conducted before selecting the sample. Thus total 4361 households are covered across 20 villages in five districts before selecting the sample of total 405. Out of the total 405 sample, 279 women are with land and 126 women were without land. Most of the women owned land after the widowhood. Land ownership among the married women is minimal. Land ownership among married women is mainly joint ownership. Women reported to have rights to access and exclusion but the rights to transfer and sale is limited, even among the widows. The decision making for various farm and household major issue is further limited. This shows that there is a gap in access to land and control over land. Land ownership is the first step towards empowerment but it needs to be translated towards increase in decision making. Control over land which could be done through involvement in major decision making, would lead to translate towards empowerment.

The control over land rights by women could be possible with the change in customary laws and institutional level interventions. Strong evidence posits women’s access to and control over land as an important tool for raising women’s status and influence within households and communities. There is paucity of reliable gender disaggregated data sets on women land ownership. For instance, the agriculture census on land ownership portrays the operational rights and not ground reality of plot wise ownership, quality of land owned, soil type of the land owned, irrigation status of the land etc. It is essential to attend the detail data about land ownership, the quality, type and ownership type. That will help to attend the status and extent of women land ownership at the larger scale.
Building access to digital resources for empowerment of women: Experiences from a Public-Private Partnership Model in West Bengal

Dr. Shyamal Kumar Jana
Landesa-GNK, West Bengal, India Programme Manager

Keywords: Digital technology, Self-help group, women land rights, women land literacy, women empowerment, land record updation, sangha, Anandadhara, WBSRLM, Land and Land Reforms Dept., West Bengal.

In India, most of the women are not aware of their legal rights to land and property and hence, have limited or no ability and or face difficulties to access land related services from the land administration officials or courts to assert and defend land claims. They also have difficulty in accessing to land, including through inheritance, and difficulty retaining rights to land. Besides, under most past land reform efforts, women have not been benefited on par with men.

Landesa’s strategic focus has been to address the gender inequities in land rights that hinder women to come out of poverty and empower her in a concerted way especially by leveraging the transformative potential of digital tools and platforms. Access to digital technology and knowledge is now a right for women collectives, and technology adoption cannot be top-down. Safe and self-reliant spaces such as women's collectives can increase confidence, pool resources, and advance women member’s meaningful use of technology and data to create an enabling environment to build prosperous communities with secured land rights.

Landesa has been partnering with Anandadhara-West Bengal State Rural Livelihoods Mission (WBSRLM) under the Panchayats and Rural Development Department, Government of West Bengal to promote land literacy among the women to institutionalise women’s access to, ownership and control over land; and to create a platform for initiating social mobilization drive to bring women closer to land. The women’s land literacy (WLL) training for self-help group (SHG) women, has caused women to become interested in updating their family land records and claiming the inheritance rights of women, and have also led the foundation for establishment and running of the Sangha Facilitation Center (SFC) at the Gram Panchayat level in the state. The initiative, jointly initiated in 2021-22 FY by the WBSRLM the Land & Land Reforms Department and supported by Landesa, for breaking gender barrier by capacitating women to access land related services provided online by Land & Land Reforms Dept. to the SHG members and their families, at local level, leading to empowerment of women in the long run.
The present abstract is a modest attempt in this direction.

Objectives:
To explore how far access to digital resources enables the SHG members and their families in updating their land records as provisioned in the L&LR Dept. Govt. of West Bengal.
To assess how SFC, a responsive institutional delivery system, ensures women’s land rights by inheritance, thereby helping improved access to and control over land.
To study the efficacy of the SFC as an innovative tool for empowerment of women by reducing gender gaps in land ownership using digital technology in future.

Methodology:
The overall methodology is based on the strategy followed by Landesa, i.e., working closely with the government system and structure to develop a replicable model for promoting the effectiveness of the Sanghas in ensuring women’s land rights by inheritance and updation of land related services in the long run. The present study has been based on a mixed-method approach including qualitative and quantitative methods of data collection. On the one hand, qualitative approaches like observation surveys, case studies, KIIIs, MSCs, FGDs have been undertaken with different target participants, as lots of actors – PRIs, government officials and SHG members and villagers - are involved in the process. On the other hand, quantitative surveys (semi-structured) interviews have been conducted only with the Service Providers of the SFCs. The West Bengal research team, and with the help of two Field Consultants, gathered information using qualitative methods. The sampling strategy qualitative research was purposeful.

Observation and Findings:
The SFCs is best defined as a unique, women-led, technology-driven innovation of an existing Sangha to cater to the unmet needs on land recordation services of SHG women and other members of the community. By establishing the SFC, the self-confidence and entrepreneurial skills of women are given opportunity to thrive. The functioning of the SFCs in the state has made a strong impact on the different stakeholders in updating land records of its members. The trigger for this innovation lies in the seed sowed through promotion of women’s land literacy: once women came to know about the importance of land recordation, some stretched their interest further to learn about the government’s online platform for record updation. Now more than 155 SFCs are operational under the leadership of more than 800 Service Providers in the state and have extended more than 20,000 land related services to their members. The service providers of the SFCs gained in confidence over time about explaining the process and disposal of mutation cases online which according to them brought a good sense of satisfaction.
and pleasure in their mind and receiving much desired support from their spouses and other family members. With updated land records, the women farmers and their families can access benefits offered by schemes introduced by central and state government to support agricultural activities as also accessing institutional credit and crop insurance benefits. The service clients highly appreciated the SFCs provided services and acknowledged this as a great service to their families. The revenue officials are also appreciative of this unique initiative taken by the Sanghas.
4. Forest Ecosystem Services and Climate Resilience

7th India Land and Development Conference 2023

Forest Ecosystem Services and Climate Resilience

Chair
Dr Avinash Jain,
Head, Forest Ecology
and Climate Change
Division, Tropical
Forest Research
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Programme
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Aest Chief Technical
Officer, Tropical Forest
Research Institute

Moderator:
Dr Divya Mehta,
Research Associate, ICFRE

Ms Diksha Verma,
Research Scholar, FRI

Ms Bharti Patel,
Scientist, Institute
of Forest Biodiversity

Mr Najibulla
Omerkhil,
Kunduz University

1 November 2023 | 12:15 pm - 13:30 pm | VKS 001

Session Partner: Institute of Forest Productivity, Tropical
Forest Research Institute

Venue: FLAME UNIVERSITY
Forest-Community Relations: A Study of interplay between Local Engagement and Land Stewardship in Urban Fringe Forests

Diksha Verma, FRI

Keywords: Urban fringe forest, stewardship, community engagement, climate change, forest-people linkage

Urbanization is the leading challenge faced by human being at an unprecedented rate in the past few decades. Notably, Himalayas are facing the inflow of population expanding the urban areas by diverting the land use and its ecosystem functions. As a result, rural areas in proximity with forest ecosystem are transitioning into urban fringes which are referred as peri-urban areas. Forests of Himalayan regions may become fragmented because of urbanization, which might disrupt wildlife migration and habitat continuity. This study examines the dynamic and mutually beneficial relationships that exist between urban fringe forests and the local populations who lives in the periphery of the forest. Tree agglomerations in urban fringes offer vital ecological services such groundwater recharging, filtration of air and water, the storage of carbon, the provision of habitat for species, erosion control, water purification, and prevention of natural calamities, leading to safeguarding of natural resources. They support the overall ecological stability of the area which is crucial for maintaining the ecological balance and advancing the welfare of both urban and rural residents. To safeguard the health and productivity of forest resources for the coming years, forest stewardship entails using them wisely. The ecological, social, and economic advantages that urban fringe woods offer to both urban and rural people must be preserved and improved per distinguished forest management. These forests are exclusive because they are situated at the junction of urban areas and natural ecosystems, offering potential for sustainable management. Local communities are extremely important in the management and preservation of urban ecosystems with the intent to accomplish sustainable land use and support resilient urban-forest connections. Over the course of the following 40 years, urban populations in developing countries are projected to rise by more than 3 billion. To address the ongoing depletion of urban fringe forests and the dependency of local communities supporting their existence, the present study intends to make some contributions in sustainable urban planning and enhance the preservation and management of urban peripheral forests by combining various management strategies with the beneficiaries of the urban forest ecosystem. The mixed methodology approach was used for the data collection including quantitative and qualitative information collected through household survey in the Dehradun city located in lower Shivalik range of Himalayas. The findings indicated that the urban fringe forests were
perceived to be essential for urban community. Distinct variations among socio-demographic groups were observed. For instance, women, older individuals, and those belonging to a younger age group placed a higher emphasis on the significance of urban fringe forests for community well-being. Nevertheless, the impact of socio-demographic factors was relatively limited when compared to the influence of individuals value and conviction. To be more precise, the reflection of the study was urban community’s ecological perspective and their beliefs regarding forests including perceptions of forest qualities and management which played a significant role in explaining their attitudes toward urban fringe forest. Engaging local communities in the stewardship of urban fringe forests is crucial as sustainable management techniques can benefit from community-based initiatives. Enacting conservation measures like zoning, green corridors, and ecologically based urban planning that consider the distinctive constraints faced by urban fringe forests. Integrating stewardship principles like biodiversity preservation, improved incentives, sustainable harvesting, monitoring, and adaptive management; creating supportive local, regional, and national policies and regulations; developing plans to increase their resilience to climate change; and launching educational campaigns and outreach projects to spread the word about the value of urban fringe forests and encourage forest stewardship. To maintain the good health and vitality of urban forests, it is of the utmost importance to take the forest-land-people connection into account while establishing and growing the urban environment.
Impact of Human Interventions on Floral Diversity and Ecosystem Services in Different Forest Lands of Central India
Avinash Jain*, Nidhi Mehta, M. Rajkumar and Shiv Kumar Kaurav

*Corresponding Author – Scientist F & Head, Forest Ecology & Climate Change Division, Tropical Forest Research Institute

Key Words: Tiger Reserves, Territorial Forests, Biodiversity Assessment, Vegetation Diversity, Phytosociology, Carbon Sequestration, Forest Carbon Pools

Forests in India, with over 24 percent of the geographical area form the second-largest land use system after agriculture. Since time immemorial, these naturally endowed forest ecosystems not only home number of plants and wild animals, but also provide timber, fuelwood, fodder, non-wood forest produce and other important goods besides the copious ecosystem services. Over 75 percent of the rural population depends on forests for their survival and livelihood. However, their rights over the forests vary according to the extent of protection and restrictions imposed on the different forest lands. Wherein, any form of human interventions are strictly prohibited in protected forests such as national parks and tiger reserves, tribal and forest dwellers around territorial forests can graze livestock and utilize fuelwood, fodder, and other resources of such forest lands. Vegetation diversity and community composition of Panna, Pench and Satpura Tiger Reserves (TRs) of central India were compared with human intervened Territorial Forests (TFs) of the region to determine the impact of protection in national parks. Carbon stock in different pools viz. trees, ground flora, litter, deadwood and soil and annual sequestration rate of these forests was also assessed to determine their potential for mitigating climate driven effects. The dense vegetation of Tiger Reserves witnessed higher species richness from diverse families. Among tree species, Fabaceae was the most dominant family and Tectona grandis was the most abundant tree species, but Lamiaceae succeeded concerning the total number of trees per family. Vegetation of Tiger Reserves and Territorial Forests depicted 29-44% similarity wherein trees of former reported prominently higher basal area and Shannon diversity than the former. The trees per hectare in different diameter classes exhibited a reverse J-shaped curve for protected and unprotected forests having more than 30 per cent trees in 10-20cm diameter class. The annual carbon sequestration rate was found maximum in trees of Pench, followed by Satpura. Tectona grandis supremely dominated species-wise contribution in the carbon stock of the studied forests, followed by Lannea coromandelica, Lagerstroemia parviflora and Terminalia tomentosa. However, annual carbon sequestration was reported maximum in Flacourtia indica and Bombax ceiba. Carbon in herbaceous and litter pools of
protected TRs was observed more than TFs. Soil Organic Carbon (SOC) contributed the maximum among all the carbon pools. Pench TR reported maximum SOC (42.84 t ha⁻¹), followed by Satpura (40.10 t ha⁻¹). The total carbon in all the pools in TRs was recorded greater than TFs and in the order; Pench (79.68 t ha⁻¹) >Satpura (73.84 t ha⁻¹) >Panna (63.37 t ha⁻¹). It is evident that forests of the tiger reserves not only have higher vegetation diversity and richness but also enacted as superior carbon sinks by capturing higher carbon as compared to human intervened territorial forests. The study draws important implications over the impact of protection and flow of ecosystem services in different forest lands of central India.
Building resilience through biodiversity services in management of landscapes
Bharati Patel, Scientist, ICFRE - Institute of Forest Biodiversity, Hyderabad

Keywords: Biodiversity services, biodiversity-ecosystem function, biodiversity indicators, landscape management, climate change resilience

Species diversity is an important indicator of biodiversity as well as health of an ecosystem. It forms the backbone of ecosystem services in the form of supporting and functional services by mere existence and no direct monetary value. It also has functional significance to determine present performance and possible pattern that may occur in future as a response to intermediate stress of physical and biological origin. Theoretically a linear relationship between the number of species and ecosystem processes is predicted. But the concept – “enhanced species richness improves ecosystem functions” may not be generalized to all ecosystems and ecosystem functions. This relationship may not be necessarily linear, but if positive it will support more species. If the performing functional group comprises many species, then loss of some of the species will not impact the ecosystem and the system will be resilient. Thus, the species and processes have a positive but asymptotic relationship. Therefore, if we can ensure that the functional group is maintained and recovered, the ecological processes can be retained or revived. Mutualistic pollination and dispersal networks and commensalism are some of examples of relationships which gain resilience through ‘functional group’ approach. Mutualistic networks have emerged as means to investigate the impact of habitat modifications and loss on the biological diversity and prescribe management and conservation measures. Commensal relationships such as availability of habitat resources contribute to the presence or absence of species and thus create or fill the voids in other direct and indirect networks. However, this approach suffers from issues such as lack of knowledge on interaction webs constituting species, performance of the groups may depend on the landscape context, the proportion of functional recovery within group, impact on ecosystem may diffuse in species networks which mediate community performances for the process. An important feature of these interaction webs is, they often bypass the usual trophic structures in an ecosystem and thus get missed in general ecological observations. Thus, along with taxa-based structure-based indicators of biodiversity has been felt and gained momentum at global level in landscape ecology and management. The structure-based indicator approach requires prior assessment of land use history and characteristics of surrounding landscapes as guiding principles. Achieving these indicators ensures that the ecosystem is functionally viable. The ‘Biodiversity-Ecosystem Function’ (BEF) Approach which relies on the services delivered by mere existence of the biodiversity, with multiple trials will identify what may work for a landscape.
Factors That Influence Farmer’s Agroforestry Decision in a Remote Area of Kunduz Province, Afghanistan
Najibullah Omerkhil, Kunduz University
Gul Agha Sadiq, Kunduz University
Laraib Ahmad, Forest Research Institute (FRI)

Keywords: Agroforestry, Binary Logistic Regression, Factors, Household, farmland

Agroforestry has been used for many years as a sustainable management strategy. It strives to diversify and deliver previously acquired forest services and products from natural forests. This study analyzes the factors that influence farm tree planting decision of farmers. We focus on the Imam Sahib district of Kunduz province and collect data from 160 households in 32 villages of this region. A binary logistic regression model is developed to identify the features that influence farmers' tree planting decisions using the acquired data. The findings reveal that several variables impact the propensity of tree planting and the intensity of agroforestry technology. These factors include the income of the head of the farmer households, availability of irrigated farmland, large size of cropping land, and prior tree planting experience. Conversely, factors such as education, limited access to planting materials, large family size, availability of tree seedlings, age of the head of the households, loan, and insurance facilities can influence the decision and adaptation practices by farmers. So far, education plays an important role in strengthening farmers' understanding of the limits, opportunities, and needs of new technologies in the form of short-term training. This might mitigate the unfavorable relationship among the age of the family head and willingness to use agroforestry practices on their farmland. These findings can help strengthen the National Agroforestry Policy to promote tree planting among the farmers, to achieve targets for tree coverage, and reduce pressure on natural forests in Kunduz and other provinces and countries with similar situations.
5. Land and Literacy

7th India Land and Development Conference 2023

Land and Literacy

Chair

Dr Shivakumar Jolad
Associate Professor, FLAME University

Dr Akbikesh Mukhtarova
Independent researcher, Assosa University

Mr Habtam Seyoum Arega,
Faculty, Assosa University

Ms Sahar Jallad
Faculty, Birzeit University

Mr Amit Kumar Sarkar
Faculty, Manava Bharati School

Ms Surbhi Anand
Student, Manava Bharati School

1 November 2023 | 12.15 - 13.30 | Reading room

Hosted by:
Weakening of symbiotic relationship between land and people: Case from a Patna village
Amit Kumar Sarkar, Manav Bharti School

Key words: Land, shifting pattern, commons, people, alienation, Governance, ecology, sustainable development, urbanization, community engagement, well-being etc.

The relationship between land and people is symbiotic. Land supports and sustains human life and its very existence. Land is not only important for meeting basic human needs but helps maintain ecological balance among all human and non-human-plant and animal-life. A balanced ecology may consist of land, water, flora and fauna which together make a sustainable habitation to live and enjoy a happy coexistence.

Over the period there has been growing erosion of the ecological balance which has adversely impacted human life. Evidence suggests of growing encroachment of free common space, water body, orchards and natural flora and fauna. Important causes may include population growth (which is most referred to) and changing pattern of needs and conflicting demands. In recent times there has been rapid growth of urbanization accompanied by different patterns of housing and civic amenities. The growth of urbanization is accompanied by usurping in of peri-urban and village land space. In the absence of functional policies and appropriate governance measures acquisition of land and development of housing tends to create a situation where the land owners develop ambivalence stances—‘keeping the land or bartering for a price’. This is, usually, accompanied by government policies to acquire land to meet the housing needs of the millions. Higher price and dwindling interest in agriculture, which is considered as non-remunerative, forces the owners to yield to abandon traditional agriculture. This entails negotiation, ignoring peoples’ needs over profit, and ignoring human relationship.

The present study, which is part of an ongoing ‘Action Research Program’, of Manav Bharati International School (MBIS), Patna is intended to understand the dynamics of shifts in the land utilization pattern in the neighboring village of Chiraura. Located at the outskirt of the state capital, Chiraura is witnessing growing interest of the over populated city of Patna. Over period large chunk of land seems to have been acquired by the real-estate business. This has made the researchers-students and faculty more inquisitive and concerned as we have been visiting the villages for the ‘Community Engagement Program’ followed by continued exposure to the village for diverse research related to life,
livelihoods and culture. This process takes us across interesting anecdotes and narratives related to land transfer adopting rule twisting strategies. Inquisitiveness and awareness have grown into continued academic and research interests to observe and understand the phenomenon and dynamics of changing pattern of ‘land - people relationship’. Important aspects include: Changing pattern of land use, land transfer dynamics, role of non-government and government actors, changing ecological situation in terms of erosion of water body and open space - grazing, recreational and community use etc. We also intend to understand aspirational trajectory of the people more so of the youths who show scant disinterest in agriculture. We have used both qualitative and quantitative tools.

We shared discussed initial observations with the local community and other stakeholders. The tentative findings suggest the followings:

There are two distinct landholding groups: marginalized farmers with small land holdings and large landowners complaining of labor shortages. The latter category seems aspirational with adequate awareness of the outside world and opportunities beyond. The changes in the land use pattern could lead to a shortage of food grains, impacting India's efforts to achieve SDG 2, referring food security. The potential consequences may include disruptions in the Public Distribution System (PDS), higher food inflation, challenges in maintaining buffer stock, and potentially worsening of poverty rates. Additionally, the underutilized land could exacerbate disguised unemployment, creating additional pressure on land under cultivation leading to more use of chemical means. Chiraura village faces a shortage of common land for livestock grazing due to rising land values, resulting in fewer livestock. Supporting small farmers with more livestock can enhance income diversification and employment. Embracing regenerative agriculture practices like organic farming, cover cropping, and agroforestry can boost soil health, combat climate change, and improve land sustainability.

As triggers to the changing pattern, we observed perceived high financial gains offered by the real estate business. The trend of the erosion of social capital can also be witnessed due to the growing middleman ship and rule twisting agents who prompt and persuade the local community to adverse actions.

The findings may help us establish a possible link between the land governance, public policies, and perhaps youths turning into a disillusioned force unable to evolve and achieve a realistic and wholesome life goal. For the MBIS engagement of school students and the faculty, in this continued research endeavor may help create early awareness and sensitivity to understand the changing pattern of land use and accompanying social and physical ecological changes.
Land: A factor of production or a resource to nurture and protect?
Surbhi Anand, Manav Bharti School

Key words: Land as a resource, Land degradation, utility, Governance, sustainable development, young students, well-being etc.

In contemporary society, land is often regarded as an infinite resource, capable of sustaining human life indefinitely. However, this misconception neglects the harsh reality that land is facing severe degradation due to human activities. The misuse of land through excessive chemical fertilizers, insecticides, pesticides, and inappropriate crop cycles has detrimental effects on its quality as a resource essential for human existence.

This ongoing research, focused on the perceptions of adolescents regarding land: whether they view it primarily as a productive factor of production or as a precious resource to nurture and safeguard has far-reaching implications beyond the local level. By understanding how young students in different educational settings perceive the role of land in society, we are taking a crucial step towards achieving several global goals.

The research involves interviewing approximately 100 school students aged 13 to 18, attending classes 08-12, from both a private urban school and a government school. To gather data, a comprehensive questionnaire has been meticulously designed and administered to these students. Stratified sampling technique is used to collect the data. The sample size comprises fifty boys and fifty girls from each of the two categories of students, enabling a comparative analysis of their perceptions.

This study is motivated by the need to discern potential differences in how private urban school students and government school students perceive the role of land in society. By understanding these distinctions, we aim to develop effective strategies to raise awareness and sensitivity among young students towards land-related issues. The ultimate goal is to empower adolescents to take actions that protect and nurture the land, thus preventing further exploitation and misuse. With the changing paradigm of land utility in last 2 to 3 decades has impacted both rural and urban population. With the prevalent conditions of global warming, pollution, increasing population the sustainability of our ecosystem is at stake. Global parameters such as Sustainable development goals (SDG) as well as initiative taken by local governments acting as stake holders have been formulating policies to promote sustainability at macro level. With the use of information technology in the process of governance by implementing policies such as digitization of land records, GPS, Land mapping, and availability of land
ownership on public domain can help in better utilization of land among people along with better transparency and accountability. This will induce productivity and can also help in reducing problem of hunger, malnutrition and unemployment. Having perspective of new generation and how do they analyse the situation will help us to have a key insight on the understandably of the situation and to dwell with the probable solutions to the problem.

The findings of this ongoing research could have far-reaching implications. First, they may contribute to the formulation of educational strategies aimed at instilling a sense of responsibility for land conservation and sustainable land use among young students. This could lead to a generation of environmentally conscious individuals who actively engage in land protection efforts. Additionally, the results may prompt educational institutions and school boards to consider integrating curriculum elements related to land conservation and sustainable agriculture. By incorporating such topics into formal education, we can ensure that future generations are better equipped to address the challenges of land degradation and contribute to a more sustainable future on a global scale.

In summary, this research, while focused on local perceptions, is intrinsically linked to global initiatives. It addresses critical issues of land conservation, education, and equity, contributing to the achievement of the Sustainable Development Goals and paving the way for a more sustainable and equitable future on a global scale. The findings may help us establish a possible link between the land governance, public policies, and international agendas with the ground level reality.

Challenges of Formal Land Education in Conflict Settings: The Case of Palestine

Sahar Jallad, Birzeit University

Keywords: Palestine, Education in fragile, conflict-affected, and vulnerable (FCV) settings, Sustainable land management

In the academic literature, it is rarely possible to find research works studying the problems of formal land education in conflict zones, particularly analyzing the case of Palestine. The rare research work that examines the problems of formal education in Palestine mainly capture in recent years such aspects as challenges of online education, digital transformations in teacher education, and entrepreneurial education readiness in Palestinian Universities (Hamamra & Qabaha, 2023; Eliandy et al., 2023; Scott et al., 2023; Daragmeh & Halabi, 2023). To fill the gap in the academic literature, this paper studies the problems of land education in Palestine. The paper is structured as follows: The first part analyzes how academic scholarship studies formal land education in conflict settings using a
literature review method. The second part considers the challenges in land education in Palestine, based on expert interviews with land specialists at Universities in Palestine. Considering the dynamic in introducing formal land education programs, it is visible that since 2022, there were initially some attempts to introduce, for instance, the Arab – American University graduate Diplomas in Land Valuation; previously, only land surveying specializations were being implemented in Palestinian Universities. There were also some planned initiatives to launch other more specific specializations like a BA in Land administration or courses within civil engineering, master’s degree programs in Spatial Planning and Land Administration within architecture, and urban planning specializations. However, the conflict escalation cycles affect the academic process. The research findings demonstrate that studies on sustainable land education in Palestine are rather absent in current academic scholarship. Expert interview results show that there were few attempts to introduce graduate programs, e.g., BSc and MSc programs in Land Administration and online courses in sustainable land management, land surveying, and other specializations. However, as interviewees underline, such initiatives, usually funded by foreign donors, are terminated, and later closed in conflict escalation periods. Thus, there is no visible continuity of such land education initiatives. Also, local specialists need to be educated for Sustainable Development Goals (SDGs) reporting. However, there is still a lack of academic programs or courses dedicated to studies addressing challenges related to climate change’s impact on land, environmental degradation, drought, and other aspects related to the environmental dimension of land education programs. Thus, the formal academic curricula on land management or land administration are currently absent in Palestine. Those who have a possibility try to acquire graduate BSc and MSc degrees in Land Management, Land Planning, and other land and agriculture-related specializations in foreign countries. However, how many of these specialists return to Palestine after graduation from foreign academic institutions with specializations in land management is unknown. Another problem the research demonstrates is that the specializations in Land Administration should be narrower. As interviewees mention, there is a lack of land use planning, land and water management, land and ecological restoration degrees, agricultural land use, and other specific specializations in formal land education. Considering that farming is one of the critical and significant sectors of the Palestinian economy, education in sustainable land use and climate change adaptation should play a crucial role. Related to land tenure specifics, it is possible to mention that the statutory land tenure regime in Palestine is complex, which leads to cumbersome procedures and systems with a high percentage of shared ownership and land-related disputes, reducing certainty, liquidity, and investment. These land tenure complexities significantly impact land markets, land valuation, land use, and land management.
Thus, from the Land and People relationships concept lens, much emphasis should be paid to introducing sustainable land administration and land management practices to prepare local specialists and enhance Palestine’s progress towards Sustainable Development Goals.
Challenges of Formal Land Education in Conflict Settings: Cases of Palestine and Ethiopia.
Akbikesh Mukhtarova, Nazarbayev University
Sahar Jallad, Birzeit University
Habtamu Seyoum Arega, Assosa University

Education in fragile, conflict-affected and vulnerable (FCV) settings is a relatively recent and understudied area of research (Smith-Vaux, 2003; Davies, 2003; Brock, 2011). In the last few decades, academic scholarship has captured the interrelationship between education and conflict, for instance, in Palestine and Ethiopia (e.g., Alzaroo & Hunt, 2003; Yohannes, 2002); however, there is still an acute deficiency of academic works specifically examining the problems of formal land education in conflict-affected countries.

This research possesses features of a most-different comparative case study and aims to identify common challenges in formal land education in conflict-affected countries belonging to different regional contexts (Sub-Saharan Africa and the Middle East). Our research will analyse the following questions: namely, what are the common challenges that countries in conflict settings (such as Palestine and Ethiopia) experience in training and education of land professionals (in land management, land use, land administration, land disputes, land governance) and how it is possible to incorporate the sustainable land education into the Universities curricula in these countries. We selected cross-regional – the most different comparative case study design for this research. Our rationale behind the selection of the comparative research case study method is in the identification of common factors and challenges that despite regional context specifics play a substantial role in formal land education inconsistency to meet challenges in conflict-affected countries (lack of specialists and brain drain in higher education, overlapping conflict land rights, land corruption, environmental problems, climate change impact on land, and other challenges).

The research will be based on twenty semi-structured expert interviews with land professionals and academic staff of higher education institutions in Palestine and Ethiopia (ten from each case country). It is anticipated that this research will shed light on problems that conflict affected countries encounter in formal land education, namely in training the future generation of land professionals and challenges in incorporating sustainable land education practices into local academic curricula.
6. Rural & Agrarian Land relations: Inclusion, Equity and Contestations

Rural & Agrarian Land relations: Inclusion, Equity and Contestations

Chair

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1 November 2023  |  14.30 PM - 15.45 PM  |  VKS 002
Spaces of Perennial Contestations: Situating common lands in a caste society with a colonial history
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Keywords: Common Lands, Collective Action, Encroachments, Caste Society, Tax Farming System, Land Tenures, Formalization of Land Laws, Social Movement.

Spaces of Perennial Contestations: Situating common lands in a caste society with a colonial history
The topic of “commons” has been of a big interest in academic research since some decades. Scholarly traditions have drawn examples from the management of commons to substantiate theories for the possibility of collective action, and there have been sustained debates about the most efficient ways to govern the “commons.” A tradition of thought led by American political scientist Elinor Ostrom argued that communities were capable of evolving institutional mechanisms on their own, to efficiently manage the common pool resources (CPR)s in their control, through collective action. Ostrom bases her argument on examples of “successfully” managed CPRs from various parts of the world by the communities through collective action and prescribes a set of design principles that can lead to such success.

Ostrom’s study inspired a vast amount of scholarship on this theme and has also greatly influenced the way the concept of commons is generally understood. This paper is the outcome of an attempt to understand “common lands” in Indian context, particularly in the region which is now constituted in the modern state of Maharashtra, in the light of Ostrom’s thought.

The main objective of this paper is to seek some answers from history to the question of what lands are understood to be common lands in this region and how did they come to be; and how do they compare with the commons that Ostrom has cited in her study? More particularly, this study focuses on the common lands in rural parts of the state. I have analyzed some laws and government resolutions since the British colonial times, the diaries of some pre-British rulers of this region, and some old publications and records about land, in addition to some contemporary literature about common lands to pursue these questions. The paper explores four major themes centred around the common lands; the village centric nature of the rural society since the ancient times; the tax farming system during the pre-British times and various land tenure systems prevalent in this region; the process of bureaucratizing land governance during the British times; and the collective action in the form of social movements by the Dalits and other marginalized castes for their land rights, after independence.
Historians argue that all the villages in this region, since the ancient times, essentially had three types of lands; the land for houses, the land for cultivation, and the land for grazing animals. The land for cultivation used to be held privately whereas the other two types of land was managed by the village community. However, the caste system played an important part in this scheme of land management. During the pre-British times, the land revenue was the most important part of state revenue. The system of tax farming, where the state gave monopolistic rights over the land to a handful of people in exchange of a lump sum of taxes, was popular during these times. Even the pasturelands of the whole state were farmed to certain individuals in some instances. As the farming system treated the village as a single unit for taxation, the management of common lands in the villages usually remained in the hands of village headmen. The land in the village that was not under private cultivation could be utilized for community purposes, and the adjustments were possible at the village level. The British government however attempted to establish a land governance system that was more impersonal and that was heavily based on detailed written laws and records. Some “unoccupied lands” were specifically designated as “lands for special purposes.” This bureaucratization impacted the nature and modalities of the common land governance. After the independence, some parts of Maharashtra witnessed a social movement by the Dalits and the landless of the state, asking for rights to cultivate the common lands. The Gairan movement in Marathwada region is particularly interesting in this context, as it saw a collective action, not for “effectively managing the common lands,” but for letting the Dalits and the landless own parts of these lands. Very recently, in September 2022, the state government of Maharashtra informed the Bombay High Court that there are around 2,22,153 “illegal” constructions on the common lands in the state. On the other hand, reports of persecution faced by the landless Dalits and nomadic communities for attempting to construct houses on the common lands are still very common. The state claims a superior right over all the common lands and they are also always wanted by the industrial projects and for establishing public facilities like schools and hospitals.

I have argued that the common lands in this region differ from the concept of commons in Ostrom’s thought by virtue of two key historical factors; the community that is supposed to have control over these common lands is rigidly stratified by the caste system, and the colonial history that attempted to impose a bureaucratic rationality from the above, obstructed a possibility of an evolution of institutional mechanisms from the people. Because of this historical context, the common lands in this region have evolved to become perennially contested spaces.
Caste, Land, and Social Hierarchies: A Comparative Study of Land Relations in Eastern and Western Uttar Pradesh
Navneet Kumar, Ph.D. Scholar, Jawaharlal Nehru University

Keywords: Land Relations, Tenancy, Caste, Inequality, Regional Heterogeneity

With the neo-liberal reforms in the form of globalization, privatization, and liberalization; the agrarian economy has undergone a significant change, but in a regionally specific and diverse manner. The ubiquitous nature and preponderance of small and marginal peasants in agriculture, along with the continued capitalist transformation of agriculture, point to the need for a more flexible approach towards capitalism in Indian agriculture. This transformation has distinct regional roots, and regional trajectories of agrarian change and production relations are an important aspect of the way agrarian change is taking shape in India. Furthermore, land being one of the key drivers of structural changes in the existing production relations, the study particularly attempts an in-depth class-caste-based exploration of analysing the land relations in a regional framework focusing on the eastern and western parts of Uttar Pradesh. More precisely, the study attempts to analyze the distribution of land owned and land operated, the amount of land leased in, and leased out, the nature; forms and extent of tenancy, and the level of landlessness for the different agricultural classes in the two regions.

Literature indicates that while the western part of Uttar Pradesh is considered agriculturally developed and its agrarian change has been attributed to capitalist relations of production, the eastern region is typically viewed as underdeveloped, with its agrarian change largely attributed to non-capitalist, semi feudal production relations. During British rule, the western part of the state was characterized by the ‘Bhaichara system', fostering peasant proprietorship and encouraging tenant investments. In contrast, the eastern part was under the Zamindari system, leading to a stratified rural society with various layers of tenants, subtenants, and landlords. Furthermore, it has been found that while it is the caste-based dominance which plays a larger role in the eastern region, it is the class dynamics that primarily determine agrarian relations in the western region. Thus, it is evident that understanding the disparities between the East and West as solely a dichotomy of capitalist development versus semi feudal stagnation is inadequate and a deeper analysis of the power dynamics between agrarian classes and caste groups is imperative. The study attempts to analyse the similarities and differences in land relations through a field survey of 320 households in Uttar Pradesh, the districts for which have been chosen based on an Index of Agricultural Development. Two districts from each of the regions have been selected, so that one of
the districts is among the highly developed districts within the region, while the second is among the relatively less developed districts within the region. From each of the four districts, one village has been selected. The villages have been selected based on an index based on data available from the Primary Census Abstract, 2011. For each of the villages, households were first sorted and then categorized based on caste and size of land ownership and thereafter the samples were selected proportionally from each category.

The study reveals that both the eastern and western parts of the state witness a high degree of inequality in ownership of land and this inequality is slightly higher in the eastern part of the state. The index of access to land values suggests that the inter-caste inequality in access to land is higher in the western part when compared to the eastern part. The extent of landlessness has been found to be higher in the eastern part and it is the Dalits who form a majority when it comes to landless households. The tenancy is higher in the eastern region and it is mostly the other backward castes and the Dalits who are leasing-in land. While both in the eastern and western regions it is the small and marginal landholders who form the majority in leasing-in land, the proportion of the same is higher in the eastern region. Furthermore, the study reveals that the share of households leasing out land is higher in the western region vis-à-vis the eastern region. This finding could be attributed to the fact that an increase in the non-farm opportunities in the western region has given rise to additional sources of income, providing an incentive to lease out land and specialize in non-farm jobs. The research further highlights that irrespective of the region, inadequate household land ownership emerges as the leading cause for leasing-in land, accompanied by a desire for additional earnings. However, the motivation for extra income does not seem to play a significant role in the eastern region. Additionally, in the western region, households primarily lease out land due to a lack of manpower, whereas in the eastern region, reasons for land leasing vary from financial constraints to unprofitable self-cultivation and the remoteness of the land from the residence. Finally, the study also shows that landlords in the western part of the state have a clear preference for fixed cash rent while in the eastern region, sharecropping turns out to be the dominant form of tenancy contract. Interestingly, usufructuary mortgage has been found to be still prevalent in the eastern part of the state, however, this usufructuary mortgage is not just limited to the upper castes but is largely practiced by the other backward castes which reveals the changing character of land relations within the different caste groups in the contemporary times.
Inequalities in Land Ownership: Insights from Village Surveys
Madhura Swaminathan, Indian Statistical Institute
Tapas Singh Modak, Foundation for Agrarian Studies

Keywords: Inequality, Land ownership, Landholding data, Village Studies, social groups, socio-economic classes

Land is recognized as the most crucial asset in an agrarian society both in terms of being a productive asset and also an indicator of social and economic status and basis for further wealth accumulation. Inequality in ownership of land is in many ways at the base of other interpersonal inequalities in rural areas. In this context, using official statistics and data from village studies (conducted by the Foundation for Agrarian Studies (FAS) under its Project on Agrarian Relations in India), this paper investigates aspects of inequality in access to land by households in contemporary rural India across agro-climatic regions and by social structure of the society.

The Land and Livestock Survey of the National Sample Survey Office (NSSO LHS), the most important official statistics to study land distribution in rural India, shows that inequality in respect of ownership of land has been very high through the last seven decades (with a Gini coefficient of over 0.7). The current pattern of distribution of land ownership arises from historical inequalities, but the evidence shows that policies of the Indian government, notably land reform policies, have not dented these inequalities (with the exception of a few states). It is important to note that inequality is a little lower at operational distribution of landholding than ownership, which suggests that a section of households without ownership of land are able to lease in and operate land.

Further, this study used survey data of 19 villages from the archive of the Project on Agrarian Relations in India (PARI) of the Foundation for Agrarian Studies (FAS). The study of PARI villages explains the social basis and context of inequality in access to land in contemporary rural India. PARI surveys are rigorous household socio-economic surveys based on the method of village studies. It aims at multi-disciplinary theoretical and empirical investigation of village-level production, production systems and livelihoods, and the socio-economic characteristics of different strata of the rural population. The project has so far conducted a study of 27 villages spread over 12 states in India. These villages are located in distinct agro-ecological regions, with concomitant differences in physical characteristics such soil type, fertility, and climatic conditions; different historical trajectories of development; distinct social structures; and
village economies. They cover a range of agrarian regimes that exhibit characteristic features of agrarian transition in India. These villages are studied through rigorous census-type surveys of socio-economic characteristics of resident households.

We found that severe inequality in ownership of land is a general phenomenon in rural India today, including across social groups and socio-economic classes. Among all resident households, the top 5 per cent of households accounted for 40 per cent or more of total agricultural land in eleven of these nineteen study villages. While most of the villages with extremely high concentrations of land were villages with access to irrigation, there were some like Zhapur village (Kalaburgi district, Karnataka) that belong to a dry zone but where zamindari was prevalent before independence. At the same time, the bottom 50 per cent owned no land of their own or less than 5 per cent of the total agricultural land in these study villages.

Among socio-economic classes, the class of landlords and capitalist farmers, largely the dominant caste of the study villages, own a substantial portion of land in the study villages, characterized by high concentration of land. The peasant households are more heterogeneous in terms of ownership of land. The rich peasant households have the highest level of land ownership, while at the end of the spectrum, poor peasant households own only a small share of land. There is a great land poverty among manual worker households, largely Dalit households or region-specific oppressed caste, who comprise a substantial share of population in the study villages.
Perceptions and Practices: A Qualitative Study on Agrarian Land Reforms and Informal Tenancy in Uttar Pradesh and Haryana

Arjun Krishnan, Centre for Civil Society

Keywords: Ninth Schedule, Land, Informal, Uttar Pradesh, Haryana

The relationship between land and its inhabitants is a cornerstone of societal development, shaping economic, social, and political landscapes. In India, this relationship is further complicated by historical land tenure systems and the legislative attempts to reform them.

The Ninth Schedule of the Indian Constitution, established by the First Amendment, was designed to shield specific laws from judicial scrutiny. Predominantly, these laws aimed to safeguard land reform legislation against constitutional challenges. Of the 282 laws contained within it, a substantial 84% pertain to agriculture, seeking to address socioeconomic disparities in agrarian landholding in India. These laws impose restrictions on land ownership, tenancy, land purchase, and other constraints.

Historically, these ceiling laws emerged in the 1960s with the belief that a direct relationship existed between farm size and productivity. Consequently, effective ceiling implementation and land redistribution were considered solutions to both productivity and equity issues. However, various reports, including Dhagamwar (1981), the Planning Commission’s agrarian reform assessments, the Dantwala and Shah Report (1971), and the Task Force on Agricultural Reform’s report (1980), indicate that these reforms largely fell short of their intended impact nationwide.

Despite extensive literature on the ineffectiveness of these land reforms, there is a scarcity of perception-based studies concerning agricultural land regulations. Given that farmers are the primary stakeholders affected by these regulations, understanding their viewpoints is paramount for formulating regulations that genuinely safeguard their interests. Moreover, farmers across India have devised informal methods to circumvent these laws, yet the underlying operations and motivations remain elusive. Our study aims to fill this knowledge gap.

Methodology
Our research comprises two key components: a de jure and a de facto analysis of the Ninth Schedule legislation, focusing on Uttar Pradesh (UP) and Haryana. These states were selected due to their proximity and project constraints, as well as their possession of critical ceiling and agricultural land sale restrictive laws. Additionally, while tenancy is largely legal in Haryana, it is severely restricted in UP,
offering insights into the development of informal legal systems within the framework of formal law.

We evaluated the impact of key legislations, including the Haryana Ceiling on Landholdings Act, 1972; the Uttar Pradesh Zamindari Abolition and Land Reforms Act, 1951; and the Uttar Pradesh Imposition of Ceilings on Landholdings Act, 1960, as amended up to 2023. Our investigation revolved around three primary themes: ceiling restrictions, tenancy limitations, and constraints on the sale of agricultural land. Furthermore, we explored the consequences of converting agricultural land for alternative purposes upon sale, a relevant but distinct aspect.

Through qualitative interviews and focus group discussions involving 62 participants across selected tehsils in UP and Haryana, we employed convenience and snowball sampling techniques to gain insights into the undocumented informal market.

Findings:

– Awareness and Perception: A significant finding was the widespread lack of awareness among farmers regarding the regulations of the Ninth Schedule. When informed, many expressed oppositions, suggesting a disconnect between legislative intent and ground realities.

– Local Customs vs. Legislation: Local customs and traditions, especially concerning leasing practices, often stand in contradiction to the formal laws. This highlights the resilience and adaptability of local communities in navigating restrictive legal landscapes.

– Unintended Consequences: The study found that conversion laws, meant to regulate the change in land use, have inadvertently led to inefficient behaviors. This includes inflated prices for barren land and the abandonment of fertile land for non-agricultural conversion, indicating a misalignment between policy objectives and outcomes.

Implications for Practice and Research:

The findings underscore the need for a more participatory approach in formulating land laws, ensuring they resonate with the lived experiences and aspirations of the farming community. Policymakers should consider the intricate land-people relations and the socio-cultural dynamics at play when drafting legislation.

The study advocates for comprehensive research spanning diverse regions to understand the broader implications of the Ninth Schedule and its impact on India's agrarian landscape.
7. Land Use Transitions in Schedule Areas and implications on Tribal Land Tenure and Livelihoods

Land Use Transitions in Schedule Areas and implications on Tribal Land Tenure and Livelihoods

Chair

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1 November 2023  |  14.30 PM - 15:45 PM  |  Reading room

Hosted by:
Protected Area expansion in India: Impact on land rights and tenurial security of local communities- Experiences from Kumbhalgarh Wildlife Sanctuary and Corbett Tiger Reserve
Meenal Tatpati, Kalpavriksh Environmental Action Group

Keywords: Protected Areas, Tenurial security, conservation governance, relocation, evictions, parks and people, pastoralists, community-led conservation

Protected Areas (PAs) cover over 170,000 square kilometres of land and marine and coastal zones in India, which accounts for approximately 5% of the total land area in the country. They are legally classified as national parks, wildlife sanctuaries, conservation reserves, and community reserves, earmarked for wildlife conservation and established through procedures laid down under the Wildlife (Protection) Act, 1972 (WLPA) and its subsequent amendments.

These protected areas are home, not only to wildlife, but also to indigenous (adivasi) and other forest-dwelling and dependent communities, including pastoralists, fisherfolk, and landless individuals. However, the creation of protected areas has led to disputes over ownership and access to land and resources. This is due to the uncertain tenurial rights of the communities on the land, which is a result of colonial laws governing land classified as forests, and the unwillingness of the authorities to adhere to the process of settlement of rights as laid down under the WLPA, before notifying these areas as PAs.

Despite the enactment of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, which aims to recognize and vest individual and collective rights over land and resources to communities living in and around forest areas, including protected areas, conservation, and development-induced displacement, through relocation and evictions, and other forms of marginalization continue to persist.

India started a flagship conservation policy called 'Project Tiger' in 1973 to conserve the rapidly dwindling population of tigers and their habitat. It was then operationalized as a PA category within the WLPA through an amendment in 2006. The amendment allows for state governments to notify areas as 'tiger reserves' with the recommendation of the National Tiger Conservation Authority, also a statutory body under the WLPA. The reserve has a core or a Critical Tiger Habitat, which comprises an already existing National Park or Wildlife Sanctuary, and a buffer area. The CTH is supposed to be an 'inviolate' for tiger conservation but should be done without affecting the rights of the Scheduled Tribes or such other forest dwellers. However, the term has been taken to mean 'free of any kind of..."
anthropogenic presence' and has invariably meant relocation and sometimes evictions of people living within these areas.

This paper looks at two protected areas, the Kumbhalgarh Wildlife Sanctuary in Rajasthan, which has just received the nod from the NTCA to be turned into a Tiger Reserve, and the Corbett Tiger Reserve, the first National Park in India and one of the initial nine to be declared as a Tiger Reserve under the Project Tiger policy. The paper aims to critically examine the conservation decision-making and governance in India's Tiger Reserves. It seeks to provide a detailed analysis of conservation laws that have been built on perceived compliance with earlier forest laws that were supposed to fix tenure systems but have been insufficiently implemented, leading to greater tenurial insecurity and loss of livelihoods. It addresses the continued expansion of these tiger reserves over adjoining areas, perceived as an inevitable necessity in the conservation of tigers as their populations increase, and the lack of scientific and objective study in determining the areas as suitable for expansion while risking land security of more and more people.

The paper critically examines the effect that conservation laws and policies, especially related to Tiger conservation, have on the inefficient land tenure security which further affects land use of the Raika community of Rajasthan and the Van Gujjar community in Uttarakhand (both pastoralist). Being pastoralist communities (traditionally they do not own land), the knowledge of their unique land-use practices is vital for decision-making bodies yet is often confused and mainstreamed. It also highlights how governance of these areas systematically excludes people from traditional and customary land-use practices. The paper emphasizes how the legal requirement of 'consultation' with local communities for conservation land use and decision-making on the governance of protected areas is a mere tokenistic attribute of the nature of conservation adopted by India.

Since the creation of Tiger Reserves is accompanied by relocation, the paper highlights how relocation and rehabilitation efforts are not sufficient and are often coerced, and place already marginalized communities at great risk. It thus draws on lessons in conservation governance methods utilized in both the protected areas and argues that successful and conflict-free models of conservation can only be achieved if they are led and actively managed by local communities.

The paper is a result of long-term action research being conducted in the two areas in collaboration with members of the local communities, organizations, and other regional stakeholders. The research employed focus group discussions (involving community elders, youth, and women), individual interviews with community members, forest officials, and district administrative staff, as well as an extensive secondary data literature review.
Colonial Origins of Spatial Inequality: Measuring the long-term persistent effects of Scheduled Areas in India
Ankit Bhatia, Johns Hopkins University

Keywords: Economic Development, Land Rights, Property Governance, Indigenous People, Impact Evaluation

The paper aims to empirically investigate the long-term persistent effects of the colonial-era Scheduled Districts Act, 1874 policy (SDP). I use a geographic Regression Discontinuity design to causally identify the treatment effect of SDP on the economic and political development of Fifth Schedule Areas (SAs) in India. The Fifth Schedule Areas in India are spread across 90,000 villages in 10 states accounting for almost 100 million people in residence. Despite the constitutional protection of land rights and a long history of affirmative action, SAs (and STs in residence) continue to remain among the most improvised regions (communities) in the world. On most indicators of economic development, SAs fall behind by two to three decades relative to other comparable regions in the country. Furthermore, the spatial correlation of SAs with Left Wing Extremism districts is testimony to the extra-legal translation of historic injustices—affecting not only the economic and political development of these regions but also challenging the internal security of the state. This paper makes empirical contributions to the evolving literature on the role of colonial institutions on the long-term political and economic development of host countries, the political economy of property rights, and the impact of place-based affirmative action policies on the stability and internal security of the state.

In this paper, I investigate the causal implication of SDP on key development indicators such as access to public goods, the incidence of poverty, agricultural productivity, the rate of urbanization, and land prices. The RD estimates suggest that at boundary on average SAs have 10 percent lower access to public goods, an index comprised of educational, healthcare, roads, power, and communication facilities. Furthermore, SAs have 20 percentage points higher incidence of poverty, 15 percent lower consumption levels, 10 percent lower agricultural productivity, and almost 40 percentage points lower urbanization rates. Not only that, STs residing within SAs are far worse off than STs outside SAs. Despite STs having access to more land within SAs, they are significantly underdeveloped on most indicators including income levels, access to productive jobs, and consumption of private goods.

I explore the role of SDA in combination with the Land Alienation Prohibition laws of the 1950s to argue that access to de-jure secure (strong) property rights does not necessarily translate into economic development. Indeed, secure land rights under weak market and political institutions result in de-facto
weak property rights. Using plot-level big data from Odisha, I show that land in SAs is underpriced by 25 percent resulting in significant undervaluation of economic assets of the poor. The paper finds that political centralization instituted by SDP in parallel to exploitative institutions such as the Indian Forest Act of 1878, and the Land Acquisition Act of 1984 resulted in poor human capital and strict monopoly of local elites over land and capital markets. Poor human capital and restrictions on land markets limited outside opportunities and trapped communities into low productivity land use. In the post-colonial period, despite the constitutional protection of land rights, a lack of human capital and continued extraction of natural resources under a non-existent Rehabilitation and Resettlement policy resulted in over-dependence on land resources, causing large scale legal and extra-legal conflicts. The silver lining is that post the adoption of PESA in 1996 and growing financial inclusion in the last decade, there is growing evidence of spatial convergence and a sign of structural transformation in SAs.
Conceptualising the urban evolution and Customary Land practices in Khasi hills
Yogesh Kumar, PhD Scholar, Jawaharlal Nehru University

Keywords – State, Urbanization, Customary Land Practices, Khasi Hills, Community Land, Privatization

The definition of Urban varies in different parts of the world. In India, Urban areas are defined by the Census of India under two categories: Statutory towns and census towns. Any place with urban local entities, such as Municipal Corporations, Municipalities, Notified Area Committees, and so forth, is considered a Statutory Town. Whereas census towns are areas with a population of at least 5000, a density of 400 people per square kilometre, and 75% of men employed in the non-agricultural sector. This current definition of Urban contains important embedded assumptions like a well-established governing state that demarcates statutory towns for administrative purposes and a population with private property relations which is getting diversified in its economic activities from the primary sector to secondary and tertiary sectors. This could be true for the Urban areas of mainland India but North Eastern states needed to be understood with the very basic philosophies of the evolution of State, Urban and Private property relations (especially in terms of land). Here ‘State’ doesn’t mean a province of a country but a ruling institution. There are multiple theories of the evolution of State and Urban but the point upon which every theory seems to agree is the very need of surplus generation for survival of the State and Urban. With the surplus generation, another characteristic which evolved is the Private property relation. Now data suggest that even after the independence, the urban population in the Northeast was less than 5% (census of India, 1951). In the 1941 census, three states (hilly states) namely Arunachal Pradesh, Sikkim and Mizoram had no urban population. Whereas Nagaland, Tripura, Assam and Meghalaya had merely 1.85%, 2.45%, 3.11% and 6.87% urban population respectively. Only Manipur had the urban population share in double digits i.e. 19.47%. Although cities can be traced in the Northeast before the advent of the Britishers, those clusters were mainly the cities of different rulers in plain areas like Brahmaputra plains, Cachar Plains, Imphal valley and plains of Tripura. Not long ago, almost the entire hill region of the Northeast was Stateless (Zomia), with no urbanisation and very insignificant private property relations because of no surplus generation to support these. North East region still does not produce surplus food grains. However, Britishers introduced urban centres in hilly regions mainly in the form of administrative units, tea gardens, hill stations and cantonments while the resources or surplus required for sustaining these institutions were supplied from outside. Hence, these urban centres of the British Era could also be understood as the power hubs made for the ruling elites.
and the army instead of the concentration of the population due to diversifying economic activities. Historically, as these urban centres were a very small part of the entire region and most part of the North-East was left without much interference in their cultural and economic practices, there was not a direct conflict between urbanisation and the traditional practices of the people. But after the British rule and independence in 1947, the realm of state and urban areas began to increase and a significant population got urbanised in North Eastern states after the independence in 1947. State and urbanisation bring with them, cultural and economic practices which were not part of the traditional practices of the people for eg. - the privatisation of land, rapid economic development, and sheer inequality in the ownership of the resources. Urbanisation is not merely clustering people and changing population density, it is the space of changing production processes and property relations. This paper focuses on land management and hence the point of enquiry would be to conceptualise changing land management practices in Shillong City of Meghalaya which is very eye-catching after looking at the literature and available data. Earlier, the customary practices of land management were based on community ownership providing access to every destitute member but with the introduction of private land ownership, 88% of the population became landless in the district creating a divide of haves and have-nots. The land tenure system is heading towards private ownership of land with a strong state comprised of required forces to maintain property relations. These complications of land management practices in the tribal lands and their consequences with the commencement of the urbanisation process have been tried to understand in the paper with the help of different theories of urban evolution and the analysis of available data regarding land in the Khasi Hills. An exploratory research methodology approach has been used to understand the phenomenon of land privatisation and urbanisation. It will provide a clear view of the broader framework under which these phenomena are bound to occur. Understanding the length and breadth of the circumstances will also highlight the existing power relations and conflict of interests rather than providing ill-informed solutions to the immediate problems arising from the changes occurring.
Forest Rights Act (2006) and the politics of forestland diversion in Ajodhya Pahar, West Bengal
Suchisree Chatterjee, Department of Humanities and Social Sciences, IIT Bombay

Keywords: Forest Rights Act (2006), Gram Sabha, Community Forest Resources (CFR) rights, Forestland Diversion

The Forest Rights Act (2006) is unprecedented in how it has tried to address the ‘historical injustice’ done to the Scheduled Tribes and Other Traditional Forest Dwellers (OTFD) by the colonial appropriation of land and forest for the first time since independence. A key component of FRA (2006) is to recognise the Individual Forest Resources (IFR) rights as well as the Community Forest Resources (CFR) Rights of the forest-dwelling communities. This has led to the development of a new form of land-tenure relationship in the forestland as the forest-dwellers who were previously seen as encroachers under the bureaucratic land control of the forest department now needed to be seen as legitimate rights holders to the forestland. The Forest Rights Act (2006) have not been welcomed by the Forest Department or the Ministry of Environment and Forests (MOEF) since the beginning, as evidenced in their opposition to the Ministry of Tribal Affairs (MOTA) when the act was being formulated. In the years following its enactment, FRA (2006) became important in safeguarding the tenurial security of the forest dwellers although the process of implementation itself has faced difficulties in almost every state in India, mostly due to the apathy at the bureaucratic levels and opposition of the Forest Department. Despite these difficulties, implementation of FRA (2006) has been carried forward mostly through initiatives of the Adivasi interest groups or the allied NGOs, with the recording of land rights and demarcation of CFR areas emerging as activities seeing popular participation of the forest-dwelling villagers for whom this became an act of claiming ownership of the forestlands. Yet FRA (2006) has not given all-round security to forest rights of the Adivasi communities and the OTFD. Even in areas under the 5th Schedule, forestland has been diverted to non-forest uses like mining or hydroelectric projects by the state governments, with the consent mechanism mandated in FRA (2006) for such actions rarely observed. In places where the Forest Rights Committees (FRC) or the Gram Sabhas have been active, their consent is more than often not taken while the state government unilaterally takes decisions like forestland diversion. In these circumstances asserting forest rights over community resources like rivers or sacred hills by forming Gram-Sabhas as mandated by FRA (2006) in itself becomes an act of resistance.

Methodology and findings: I have conducted ethnographic fieldwork in different villages of the Ajodhya Pahar hill range in the Purulia district of West Bengal. My ethnographic fieldwork has shown
how the Adivasi resistance against the diversion of forestland by the state government for the Turga Pumped Storage Project (TPSP) on the Thurga River in Ajodhya Pahar, has essentially pitted the institution of Gram Sabha, mandated by the FRA (2006) against the elected Gram Panchayats in the two constituencies of Ajodhya Pahar and Baghmundi in Purulia. The West Bengal government has previously used the Gram Panchayats led by the ruling party TMC to legitimize the TPSP, while the Adivasi organisations had resisted by forming FRCs and Gram Sabhas and recording the CFR and IFR rights in the disputed villages to highlight how the mandated consent was never taken. This had happened simultaneously with the PIL case filed in the Kolkata High Court in 2018 by the forest-dwellers of Barelahar village in Ajodhya Pahar, where the project was feared to affect the IFR cultivated plots of the litigators, besides drowning the sacred Marangburu Hill adjacent to the village. Over the years with the progress in the litigation, the Santal and the Bhumij communities in Ajodhya Pahar have increasingly engaged with the legalities of FRA (2006) and although the verdict given by the Kolkata High Court in 2021 had termed the litigation as ‘pre-emptive’ while transferring the responsibility of taking consent to the Gram Panchayats, the Adivasi organisations had undeterredly worked for the implementation of FRA (2006) across Ajodhya Pahar, such that by June 2023 at least 20 Gram Sabhas were formed in the region, whereas there was none in 2018. It can be said that the demand for tenurial security and land rights of the Tribal communities in Ajodhya Pahar has caused the implementation of FRA (2006) to become a rallying point for forestland activism not only in Ajodhya Pahar but also in other land-based movements in West Bengal like the resistance to the Deucha-Pachami coal mines in the nearby Birbhum district.
Urbanization in the Fifth Scheduled Areas of India: Land-use Illegalities in the Peri Urban Areas of Ranchi
Himanshu Baranwal, Independent Researcher

Keywords: Land; Land-use Planning, Urban Governance; Caste; Legislation and Urbanization, Informality and Illegality; Urban Inequality, Ranchi; Peri-urban

The Indian urban landscape is riddled with various inequalities which are different in different cities and their complexities are often culturally or historically rooted. The status of many Indian cities presents a picture in contrast with their planning objectives, where on the ground realities deviate and vary from the universalized idea of urban planning. The abstract for the research-work here presents the case of Ranchi, the capital city of Jharkhand, highlighting the historical as well as the current scenario of exclusion and plight of its natives (Adivasis) in the evolution of the city, and analyses the dilemma(s) behind the pre-conceived parameters of urbanisation in contrast to Ranchi’s currently ‘unplannable’ trajectory of growth by exploring factors that induce permanency in the immiscibility between the rural and the urban. The contradictions are studied in two aspects. First, where constitutional and legal protections for tribals are pitted against the intentions of municipal and urban governing bodies by cross analyzing legislative, urban planning, and governance aspects of land and urbanization. Second, finding the roots of this conflict/contrast in the pre-conceived notions for socio-cultural utility of spaces in the urban and the rural, where former termed as land-use and are top-to-bottom goals to be achieved, the latter evolves with the community and is integrated with community’s origins, culture, aspirations, and doctrines. These parallel studies allow the research to converge towards cross-analysing land records data with urbanization trajectories of the city, issuing quantitative proof of the patterns of inequalities via urban governance and land management.

To provide further context, the Indian Constitution has been provisioned with Fifth and Sixth schedules to safeguard Adivasi rights, culture, and autonomy. Administrative regions with a tribal population of more than 50% are termed Scheduled Areas. The Panchayat Extension to Scheduled Areas Act, 1996 gives considerable power to rural bodies in Scheduled Areas to practice autonomy. Like this law, the Municipal Extension to Schedule Areas Bill, 2001 has been waiting for the parliament’s approval for the last more than 20 years which could have given Adivasis their autonomy in urban areas as well. Further, the customary land tenures of the Scheduled Tribes (ST), Scheduled Castes (SC), and Other Backward Castes (OBC) in Ranchi have been protected under the Chota Nagpur Tenancy (CNT) Act, 1908 which
also restricts the transfer of protected lands to any person or entity outside protected categories (ST, SC, and OBC). Non-compliance to these laws in Planning and Governance bring out the illegalities and irregularities in urban planning and land management and presents a case of casteism affecting governance.

Since the urban population is mostly composed of non-tribals who enjoy a higher socio-economic/caste status, Ranchi presents quite an interesting case of marginalization and urban inequality where the urban authorities would often violate laws in order to retain the status quo. As a result, while the pre-existing tribal hamlets remain excluded from development and over time turn into slums, the unregulated non-tribal settlement growth on illegally acquired tribal lands has given rise to massive illegal settlements of middle-income and rich classes belonging mostly to comparatively privileged castes than Adivasis. The argument about this pattern of urban sprawling is further strengthened by cross-analysing the geospatial data of Customary Tribal Land Rights protected by Chotanagpur Tenancy Act, 1908 with Land-use proposed by Ranchi Regional Development Authority intended to be implemented by the end of year 2037.

The research finds that Khatiyan records shown in the government records will be the closest to the 1932 revisional survey records (the last revisional survey done in Ranchi). The Customary Tribal Land Tenures and Rights, Land-use and powers and responsibilities given to the Adivasi villages are documented with careful reading of the provisions of the CNT Act, 1908, and PESA Act, 1996 and various other reports and ground truthing via interviews. The research also documents the land titles and tenure record keeping framework and supporting legislation (Bihar Tenant Holding (Maintenance of records) Act, 1975). Using this knowledge, the publicly available cadastral data is divided into four categories using caste identities of the owners in the cadastral record, and associated customary tenure/ownership category, i.e., individual and community ownerships. The final four categories were:

1. Zamindari Lands (free from any restriction by CNT),
2. CNT restricted lands with individual tenancy rights,
3. CNT restricted lands with community rights, and
4. Land parcels with no information.

This categorization is represented spatially and used to analyse and quantify the illegalities in the proposed land use plan for the year 2037 in the Ranchi Master Plan using geospatial analysis tools in ArcGIS. As there was no cadastral data available for the Ranchi Municipal area, 3 Panchayat boundaries adjacent to the Municipal Boundary with highest contiguous urban growth are taken as case studies. In
result, approximately 50% of the land use proposed in the Master Plan came out to be illegally proposed. This proved that the whole master plan has been proposed without any consideration of such powerful acts and cannot be considered lawfully implementable.

In three case studies covering a total of 972 Ha of peri-urban growth, 212.33 Ha of ‘existing Land Use as of 2022’ (prepared through primary surveys and geospatial mapping) and 311.31 Ha of ‘Land Use under Ranchi Master Plan, 2037’ have been identified illegal against the CLTS protected under CNT Act, 1908.
Day 2

1. Women and Land Relations: Diverse Dimensions

Women and Land Relations: Diverse Dimensions

Chair

Dr. Nisha Pandey
Director, GIDR, Ahmedabad

Dr. Francesca Marzatico
Professor, University of Otago

Dr. Anindita Nayak
Assistant Professor, KIIT, Bhubaneswar

Prof. Shilpa Kashikar & Santosh Vanjari
Sanman Samajik Bahuuddeshiya Sanastha (SSBS) & Shiv Vidy Pratishthan (SVP)

Ms. Anixa Gamit
Cohesion Foundation Trust

Ms. Kamini Athawale & Ms. Monica Marandi
Project Coordinators, Mahatma Gandhi Sewa Ashram

2 November 2023 | 10.30 - 11.45 | VKS 003

Venue: FLAME University
Elements of the Nexus between Gender-based violence and land
Dr Francesca Marzatico, University of Otago

Keywords: Land Relationship, Customary Right, Land Law, Women, Paroja Tribe, Odisha.

There is a complex relationship between women and land, interwoven, with gendered stereotypes of women's land rights, structural inequalities, traditional and religious beliefs and power dynamics within the couple. Moreover women often have limited decision-making power and control over how to use the land and/or its outputs and often the legislation is not sufficient in empowering women and counteract the structural inequalities. For example in India

The literature analysed has focused on empirical research on women’s land ownership and relationship power (Grabe et al. 2015; Fairchild and Petrzelka, 2022), as well as on women's economic empowerment (Pereznieto & Taylor, 2014; Reshi & Sudha 2023). and financial inclusion (Hendriks, 2019; Ghosh, 2022).

Findings around the world are inconsistent. In India women who own property experienced overall less intimate partner violence than those who do not own property and were more capable of leaving abusive relationships (Agarwal & Panda, 2007). In Tanzania and Nicaragua it has been found that access to land for women protects them from gender-based violence (Grabe et al. 2015). In Colombia women head of households were raped to force them to flee their homes (Norwegian Refugee Council, ICLA 2012). In Kenya: widows of HIV-AIDS men are evicted by the husband’s family (Hilliard et al., 2016)

This study aims at assessing the status of the current research on the complex relationship between women and land while identifying gaps and proposing pathways for further investigations while discussing the existence and the nature of the nexus between gender-based violence and land.
Tribe and Land Relations: A Case Study from the Indigenous Paroja Women in Odisha
Anindita Nayak Ph.D., KIIT

This study explores the relationship between women and land, the importance of land in women’s life, ownership rights, and control over the inherited land property, women’s participation in agricultural activities and other belief system and ritual practices among the Paroja Tribe of Ichhapur Village of Nabarangpur District, Odisha. The Parojas are traditionally agriculturalist, mostly dependent on land for agricultural practices for their livelihood.

This paper enquires that how the Paroja Women acquires land through inheritance as well as how they have own land through customs and traditions according to their customary laws following through generations. Furthermore, the research focuses on how the Paroja Women access to the other immovable property and the status of gender role in land and property management. Besides this, the research also enquires about the Hindu Succession Amendment Act (2005) which brought a strong advocacy by the Civil Society Organizations for the favour of unmarried daughters, sons and share of the undivided joint family property at birth and how this Act has its application and conflict with customary law among the Praroja Tribe in this area.

The data have been collected through Auto ethnographic empirical research. The field work was carried out using the necessary research techniques like interview, observation, focused group discussion and case study to collect the firsthand data. Purposive sampling method have been applied following by the snowball sampling method.
Status of accessing land ownership of Dalit Women

Prof. Shilpa Kashelkar, Sanman Samajik Bahuudeshiya Sanstha (SSBS)
Mr. Santosh Vanjari, Shiv Vidya Pratishthan (SVP)


The Indian society is hierarchical, where women have been facing vulnerability, marginalization, and subordination particularly the Dalit women. The caste system in India places Dalit women at the bottom of caste, class and gender hierarchy. Discriminatory practices deny basic rights of Dalit community especially Dalit women. Dalit women suffers from multiple forms of violence and discrimination as women, poor and Dalit. Thus, accessing land ownership is critical for Dalit women. The land ownership is important for survival, security and sustainable livelihood for Dalit women and for their family and community. Apart from that recognition as farmer or agricultural worker is difficult for women in general and more tough for Dalit women.

The Maharashtra state has long history of legal reforms, land rights movements and struggle of accessing land ownership of Dalit women. Through action research the researchers have explored the present status of accessing land ownership of Dalit women.

The access of land ownership of Dalit women is depended on various factors which cover levels of Information about land holding and laws, marital status, support of in laws and maternal family, income stability etc. Apart from these factors, social norms and family laws, customary practices, laws and legal system, Government institutions and structures affect directly while accessing land ownership. One can observes that villages are changing rapidly due to urbanization, builders lobby, political interests which directly affects overall land holding of agricultural land, which have direct impact on marginalised communities specially Dalit women.

Dalit women have very limited access to land and no control over it. In some cases, they have right to use land and work on land for agriculture purpose but they cannot take any decisions about what crop
should be cultivated, sell the land or use any new technology or even claim any scheme from Government as land owner. Even if they have land, they have to strictly follow orders of family members especially senior male member of family. Dalit women cannot access the benefits from various schemes of Government because they are not recognised as farmers or agricultural workers.

The study is also focusing on hardships of Dalit women due to family conflicts and court cases. If the women are single (unmarried, widow, separated, divorcee, deserted) the situation is worse. In this situation women groups and sanghatans from community are support and guiding pillars for women to fight for justice.

The study is based on collection of primary data from field. It covers case studies of fifty Dalit women from Maval, Mulshi and Haveli blocks of Pune district. Our organizations are jointly working in twenty villages from these three blocks. Our focus is women empowerment, sustainable livelihood, rural development with special reference to vulnerable and marginalised communities. For this study we are reaching to fifty Dalit women from various villages of our development interventions.

The case studies have explored land ownership of Dalit women in terms of level of information women have, how much they have access, use the land and control on land, who possess the legal titles, livelihood opportunities from land access, security and emotional relation with land. It also deals with challenges and difficulties of Dalit women in accessing ownership of land.

In this qualitative study, the group discussions have focused on family and customary practices of community, impact of patriarchy, need of information sharing and group building for accessing ownership of land of Dalit women. Apart from that study involved visits and interviews with key personnel from formal and informal setups to get their perspectives about accessing land ownership of Dalit women.

At the end of the study, recommendations and strategies have shared for further intervention and action research. There is need to work with individual woman, work at family level and also with government institutions for creating gender sensitive environment. Also, its focuses on need to develop resource center and strengthen sanghatan for accessing land ownership of Dalit women.
Women Farmer’s Access to Productive Resources – Land, Forest, Water, Market, Credit, Government Policies
Ms. Anixa Gami, Cohesion Foundation Trust

Keywords: Women’s Land Rights

Women play a critical role in agricultural production in developing countries, including India. Particularly in low income countries in which agriculture accounts for an average 32 percent of the growth in gross domestic product (GDP), and in which an average 70 percent of the countries’ poor live and work in rural areas, women make up a substantial majority of the agricultural workforce and produce most of the food that is consumed locally. Agricultural production in most of these countries provides the basis for most rural livelihoods. The large proportion of agricultural production that is attributable to women makes them important agents of economic development. The vast majority of food production that is attributable to women makes them the principal agents of food security and household welfare in rural areas.

It is very important to work with tribal women farmers for their identity as farmers because, 70% of work are done by women but still the land is not in their name, neither they have access to markets, finance, and government schemes for farming. At the same time land title in their name is the biggest question though there are acts like Hindu succession Act which says equal share of asset like land can be in the name of women, but the patriarchal mind set needs to be challenged. Hence there is strong need to work on women farmers’ especially tribal women farmers’ land rights. Tribal though have their customary land law, but those are not in practice.

What need to be done?
1. Economic empowerment:
Resource Utilization: Understanding their identity as farmers helps women optimize resource allocation, effectively utilizing land, seeds, water, and other agricultural inputs to enhance productivity. because lack of access of resources are more challenge specially with single women in our area.

2. Social recognition and rights:
Legal Protections: Acknowledging their identity as farmers makes women farmers are eligible for legal protections and government policies tailored for farmers, which can include land rights, access to agricultural extension services, and representation in farmer associations.

Community Participation: By embracing their farmer identity, women farmer can engage with their
communities, share knowledge, and contribute to decision-making processes related to agricultural practices and policies.

Innovative Farming Practices: Being aware of their farmer identity enables tribal women to learn about and adopt innovative farming methods, technologies, and practices that can enhance productivity and income generation.

3. Food security and nutrition:
Food Production and Access: Recognizing themselves as farmers motivates tribal women to actively engage in food production, contributing to food security for their families and communities. It also enhances their access to diverse and nutritious food options.

4. Environmental sustainability:
Sustainable Farming Practices: Identifying as farmers prompts tribal women to adopt sustainable farming practices, ensuring long-term environmental health, soil conservation, and biodiversity preservation within their communities.

In conclusion, being aware of their “farmer” identity empowers tribal women economically, socially, and individually, allowing them to make informed decisions, access resources, contribute to their communities, and foster sustainable agricultural practices.

Strategies:

- Land in the name of women.
- Motivate women to assert their identity as Farmers – as a first step of which is calling and introducing themselves as Mahila Khedut (women Farmers).
- Once they start asserting their identity as women farmers, simultaneously facilitate processes to ensure their control over productive resources and equal participation in decision making.
- To enhance the social status of women farmers and reduce vulnerability.
- Simultaneously address the issues related to other rights and entitlements so as to bring a comprehensive change in the life and livelihood of women.
- Joining hands with likeminded CSOs, CBOs, and national-international networks
- National Agriculture Policy 2007
- “For the Purpose of National Agriculture Policy, the term “Farmer” will refer to a person actively engaged in the economic and/or livelihood activity of growing crops and producing other primary agricultural commodities and will include all agricultural operational holders, cultivators, agricultural labourers, sharecroppers, tenants, poultry, and livestock rearers, fishers, beekeepers, gardeners, pastoralists, noncorporate planters and planting labourers, as
well as persons engaged in various farming related occupations such as sericulture, vermiculture, and agro-forestry.” (Source: National Agriculture Policy) The institution has plans to develop control over resources for women farmers:

- Alignment with SDGs

The challenges faced by women in agriculture and rural areas directly link to the global Sustainable Development Goals (SDGs). The workload, family planning choices, inadequate access to decision-making power, all impact women’s overall well-being, aligning with SDG 3 (Good Health and Well-being) and SDG 5 (Gender Equality). Additionally, limited access to productive resources and participation in governance relates to SDG 1 (No Poverty) and SDG 10 (Reduced Inequality). The adverse effects of modernization on sustainability on land. Further emphasize the importance of aligning agricultural practices with SDG 2 (Zero Hunger) and SDG 15 (Life on Land).

Challenges faced:

- One of the biggest challenges is breaking the Patriarchy System
- Organizing women in groups as no such practice existed
- Preserving traditional tribal knowledge in changing urbanized environment
- Recognizing the Primitive Vulnerable Tribe groups as farmers
- Involving Tenant farmers
- Involving Forest dwellers and community dependent on forests
- Registration for women farmers linkages with government schemes
- Changing of Government Officials and sensitizing them
- Unavailability of credit for women farmers
- Feminization of Agriculture: Women face burden of work due to migration of male members and hence drudgery reduction mechanisms being developed.
- Land rights of women farmers is not just a taboo but it is also a challenge to entire society
2. Land & Property Valuation : Multiple Dimensions
Valuation Mechanism in Town Planning Scheme; The backbone of successful micro planning framework in Gujarat
Amit Gotecha, CEPT University
Geet Khurana, CEPT University

Theme: Land Administration, Land Management, Valuation, Urban Planning, Land Development
Keywords: Town Planning, Original Plot, Final Plot, Valuation, Jantri, Incremental Factors

Abstract
Town Planning Scheme (TPS) is a mechanism to pool land for the provision of various amenities like roads, health and education amenities, and other civic facilities. It was introduced under the Bombay Town Planning Act 1915 in the pre-independence era in Greater Bombay province and came into widespread use after the introduction of The Maharashtra Town and Regional Planning Act in 1966 and the Gujarat Town Planning and Urban Development Act in 1976, post the division of Bombay Presidency state into Gujarat and Maharashtra. The mechanism of preparation of micro-level plans has evolved over 100 years and has been successfully used partially or as a whole model in various other states as land pooling or re-adjustment models. Gujarat government and its Urban Development Authorities (UDAs) proactively used and amended the framework and have used it to shape the state’s cities even to date. The Town Planning Scheme is a land readjustment mechanism in which land belonging to different landowners is assembled by a government agency to implement various public-purpose reservations earmarked in a city master/development plan. After reserving and deducting the land required for public purposes, the authorities return reconstituted and serviced plots back to the landowners. These plots are smaller than the original land plots, but since they are planned and serviced, they exhibit higher land values. This mechanism of land and financial transaction has two components- physical planning and valuation mechanism. The major component deciding the feasibility of these models is the Valuation and Financing mechanisms of this model.

Town Planning Scheme works in partnership with the landowners where a certain portion of their land (Original Plot) is taken and in return for compensation and a serviced plot (Final Plot) with infrastructure such as roads, water supply, drainage, and access to public amenities, social and physical infrastructure and open spaces is provided. Since the serviced plot or the Final plot has now access to the above-mentioned services, it has a higher value in the market. The authority shares the cost of infrastructure provided with the landowner in a 50:50 ratio in return for the portion of land surrendered which is later used for amenities and reserved for sale in the open market. Hence land valuation is done for the plots
in pre-TPS and post TPS state to calculate the shared cost borne by the authority and land owners. This study aims to look at the land valuation/financial mechanism of the Town Planning Scheme from an Original Plot value (pre-TPS plot value) to a Final Plot value (post-TPS plot value) and in the process the reason for a successful run of the model in the state since past more than 100 years.

The backbone of this mechanism lies in the GTPUD Act 1976. The Act provides the basic framework to carry out the valuation. The study is conducted through an elaborated 3 tier methodology framework. In the first phase, a detailed review of the Act is carried out. This encompasses the study of the preparation of TPS through all its stages, the financial or valuation of land parcels, and the legalities attached to it. Then a series of detailed interviews and discussions are carried out with practicing planners of the UDAs, experts from the academia, developers from Ahmedabad, and land owners. This has given a well-rounded perspective to develop an understanding of the method adopted for valuation including its advantages and disadvantages. In the third phase, a couple of TPS cases from Ahmedabad have been studied to further strengthen the understanding of the mechanism.

The research derives inferences related to various components considered for valuation. It also derives key takeaways related to methods of calculating the appreciated land value using the Jantri value (circle rate) of land as a base, and considerations of incremental factors depicting the development potentiality of land. These factors when applied to the Original and Final plot values determine the amount for fair and transparent compensation for the land surrendered to the land owner and the shared cost of the infrastructure and amenities provided, which is payable by the land owner to the authority.
Re-examine the effects of land ownership on productivity differences in Cameroon

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Keywords: land ownership, gender, agricultural productivity, Cameroon

As the source of most biological and human activities, land is a crucial productive asset for the daily life of households. It is particularly important in agriculture where it is considered a natural and economic resource (Kenfack & Teguia, 2018, Ma et al., 2017). The scarcity of land is marked among women especially in gender-neutral public policy contexts. Indeed, according to Razavi (2003), weak governments and institutions have failed to address gender inequalities in land ownership. The General Census of Population and Housing (RGPH, 2005), shows that Cameroonian women represent 50.1% of the population, they produce 70% of foodstuffs yet only 7.6% of women in rural areas have land ownership compared to 5.4% in urban areas.

In Cameroon, land tenure system in defined by customary and legal laws. From culture to another, the land-people relations vary. For instance, people from grassfields area zone perceive land as an inheritance. Therefore, it is difficult to them to sell it. People from the forest area in contrary are more willing to sell their land. This dualism law concerning land is often the cause of the insecurity of land tenure in Cameroon especially for women. The importance of land is more evident in developing countries such as Cameroon, whose economic activity is dominated by agriculture. The limited possession of this factor explains the poor performance of the agricultural sector. Another justification for this poor performance of the agricultural sector is found in the unequal distribution of productive resources between men and women (Manyire and Apekey, 2013; Bayraktar and Fofack, 2018). Also, the low overall agricultural productivity can be attributed to several factors, some of which are also related to the gender dimension. Some of the links are inequitable access to resources, low use of agricultural technologies, disproportionate workload, lack of access to markets and economic opportunities.

The existing literature reveals the existence of a relationship between gender and agricultural productivity (Abessolo, 2021). Thus, analysing this relationship, authors show that differences in agricultural productivity between men and women are detrimental to differences in access to productive resources, especially land (Kilic et al., 2013 and Ali et al., 2016). However, Gniza (2021) argues that while previous work emphasizes that access to land explains gender differences in agricultural productivity, no study has focused on the issue itself. Access to land only provides the
farmer with a right of use. Roth and Haase (1998) point out that the possession of a land title provides the farmer with the assurance that he will always own the land. We are interested in the issue of land ownership which, apart from providing a right of use, gives the individual the assurance of benefiting from his or her investments. However, to our knowledge there is no study analysing the effect of land ownership on gender differences in productivity and in Cameroon in particular. The question posed by this paper is: Does land ownership influence gender differences in agricultural productivity in Cameroon?

In this paper, we use the endogenous switching regression model inspired by Roodman (2011) to take into account the assumed endogeneity of land ownership. The decision to own a property is endogenous. To remove this endogeneity bias, we use an endogenous Switching Regression (ESR) model. These models have the advantage of removing both selection and endogeneity biases but also of calculating the average treatment effects.

The objective is to determine the effect of land ownership on gender differences in agricultural productivity in Cameroon. To do so, we use data from the fourth Cameroonian household survey. We find that land ownership improves the agricultural productivity of landowner households. Also, when men and women are all non-landowners, women's productivity in food crops is higher than men's. However, landowner households managed by men have a greater productivity than their women counterparts. Similarly, landowner households managed by women have in mean better productivity than non-landowner households managed by women. This study concludes that when they own the land, women may aspire to larger and more profitable investments than food crops. These results inspire that public policies aiming to reduce gender gap in agricultural productivity of food crops should promote land access and not land ownership to women. These results inspire, firstly, the need to put in place a system that allows households to access land ownership. Also, the government must put in place a mechanism to allow households managed by women who do not own land to have access to land to cultivate without necessarily owning it.
Access to Land, Building Materials, Finance for Rental Housing Production in Dodoma Capital City, Tanzania
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Fredrick Bwire Magina, Ardhi University

Keywords: Access to land, rental housing, tenant, landlord, finance

This paper presents study findings concerning rental housing delivery systems in accommodating low-income urban residents in Tanzania. Generally, the study intended to establish the operational and workable policy options for promoting affordable rental houses for the sake of narrowing the urban housing shortage gap that has been increasing over time. The study involved a sample of 100 property developers who were selected systematically in the study area. Qualitative and quantitative data were collected through interviews with property developers, focus group discussions with key informant and local leaders. Statistical Package for Social Science (SPSS) version 20 was employed in inferential and descriptive analysis. In line with this, a Chi square technique was employed for describing the association between the variables whilst descriptive analysis was employed to describe the distribution of scores among the variables. The study has shown that 68% of property developers obtain land through informal land market while the rest 32% obtain it from a formal market. Moreover, property developers have reported that savings is the dominant source of rental housing finance mechanism in the study area which counts for 65% of the housing finance mechanisms. Other sources are remittances (16%), pensions (8%), loans (7%) and borrowing from relatives (4%). The study has revealed that the Pearson chi-square value and significance value, confirm that, there is a significant association between affordability and category of land market ($x^2$-Value= 65.696, $P < 0.001$). Furthermore, the study has evidenced that individual property developers are dominating rental housing market in the absence of policies, regulations, standards and plans which could take into consideration the access to rental housing for the low-income urban residents. The study recommends to the central and local government that there should be an urgent strategy to establish an enabling housing policy in order to promote affordable rental housing as an option for low-income urban residents in Tanzania.

In this study, land tenure and land-people relations are defined by landlord-tenant relations. With this overview, the study findings have disclosed that in ensuring the relationship between tenant(s) and landlord, rent is imposed by landlord and not the government which is paid periodically by a tenant (can be monthly, quarterly, or yearly). However, there is no legal instrument guiding the rental
properties constructed by developers despite the imposition of property rent by the government. For instance, in 2022, the Parliament of Tanzania passed a bill for rent property for all properties meant for renting to be paid via electricity meter. In this regard, when a tenant pays for utility bill (electricity), the money paid is deducted automatically meant for property rent. This scenario of producing rental housing without legal instrument guiding it, has resulted into intermittent change in rental charges by landlord without prior information to tenant thus makes most of tenants fail to pay such rent since their income level is lower than the amount added. This change in rental charges includes change in the quantity of monthly charges and duration under which rental charges ought to be paid. The study used focus group discussion and interview as methodology to get insightful and feelings of the landlord and tenants in the context of rental housing. For instance, through a focus group discussion, two tenants at Mbwanga sub-ward, in Dodoma Urban reported that in the year 2018, received information from their landlord requesting them to quit in case they don’t comply with the increment in the rental charges imposed by the landlord. This implies that there are no appropriate government interventions like incentives related to access to land, building materials and construction in relation to rental housing production in the country. The government interventions could assist to control the rental charges hence improving the landlord-tenant relations.
3. Coastal land tenure and governance: Community, access and livelihoods

7th India Land and Development Conference 2023

Coastal land tenure and governance: Community, access and livelihoods

Chair

Mr. Shivakumar MS, Independent Consultant
Ms. Nayana Udayashankar, Researcher, Dakshin Foundation
Ms. Thisam Mahsana, Researcher, Dakshin Foundation
Ms. Vineetha Venugopal, Independent Research Consultant

2 November 2023  |  12.15 to 13.30  |  Hall: VKS 001

Hosted by:
Women and coastal commons: Grassroots strategies to secure tenure
Thisam Mahsana, Dakshin Foundation

The implementation of the CRZ notification, India’s sole legislation for coastal zonation, leaves much to be desired. In the absence of a sound coastal land governance framework, small scale fishers and civil society organisations across its coastal states, have devised counter strategies to secure tenurial rights. One of the crucial requirements under the law is the preparation of district and village level maps of the coastal areas. However, village level maps, which are expected to have granular details of the coastal commons are often never prepared, leaving a gaping hole in the land governance framework. It is in this context that small scale fishers have undertaken counter mapping, creating detailed, well-planned and participatory community maps of village coastal commons. The paper examines the case of a counter-mapping strategy undertaken by a cohort of women from the fishing villages of Karangadu, Morepannai, Olaikuda and Thanneer Ootru in Ramanathapuram district, Tamil Nadu. It uses participant observation conducted by the author in her capacity as a facilitator of a grassroots fellowship targeting women from fishing communities, to assess the implications of women’s grassroots actions on tenurial security. In addition, it explores limitations within existing governance spaces for women’s active participation in the securing of tenurial rights and benefits for small scale fishers. The paper also provides insights into gendered counter-mapping strategies drawing from the case of community mapping by women community catalysts. The paper offers insights into practical ways to both strengthen governance of village commons as well as deepen people-land relations through the active centering of women in discourses and practical actions related to land.

Governing fragile lands: Assessing India’s coastal governance in the age of climate
Nayana Udayashankar, Dakshin Foundation
Keywords: commons, fishers, coastal governance, Coastal Regulation Zone notification, tenurial security.

Despite the promulgation of dedicated legislation and legal provisions for coastal planning for over three decades, instruments such as the Coastal Regulation Zone notification (CRZ notification) have not translated into increased tenurial security for small scale fishers. Maps and plans prepared under the CRZ notification serve as the state’s record of rights over coastal commons, which are then used as a source of information for approval of development projects. Maps under the CRZ notification are expected to demarcate existing fishing zones, fish breeding grounds and coastal commons such as beach areas that are used by fishing communities for various fisheries-related activities while management plans are expected to include a long-term housing plan for the fishing community. However, the implementation of the mapping and planning process under the CRZ has been rather poor. In many instances, detailed village level maps that are expected to capture nuances critical to fisher communities, have not been prepared. Consequently, coastal planning and development rarely takes into consideration the needs of small-scale fishers as the recognition of formal collective rights of fishing communities over coastal commons remain absent. Additionally, in many coastal stretches, coastal communities do not have legal title and deeds to their houses and settlements.

Regardless of its weak implementation, the legal framework for governance of coastal commons is not geared to addressing contemporary challenges that affect tenurial security of small-scale fishers. Small scale fishers are at the vortex of a polycrisis - rising sea levels due to climate change, threat to food security, declining livelihoods, rapid coastal erosion and coastal land degradation. Loss of land, both private and commons, because of rising sea level, an unprecedented pace of coastline erosion and degradation of land due to pollution, resource extraction and loss of vegetation increases the vulnerability of small-scale fisher’s multi-fold. But, the current legal framework, which views the coastal commons from a lens of zoning for development, is ill equipped to address the multifold and inter-related problems affecting land and tenurial security of small-scale fishers.

The paper takes these interrelated challenges, inseparable from the fragile lands and people dependent on it, as its point of departure. Drawing from documented records maintained by environmental activists, secondary literature and analysis drawn from personal practice and field engagement by the authors, this paper will,
(a) critically examine the legal framework that governs coastal lands from a climate change induced loss and damage perspective
(b) unpack the state’s response in terms of readiness and planning to address land loss and degradation and
(c) critically assess the spaces for engagement for policy makers and practitioners.

The paper concludes with suggestions to address the issue of tenurial security of small-scale fishers in the face of such contemporary challenges.

Recentering the commons: Assessing citizen mapping as an environmental practice
Vineetha Venugopal, Independent Researcher
Biswa Swaroop Das, Dakshin Foundation
Aarthi Sridhar, Dakshin Foundation

Keywords: Citizen mapping, coastal governance, coastal commons, coastal regulation

In India, both state and non-state community-based legal systems operate along the coastal stretches pointing to legal pluralism in the governance of coastal land. The custodianship of non-marked public lands rests with the Revenue Department and is often erroneously marked in local terminology to translate as ‘wasteland’, a revenue category introduced in the colonial period. Non-private coastal land can also officially be recorded as being vested with either panchayats, municipalities, the public works department, the port department, the irrigation department, or the forest department. However, fishing communities have historically resided in these coastal spaces as they require direct view of the sea to plan their fishing trips. They also use the beach space for worshipping deities, holding meetings, leisure, storing and mending boats and nets, and drying fish. Such lands and adjacent aquatic-marine spaces are informally governed by diverse traditional community institutions with varying degrees of inclusiveness, such as Kerala’s example of kadakkodi (Paul 2005).

We explored the trajectory of coastal protection law in India and found it to be an interplay of competing interests. While promulgated from a conservation perspective, the spirit of the law was shifted towards accommodating developmental interests via a succession of controversial amendments. Poor implementation of the act also contributed to its ineffectiveness. The original principle that only those activities that required the waterfront and foreshore area could be permitted
in the area governed by the notification was ignored in many of these amendments.

We see these shifts in coastal regulation regime as outcomes of a dominant coastal and ocean governance paradigm based on a commodification imperative. We identify citizen mapping as one among the many practices employed by civil society actors to resist this commodification and visible the fisher people’s relationship with the coast. Inspired by a counter-mapping undertaken by the fisher community in Chennai, the authors undertook a collaborative mapping exercise focusing on recording usage of coastal commons. In this presentation, we reflexively examine the utility and effectiveness of such initiatives.

Methodology
This abstract draws from the fieldwork we undertook as part of the citizen mapping which we initiated between June 2019 and March 2020. Dakshin project staff spent one month in 2019 conducting participant observation, semi-structured interviews, group interviews and transect walks to acquire a preliminary understanding of the tenure systems, regulations and various institutions governing the commons in seven fishing villages in Ganjam district. The team then chose the riverine fishing village of Purnabandha to pilot the citizen mapping initiative. Purnabandha, a small Odia fishing village situated near the mouth of the river Rushikulya was chosen due to the good rapport the organisation had with its fisher leaders.

The village committee leaders approved of the mapping initiative as they felt that mapping the areas, they have been historically using would be advantageous to stop the on-going problem of encroachment of commons by non-fishers from adjacent hinterland villages. The prompts for the transect walk and mapping were prepared after key informant interviews and focus group discussions with fishermen and fisherwomen, separately. The community members pointed out and mapped the areas that they considered commons while the technical team documented the past, present and seasonal uses of these spaces as well as the norms governing them through interviews and focus group discussions. The fieldwork was completed in March 2020.

The community-sourced uses of the coastal commons were superimposed with the CZMP and the revenue map of the village using GIS. During a community meeting in March 2021, the physical copies of both English and Odia versions of the map were presented to the community members along with a booklet describing how the maps were made. This meeting also served as a verification process where community members pointed out common areas that were missed on the map. Methodology followed for this abstract is the reflexive examination of the mapping process.
Findings
The on-ground citizen mapping highlighted the gaps in both the process and the knowledge generated in official coastal zone records. For example, the Coastal Zone Management Plans (CZMP) created under the Coastal Regulation (CRZ) act ignored the full spectrum of livelihood related uses as well as the social and cultural uses of common spaces. It also demonstrated the inaccessibility of official spatial knowledge with the documents being prepared in English and following the specialized language of cartography. The citizen mapping exercise highlighted the peculiarities of fishers’ relations with coastal spaces which shifts with changes in the river mouth and the local landscape. Coastal spaces are also venues of shared and at times conflicting uses of the land. The mapping process also indicated the need for attention to translocal scaling and adopting contiguous mapping processes involving related traditional fishing communities and other historical coastal (albeit non-fishing) communities in the region. However, it remains doubtful if fisher demands for incorporating community generated information in official coastal planning documents would be heard unless supported by a wider community galvanization.

Impact assessment
No formal impact assessment was conducted due to constraints imposed by COVID-19 pandemic and impact was assessed via field observations. Eg. shift in the way participating fishers used to describe the coastal commons from ‘government land’ to ‘our land’. In another instance, when Ganjam municipality dumped municipal waste at night in the Purnabandha, without consulting villagers, the community leaders were able to make use of data collected via mapping process and argue that the action of municipality violates provisions under CRZ 2019 for that specific category that the area fell under. We also noticed unintended impacts such as tension among neighboring coastal communities regarding the mapping exercise in Purnabandha.
4. Inclusive Urbanisation, Governance and Development 
16:15 – 17:30 hours (IST) 

Venue: VKS 002
Land use conversion for urbanization: two case studies of misaligned institutions and diverging objectives in Karnataka, India

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Keywords: urbanization, land use conversion, local planning area, Bengaluru

Land use conversion is at the heart of development strategies driven by industrialization and urban expansion. Apart from economic drivers, use of land is influenced by social, cultural and political factors as well. Land use perspective plans have emerged as important land use management tool for development planning in India. However, with rapid and unplanned expansion of habitations, land use planning in rural as well as in urban areas has become more and more complex. This has added challenges to already complex land use conversion processes. Using examples from the state of Karnataka, we unpack key nuances of the process of land use conversion including legislations and institutions involved. The paper employs a combination of a) critical review of historical and contemporary frameworks of land use management that includes master plans and conversions in the state of Karnataka and b) case studies with varied economic and institutional models, to highlight misalignment of institutions with conflicting goals.

The case studies include one State initiated industrial area development and another residential layout formation for private agency but with involvement of multiple agencies. In both the cases studies, absence of clarity on authorities and also processes involved in land acquisition or conversion were highly cited by the stakeholders that we spoke to. This led to challenges in making clear decisions on either investment in land development and also on compensation for loss of land or livelihood. Simultaneously, implications on socio-cultural and ecological parameters related to land conversion process were conspicuously absent.

The problems are not only with the confusing and conflicting land policies and respective institutions, but the issues exist with implementation of land conversion procedure also. There are either diversions from the rules laid down or forced change of land use. Using the three cases of large-scale land acquisition and development either by the state agencies or private firms, we describe the problems in each of those.
Two cases of land use conversion in the outskirts of Bengaluru:

Township development – land acquisition by State agency for development by private firm

Government of Karnataka proposed five township projects in 2006. Bidadi Township Project was the first one among them and to have Knowledge City. About 9,178 acres of agriculture land in ten villages of Bidadi area was identified by the Karnataka Industrial Area Development Board (KIADB) for the development of the proposed township. Out of this, 6,336 acres was private land, 2,198 acres of Government land and 643 acres of water bodies. For the first time the State Government planned township with private mode of development. One of the reasons to choose these villages was that around 35 percent of land belongs to the State (gomala and water bodies). It would be easier for the government to acquire the land and spend less money to purchase the private land. Government of Karnataka through Gazette notification in 2006 froze the land transaction from the private owners.

The private lands identified were fertile farmlands. Farmer owners of the lands notified by KIADB claimed that about 80% of the lands identified were well-irrigated but the officials declared those as dry lands. Small and marginal farm holders for whom land was the only source of livelihood were in shock. Government fixed the compensation amount for all the notified lands and announced the project in 2006. In the following year, a private company showed interest in developing the project, and farmers protests started demanding higher compensation. This went on for quite some time. Meanwhile the tussle between political parties ended bitterly and the private company backed out from the project. Till 2015 nothing progressed on the project, when under the provision of Karnataka Town and Country Planning Act, the government announced Bidadi as Local Planning Area and constituted a planning authority. For almost 10 years, farmers who were notified for land acquisition were kept in limbo. They couldn’t make clear decision about investing capital to develop their farmlands thinking that if the government takes away the land their investment would go waste. At the same time, they did not receive fair compensation for the lands they were going to lose. Other factors such as environmental pollution, soil degradation, stress on water resources, livelihood loss, distress and social conflict were not even of any consideration by any agencies.

Private layout formation – multiple agencies involved in the entire process

Layout formation outside the Local Planning Area (LPA) are done through different department under different laws. If the land is more than two acres, the application is received first by District Collector (DC) and from there it is forwarded to Town Planning department for technical opinion. Since, technically most the land outside LPA is agricultural land, the probability of getting land use change approval is less. Interested partied have to give reasons for land conversion for layout making. Layouts
are approved by the DC with the technical opinion from the Town Planning departments. One such case of layout formation outside LPA near Bengaluru in Malur taluk is discussed here.

One private real estate development company aggregated lands from villagers for development and approached Deputy Collector’s office for land use conversion. The aggregation of land was made with an agreement between the developer and landowners on certain terms of sharing profit or returns. Since master plan or rural development plan don’t exist in these areas, the property owners must apply for land use change individually. For each parcel of land, a separate layout map and other related documents were to be submitted to DC office. After all the necessary documents were received, the DC would forward all those to Town Planning Department for technical guidance. TDP will issue approval for land development only after thorough scrutiny of all the documents and site inspection of the land. Once the approval is granted, the developer will carry out work on the site. Upon completion of development work, the developer must approach gram panchayat for generating revenue records for all the sites in that layout. Again, they submit all the documents to gram panchayat and wait for their response. All the process takes a long time and meanwhile some disputes or conflicts crop up in some of the land parcels. If everything goes smooth from government agencies, developer and landowners, then the project will be successful. Since the proposed project was close to Bengaluru city limits, the cost of land and also risk involved was quite high.

Thus, we argue that current institutional arrangements of land use planning and management that lead to rampant land use conversion are unable to hold the ground against economic drivers. Misalignment of institutional objectives leads to exploitation of uncertainties by different agents. Divergence in the objectives of policies and an exigent than pro-active and informed policy framing are found to be the main reasons behind such ineffective institutions and policies. A re-envisioning of institutional roles and linkages with each other is highly recommended in order to improve effectiveness, inclusivity and sustainable practices in land use conversion.
Acquiring land for Planned City Development – The Navi Mumbai Experience
Ashitosh E. Nikhade, City & Industrial Development Corporation of Maharashtra (CIDCO)

Keywords: CIDCO, Navi Mumbai, Bulk land acquisition, Project affected persons (PAPs), 12.5% Scheme, 22.5% Scheme.

The Land Acquisition Act, 1894 offered only monetary compensation for the owner whose land is compulsorily acquired for ‘public purpose’. The method was neither adequate for the owner who had lost his land, nor for those whose livelihood depended upon it. In the period from 2000-2010, the country witnessed violent protests in wake of Government sponsored large-scale acquisition for a variety of projects. In response, the administrators & the political class came up with perhaps a more just and equitable dispensation in the form of the ‘The Land Acquisition, Rehabilitation and Resettlement (LARR) Bill, 2011’. It proposed to add the hitherto missing dimensions of rehabilitation and resettlement to acquisition. Thus, come into existence the LARR Act, 2014.

The emotional upheaval of land being acquired, loss of livelihood due to the new project and lack of instant employment opportunities in view of long gestation period involved in the project are some of the vital aspects for consideration in New Town development. The City & Industrial Development Corporation (CIDCO) of Maharashtra is company owned 100% by the Govt. of Maharashtra. CIDCO was set-up in 1970 for the development of New City to decongest Mumbai and act as counter-magnet to Mumbai. The new city located on the mainland on the eastern side of the Thane Creek spread over 344 km2 and coined as Navi Mumbai. The State Govt. acquired lands in project area and handed them to CIDCO for developing the city. The Gaothans in Navi Mumbai area was beyond the purview of acquisition. The Development Plan for Navi Mumbai gave CIDCO the responsibility of providing them civic amenities like piped water supply, approach roads, gutters, septic tanks, upgraded school facilities, medical care services.

Initially (1970s) measures aimed at enhancing competitive ability of local people and integration with the wider population of the new city were taken. The rise in land prices after initial decade of development made the compensation paid for acquired land look meagre. This created ground for social unrest between the original land-owners (colloquially called Project affected persons or PAPs) and the new residents, endangering its sustainability.
The PAPs were agitating against inadequate compensation paid for their lands and wanted CIDCO to give them a portion of developed land. In response in the 1986, in addition to the financial compensation given under LA Act, 1894, the GES (Gaithan Expansion Scheme) was approved wherein PAPs were to be allotted lands/ plots under for self-use houses for their extended families. The GES was aimed at accommodating natural growth of families and making the PAPs reap the benefits of value addition to their lands. In GES, 10% of the land acquired from a village was proposed to be apportioned and returned back to respective villagers in a layout to be developed abutting the Gaithan. In this layout, 50% of land is earmarked for villagers and rest 50% is used to develop roads, social facilities, open spaces, etc. Developed plots allotted to PAPs ranged from 100m2 to 500m2. Landless labourers, salt-pan workers and village artisans whose livelihood depended on the rural activities that existed before CIDCO acquired the lands, were entitled for 40m2 plot. Within 4 years, about 27 Ha. was allotted covering 7 villages and was replaced by a more beneficial 12.5% land re-allotment Scheme (12.5% Scheme).

The State Govt. in March 1990 announced the 12.5% Scheme and extended it to all PAPs, including those who had earlier benefitted from GES Scheme. In this scheme, the PAP is given back developed land which is 12.5% of the land acquired from him. Out of the 12.5% entitlement, 30% is reserved for social facilities and public utilities. Thus, net allotment to PAP would be 8.75% of the land acquired from him. The plot allotted to the PAP has 1.5 FSI and 15% commercial component is also permissible on the eligible built-up area. The 12.5% Scheme became fully functional in 1994. The layouts prepared for these schemes are proposed across Navi Mumbai & are not necessarily in vicinity of the Goathans. The PAP can develop the plot himself or enter into an agreement with the developer for developing the plot. These agreements are tripartite in nature with CIDCO being the 3rd party. CIDCO has earmarked approximately 1064 ha. net land (60,000 beneficiaries) for the 12.5% scheme and has so far disbursed more than 900 ha. The disbursal of land was slow initially, but gained momentum after 2005. A study conducted by Tata Institute of Social Sciences for CIDCO only for those PAPs who had taken the possession of land allotted under 12.5% scheme inter-alia revealed that more than 90% PAPs have stated their satisfaction towards entitlements of the allotted land and nearly 50% have received developed plots ranging from 500 to 2000 m2. CIDCO’s 22.5% Scheme

CIDCO envisaged development of Navi Mumbai International Airport (NMIA) (1160 ha.). The site for NMIA had existing Gaithans, encroachments and partial stretches of unacquired lands. The entire site needed to be in possession, free of any encumbrances. There was resistance against acquisition and
12.5% scheme was not acceptable. After lot of discussions a formula was hammered out acceptable to both CIDCO and NMIA PAPs. A rehabilitation and resettlement package (R&R) was worked out for Goathans & enchroachments and compensation for land acquisition was given in form of 22.5% Scheme. The 22.5% Scheme included compensation of land @12.5%, Scheme, as per the State Govt. Scheme of 1990-94 and additional 10% of land is offered, in lieu of the monitory compensation. A Master Plan for the 22.5% Scheme was prepared (230 ha.) in the vicinity of the NMIA and is called Pushpak Nagar. The entire physical and social infrastructure is developed by CIDCO.

The 12.5%/22.5% Schemes offer some unique benefits. The layouts of these Schemes and are in midst of the township and serve the purpose of integrating the PAPs into mainstream. The commercial component in the plot creates self-employment opportunities for the PAP as well as scope for earning. The scheme creates housing stock which caters to growing needs of the PAP’s family and scope for earning through rent or disposal of residential units. It encourages PAPs to become developers. CIDCO also encourages the trusts of PAPs to participate in Institution Building by earmarking plots for Schools, Colleges, Community Centres, Gymnasiums, etc. that shall be allotted & run by trusts formed exclusively by them.

CIDCO’s land development model and Magarpatta land development Model

The key difference land development models of CIDCO and Magarpatta lies in the scale. Magarpatta is spread over 400 acres (163 ha.). Navi Mumbai is nearly 85000 acres (34400 ha.) Secondly development of Navi Mumbai spans over more than 4 decades and the process is ongoing. The idea of Magarpatta took shape in early 1990s and the project was complete by 2015. The extent and time required for development has necessitated CIDCO to change development models from Bulk acquisition to 12.5% Scheme to 22.5% scheme. The Magarpatta model is based solely on land pooling. 120 families have voluntarily contributed their lands for township development. The homogeneity of the families (Magar Family) under the leadership of Satish Magar have helped the project development. Magarpatta deserves appreciation because voluntary land pooling is tough and to achieve the scale of township is tougher. The model has also ensured financial stability for all stakeholders who have contributed varying sizes of their private lands.

Assessing the Challenges of Applying Good Governance in Urban Land Administration System in Woldia Town, Amhara Regional State, Ethiopia

Getie Gebrue Eshetie, Woldia University & Bahir Dar University
Keywords: Land Administration, Good Governance, Land registration, Woldia Town.

Land is the source of all wealth. It has been considered as an important social asset where the status and prestige of people is determined. The integration of land tenure and land-people relations recognizes that land is not just a physical resource but also a social and cultural asset. It acknowledges that land tenure systems and land use practice are shaped by and influence social dynamics, power structures, and economic activities. By taking a holistic approach, this integration aims to address the complex and interconnected challenges related to land governance, land rights sustainable land use, and poverty reduction. It requires a multi-sectoral and multi-stakeholder approach, involving governments, civil society organizations, indigenous peoples, local communities, and the private sector. Sound land administration systems, which needs effective good governance, provide a range of benefits to the community. Good governance is basic in achieving the benefits of the protection of property rights and the development of efficient and effective land and property markets to have stable society.

This study assessed challenges of applying good governance attributed to the existing urban land administration practice of Woldia town, Ethiopia. The study mainly focused on assessing the practice of good governance implementation in urban land administration system in general and urban land registration system in particular by employing five good governance indicators/principles (rule of law, participation, transparency, accountability, and efficiency and effectiveness) as bench mark to collect and analyze data. To achieve the stated objectives of this study, the researcher employed descriptive research design and mixed research approach. In this study both probability and non-probability sampling techniques were used. By applying a simple random sampling technique, the researcher selected 373 sample households to obtain primary data to capture the required information about the current status of good governance indicators implementation in urban land administration in general and urban land registration system in particular of the area under study. Primary data sources were collected using questionnaire, interview and focal group discussion (FGD). In addition, to achieve the goal of this study, secondary data, such as journals, relevant books, and appropriate official documents, were gathered and document analysis was made to support primary data. Both qualitative and quantitative methods of data analysis were employed. The quantitative data which were gathered from questionnaire were analyzed in a descriptive way. The major finding showed that the practice of good governance indicators in urban land administration system of the study area were generally weak and surrounded by a growing number of challenges. From rule of law good governance indicator point of
view, the respondents were asked about corruption and the implementation of rules and regulations in urban land administration, and the majority of the respondents, 176 (47.2%) replied that corruption, negligence and ineffective implementation of rules and regulation to protect property rights were the major challenges that affect the practice of good governance in urban land administration under studied area. The involvement of the local community (public participation) in land and land related issues, example during land delivery process, was less in the study area. Regarding to land registration, household respondents were asked to know the degree of their awareness about the availability of accurate, integrate and computerized land information in the study area. Of the total respondents, 225(60.3%) of the respondents disagree, while 32 (8.6%) and 23 (6.2%) of the respondents replied by saying neutral and agree, respectively. In this issue, land administration officials and experts from municipality confirmed that the awareness of the community about modern land registration (cadastral surveying) is less and this is one of the challenges to accomplish land registration process fast. According to the information obtained from FGD discussants and key informants, absence of appropriate skills and competencies of land administrative officials and experts were the major problems that challenge urban land administration practice to carry out urban land administration activities properly, efficiently and effectively, and thereby good governance in the urban land administration system. The town administrators were not responsive for their actions; decisions and responsibilities. Moreover, the study indicated that there is a serious problem in application of good governance in land administration unless cooperation and integration should be established between land administration departments/offices. As a suggestion based on the findings, the concerned body should develop and implement mechanisms, and improve the institutional setup to ensure sustainable good land governance in urban land administration system.

TP Schemes and the peripheralization of the SEWS: a case of Vadodara’s peripheries
Rasika Acharya, Student, School of Planning and Architecture, Bhopal

Keywords: Peripheralization, SEWS, TP Schemes, peripheral urbanization
Cities have always been the drivers of economy and the magnet of growth and opportunities, attracting a large population. To accommodate this increasing population, cities have expanded by spilling into its peripheries.

Peripheries in India have shown unprecedented growth. According to the last Census (2011), urbanisation in the peripheries of large and small cities, recorded the fastest growth” (Gururani and Kennedy 2021). In India, there were around 1.8 million homeless people as of 2019. Most of these people reside in the urban areas, especially on the outskirts of cities (Project 2020). With the increase in urbanisation at the peripheries, the inequity at the peripheries has also increased. They have become the focal points of contestation and social exclusion, recognized by a social phenomenon called peripheralization.

To manage this inequity at the peripheries and to control urbanization, an urban planning tool called the ‘Town Planning Scheme’ has been widely prevalent. The city of Vadodara too has adopted this model to manage its peripheries. The TP Scheme, an equitable land reconstitution model, reserves land for the SEWS, who often get pushed out of the formal housing market, because of urbanization. In a context, where many other cities in the country are struggling to provide land for housing the SEWS, it is ironic how even after making land available, the city still has many unhoused people. This research attempts to understand the supply of land for the SEWS through the TP Scheme model and tries to understand if it intentionally or unintentionally leads to peripheralization. It does so by identifying the gap between the conceptualization and implementation of TP Schemes in Vadodara with respect to the land it reserves for the SEWS. This analysis has been done by following a mixed method approach through spatial quantitative analysis as well as qualitative narrative through primary surveys. The research finally, tries to suggest sustainable alternatives to make TP Schemes more socially and financially viable.
Day 3

1. Homestead Land: Access, Equity, Governance and Legislation

Homestead Land: Access, Equity, Governance and Legislation

Moderator: Dr Shamsher Singh, Assistant Professor, FLAME University

Panelists:
- Dr Anup Tripathi, Assistant Professor, FLAME University
- Mr Anjan Sarkar, Programme manager, Landesa
- Abebew Abebo, PhD Scholar, Bahir Dar University, Ethiopia
- Mr Dharmraj Joshi, Land and Advocacy specialist, Habitat for Humanity, Nepal
- Mr Sandeep Singh & Ganvit Sharma, Students, School of Planning and Architecture, Bhopal

3 November 2023  |  09:00-10:15  |  VKS 002

Session Partner: National Land Coalition India

Hosted by: FLAME University
A tested model for land tenure security and women’s entrepreneurship

Anjan Sarkar, Landesa / Gram Niyojan Kendra

Keywords: Patta, Land Literacy, Sangha Facilitation Centers (SFC), Land Record Updation, Mutation, Conversion, Record of Rights (ROR), Prototypes of land records, West Bengal State Rural Livelihood Mission (WBSRLM)

The government of West Bengal initiated a drive for land allocation and patta distribution among the landless families in 2011. One important aspect in this land reforms work was to issue land titles in favour of women either jointly with husband or as a single holder. This resulted in handing over more than 575,000 land ownership titles in between 2011-2016, and more than 73% of the distributed titles contained the names of women, either as sole owner or as joint owner. The reality revealed that the women did not understand the contents of the documents and consequently did not consider these as significant. This prompted a need to introduce land literacy focusing the women in the state.

Land Literacy on the basic land issues, authorities, and documents Landesa engaged with the government land administrators and explained the need.

A pilot was planned with the approval of the WBSRLM. A training module was developed, vetted by the Land Reforms Department, and endorsed by the WBSRLM. Trainers were developed at the districts and Blocks, and trainings were rolled out. Two blocks covered throughout 2017 and approximately 37,000 women SHG members trained. An assessment was carried out which showed positive results and WBSRLM went ahead to scale.

Scaling land literacy

The WBSRLM desired to scale land literacy in a cascading approach. Landesa was the technical partner. This partnership resulted in development 435 master trainers at district level who trained 7240 Block Level trainers till June 2023. Now it has been institutionalized and regarded as women’s empowering component in SHGs’ capacity building. Till June 2023, a total of 2600000 SHG members were trained with the following outcomes:

The Block Level Trainers emerged as a source of land related information.
They are capable of checking the land records using the online platforms.
A demand emerged from the communities for the land related services.
With the urge from WBSRLM, further capacity building of the selected Block Level Trainers was organised to enable them to submit applications for updating land records using government’s web-based platform. The Sanghas (cluster federation of SHG network) were identified for such service delivery through the trained SHG member as service providers.

Piloting and scaling the SFCs

The SFCs had two objectives, addressing communities demands of land records updation and providing an entrepreneurial opportunity to the service proving women. During the pilot in 2020, seven Sanghas were identified in the two districts, Jalpaiguri and Coochbehar. The Block Level Trainers operating from these Sanghas were trained for land record updation and corrections. The government issued a guideline in December 2021 instructing 22 districts to establish five SFCs each by March 2022. Another notification was issued by the WBSRLM in June 2022 specifying the fees to be charged by the service providers for the various services e.g., mutation, conversion, ROR etc. As the first step for scaling, a three-days’ residential Training was organized by the WBSRLM, and 44 master trainers were developed. In all the districts, training for the service providers was provided by Landesa together with the master trainers. Landesa provides handholding support to the service providers during the initial months of operation. The services offered through the SFCs include checking plot information and Khatian, and submitting applications for digital copy of land records, mutation, land classification change, record correction, a certified copy of deed and counselling services.

Current status

- Operational SFCs – 151 (Out of 224 trained)
- Total services extended- 19544
- Methodology, findings, and the impact assessment methods
- Both the interventions, Land Literacy Promotion and setting up the SFCs were piloted and then scaled.

The methods adopted were as follows:

Closely working with the government institutions to develop their ownership. The strategy adopted for this purpose was to hold consultative meetings with the officials at the state, district and sub-district levels of the concerned departments (Land Reforms and WBSRLM) for agreeing on the universe of the pilots, approach, developing training modules, developing trainers’ capacity etc. A cascading approach was followed for rolling out the land literacy promotion, and master trainer development at the districts to training the village level SHG members. For developing training module on land literacy promotion, semi structured need assessment was carried out to identify issues which the families have encountered,
challenges faced, issues pertaining women land ownership including inheritance, etc. Draft module was developed based on the analysis of the data and was tested through conducting land literacy training sessions in the field. This helped in further refining the methods of training delivery through incorporating storytelling, developing prototypes of land documents etc.

Once the pilot phases were over, outcome assessments were carried out jointly with the WBSRLM mostly using qualitative methods. It revealed that the WLL and SFCs had positive results in breaking the psychological barrier of women to know about land and to take steps for updating land records. This resulted WBSRLM to take the decision on scaling both the interventions, WLL and SFC, across the state. A detailed outcome assessment exercise is planned in discussion with the WBSRLM authorities which would involve both the quantitative and qualitative data collection in a more structured manner.
Land and Housing Restitution as a land governance tool in governing the fragile land and people relationships to protect the land rights of Internally Displaced Peoples
Abebaw Abebe, Bahir Dar University

Keywords: Restitution, Internally Displaced Peoples, Principles, Land-people relations; Land rights

Land-to-people interaction is an old phenomenon that has occurred throughout human history. The scope and nature of the relationship have been changing over time because of continuous political, economic, social, cultural, and technological changes. Human civilizations, rapid technological advancements, high rate of urbanization, and internal displacements along with the need for sustainable development are driving changes in land-to-people interactions. The displacement of people has happened in Ethiopia due to ethnic tensions that have evolved into complex armed hostilities, with reports of indiscriminate attacks against civilians. According to the reports produced by different organizations, millions of people have been displaced. These internal displacements lead to loss of land, housing, and other property. People are often forced to leave behind valuable land and other property, and even damage or lose important documents when they flee and seek safety from the effects of armed conflict, human rights abuses, and other events. Loss of land and property can have serious consequences for the lives and rural livelihoods of individuals, households, and communities and could even spiral into another internal conflict. Understanding these, the Ethiopian government is implementing land restitution as a tool in governing these fragile situations aimed at protecting the land and property rights of Internally Displaced Peoples. Restitution can be defined as the act of restoration and the process by which land is returned to its rightful landholder who was dispossessed of the land in question due to forced displacement. This is aimed at governing the changing people-to-land relations because of internal displacements. In the IDP situation, there are complex people and land relations. There are legal owners of the land, occupiers who occupied land illegally using the displacement as an opportunity, and governmental and non-governmental organizations who have their interest in the due course. Governing these interconnected and complex people-to-land relations during internal displacements through restitution is not an easy task but is necessary. The main objective of this research is to present the experiences, challenges, and prospects of land and housing restitution as a land governance tool in governing the fragile land and people relationships to protect the land rights of Internally Displaced Peoples (IDPs). Research questions for
this purpose were developed and used. Secondary data that is a literature review is conducted using a systematic literature review approach. As the primary source, international instruments and handbooks, and national laws related to land restitution are reviewed. Besides, a Key Informant interview was conducted with federal and regional-level land administration experts and officials, and landholders who have been restituted after internal displacement. The research revealed that land restitution principles such as the right to housing, land, and property restitution; non-discrimination; granting sufficient application deadline for restitution; adequate consultation, participatory and inclusive; evidence-based, responsiveness; enforceable restitution decisions, judgments, and orders; accessible reception of restitution complaints; free of charge service fees for claimants; accepting alternative evidence; implementing land Registration and documentation after restitution are very crucial to make the restitution process successful. Besides, assessment of the security situation (such as return rate, and the illegal occupancy rates); awareness creation for all; reconstituting and establishing and capacitating local-level formal and informal institutions are prerequisites that need to be conducted before the implementation restitution project. The research recommends strictly applying land restitution principles during the implementation of restitution projects. Local-level formal and informal institutions are key for the success of restitution. Besides, implementers should also give equal emphasis to preparatory activities (such as assessment, awareness, and capacity building); and post-restitution tasks (such as land registration and titling; trust building, awareness creation, etc.) are pivotal.
Land Supply for Affordable Housing: A Case of Delhi and Bhopal
Sandeep Singh, School of Planning & Architecture, Bhopal
Garvit Sharma, School of Planning & Architecture, Bhopal

Keywords: Affordable Housing, Land Supply, Delhi Land Pooling Policy, Pradhan Mantri Awas Yojna (PMAY), Infrastructure Development

Access to affordable housing is a pressing global challenge, and India is no exception to this issue. In this study, we explore the dynamics of land supply for affordable housing in two major Indian cities, Delhi and Bhopal. These cities represent diverse socioeconomic and demographic backgrounds, making them ideal case studies to examine the complexities surrounding land availability, government policies, and urban development in the context of affordable housing. The demand for affordable housing in India is ever-increasing due to rapid urbanization and population growth. Inadequate housing options for the urban poor and the middle-income group have led to a housing crisis, affecting millions of households. Recognizing the magnitude of this problem, the Indian government has undertaken various initiatives and policies to address the issue of affordable housing, such as the Pradhan Mantri Awas Yojana (PMAY), which aims to provide "Housing for All."

Delhi, the national capital, and Bhopal, a tier-2 city in central India, exhibit stark differences in their affordable housing landscapes. Delhi's housing market is characterized by high demand, soaring property prices, and acute shortages of affordable units, while Bhopal faces challenges such as informal settlements and inadequate infrastructure for housing. These disparities necessitate tailored approaches for land supply in each city. In the case of Delhi, land supply for affordable housing is constrained by limited availability, competing land uses, and complex land ownership patterns. The Delhi Development Authority (DDA) has played a pivotal role in allocating land for affordable housing through auctions, but this method has faced criticism for driving up land prices and ultimately making affordable housing unattainable for the target population. Moreover, urban sprawl and congestion have put pressure on the available land, calling for innovative land-use planning strategies.

In contrast, Bhopal has a relatively lower population density and more available land for housing development. However, the city grapples with informal settlements and urban poverty, making it crucial to address affordable housing through integrated urban planning. Government programs in Bhopal have
aimed at formalizing these informal settlements, thereby facilitating access to basic amenities and housing for the urban poor. Both cities are challenged by the need for infrastructure development, urban services, and land regularization, which are essential components of making affordable housing a reality. The study highlights the importance of a comprehensive, city-specific approach to land supply that addresses not only land allocation but also infrastructure development and slum upgrading.

Government policies have played a significant role in shaping land supply dynamics. In Delhi, the land pooling policy has been developed on public-private partnership model has been promoted to enhance land supply for affordable housing. This model has had mixed success, with concerns about transparency, affordability, and the displacement of marginalized communities. Bhopal, on the other hand, has adopted a more inclusive and community-driven approach in line with the Pradhan Mantri Awas Yojana (PMAY) policy, which seeks to upgrade slums and provide tenure security to residents. The study also explores the role of land-use regulations and zoning in shaping land supply for affordable housing. In Delhi, complex zoning regulations and an overemphasis on high-end real estate have hindered the availability of land for affordable housing. Streamlining these regulations and introducing incentives for affordable housing projects could make a substantial difference. In Bhopal, flexible zoning regulations have been instrumental in accommodating informal settlements and promoting affordable housing options.

The methodology opted for study involves analyzing housing dynamics in two diverse Indian cities. It includes assessment of government policies’ impact, study the role of zoning regulations, and conduct comparative analysis. The study combines qualitative and quantitative research methods to understand land supply challenges and their implications for affordable housing. Data is gathered through surveys, interviews, and document analysis. Statistical analysis and case studies provide insights into the unique housing landscapes of the two cities and enable us to draw meaningful conclusions.

In conclusion, the research underscores the multifaceted nature of the affordable housing challenge in Delhi and Bhopal, India. It illuminates the need for tailored, city-specific strategies that encompass regulatory reform, community engagement, and infrastructure development. By examining these two distinct case studies, study contributes to the larger conversation on affordable housing and urban development in India. The findings emphasize the importance of flexible policies and inclusive approaches, serving as a valuable resource for policymakers and urban planners addressing this critical issue in diverse urban settings.
2. Sustainable Forest Practices and Community Engagement

Chair: Dr Sharad Tiwari, Scientist, Institute of Forest Productivity
Co-Chair: Ms Bharti Patel, Scientist, Institute of Forest Biodiversity
Moderator 1: Ms Manisha Mallick, PhD Scholar, FRI
Moderator 2: Ms Honey Bhatt, PhD Scholar, GBPNIHD, Almora
Moderator 3: Mr Prastuti Sakkia, Climate Change Officer, Great Yarmouth Borough Council, UK
Moderator 4: Mr Animekh Hazarika, PhD Scholar, Assam University
Moderator 5: Mr Jintu Kumar Bania, PhD Scholar, Assam University
Moderator 6: Ms Ganga Bista, Climate Change Officer, Federation of Community Forestry Users

3 November 2023 | 12.15 to 13.30 | Hall: VKS 003

Session Partners: Institute of Forest Productivity, Tropical Forest Research Institute, Forest Research Institute
Rejuvenating the Riparian Landscape of the Mahanadi River: A Holistic Approach for Sustainable Stewardship and Riverscape Health
Sharad Tiwari, ICFRE- Institute of Forest Productivity

Keywords: Land neutrality, Land tenure, Livelihood support, Mahanadi Riverscape, Riparian Landscape, Sustainable stewardship

Riparian ecosystems act as vital buffers between the terrestrial and aquatic environments. They play a crucial role in river health and accommodating large, especially the marginal populations in river’s vicinity. However, anthropogenic stresses such as untenable developments, encroachment, unawareness, lack of ownership, inter-state conflicts, and habitat fragmentation due to climate change have significantly degraded these vital landscapes, leading to compromised riparian ecosystems. In order to ensure the preservation and durability of our river ecosystem, it is crucial to understand the interconnectedness between the land and the communities residing within it, thereby cultivating a collective dedication to the sustainable stewardship of these unique ecosystems. Considering the diverse category of stakeholders along the riparian landscape of the Mahanadi River, it is essential to analyse the existing land tenure arrangements across the intended landscape. Land tenure systems can impact economic development, as secure land rights are crucial for investment in agriculture, industry, and infrastructure. A Secure land tenure scenario would inculcate the owner responsiveness and facilitate the rehabilitation initiatives. Understanding and addressing land tenure and land-people relations are essential for sustainable development, social equity, and the well-being of communities and individuals. These aspects often intersect with legal, cultural, economic, and environmental factors, making them complex and multifaceted issues. The current endeavour is an attempt to take a holistic approach and prepare a comprehensive proposal to rehabilitate the Mahanadi riparian landscape and rejuvenate the health of River Mahanadi. The proposal aims to conserve and promote sustainable use of natural resources, address the stressors and drivers of biodiversity loss, and to enhance ecosystem services and ensure livelihood support to marginal population. The proposal emphasises a multi-stakeholder-driven approach to rehabilitate the riparian landscape of the Mahanadi River system. A detailed implementation, management and monitoring mechanism involving all the concerned stakeholders have been proposed to ensure smooth implementation. The document offers a well-defined mechanism for the involvement of centre and state-driven schemes with a proper convergence and dove-tailing of existing schemes. The river’s catchment area covers 1,38,838 Km2 (1:50000),
encompassing the states of Chhattisgarh, Odisha, and a small part of Maharashtra. Following a stakeholder consultation, we considered Mahanadi and its major tributaries, such as Sheonath, Hasdeo, Jonk, Ib, Mand, Tel and Ong. A riverscape area of 24,933 Km2 was demarcated to implement rejuvenation measures. The delineation of the riverscape took into account a buffer zone of 5 kilometres on both sides of the Mahanadi River and a 2-kilometre buffer for its tributaries. A land use land class (LULC) map at 1:50,000 scale was developed using the visual interpretation approach. A Multi-Criteria Decision Analysis (MCDA) was applied to prioritise the riverscape area for the intervention activities. An extensive field survey was carried out across the delineated riverscape to study the ground conditions and interact with local inhabitants especially the rural population and farmers. Landscape-specific intervention models were developed for the Natural, Agriculture, and Urban landscapes, considering factors such as soil composition, vegetation type, native species, and the stakeholder's preferences. The proposed riverscape intervention activities would enhance the amount of green cover by 30123 hectares and ensure wide-scale soil and moisture conservation (SMC) through SMC interventions. The intervention activities are anticipated to substantially benefit the riparian ecosystem, with groundwater recharge 388 MCM, annual sedimentation reduction 420 thousand CM, and 92% of riverscape area reducing to an erosion class of 5 tonnes/hec/year. The intervention is anticipated to contribute to the sequestration of 3.65 MT of carbon at the proposed riverscape site. A large number of employment opportunities would be created for the marginalized population. The proposed endeavour shall contribute to achieving “Kunming Montreal Global Biodiversity Framework” targets concerning land neutrality, carbon sequestration, capacity building, conserving biodiversity, and serve as a benchmark to support similar future initiatives. It is expected that this study would pave ways for comprehensive, technically-sound solution and a collaborative mechanism to sustainable solution for maintaining the integrity and health of riparian landscape of Mahanadi River system.

Governance Of Land Use, Land Use Change And Forestry in Relation to Climate Change from the Perspectives of a Developed And Developing Country

Prastuti Saikia, Great Yarmouth Borough Council, UK

Keywords: Land ownership, adaptation, land use, policy

Land Use, Land Use Change, and Forestry (LULUCF) governance differs significantly between developed countries like the United Kingdom (UK) and developing countries like
India. In the UK, land ownership is well documented and tenure regulations are clear, enabling effective planning and management of LULUCF projects. Conversely, India grapples with a complex system of land ownership and tenure, leading to challenges in implementing large-scale projects due to land rights issues and disputes. The UK, further, has well-established policies and institutional frameworks for managing land use and forestry. It has more advanced technology for monitoring land use and carbon sequestration. This results in high-quality and readily available data. India is actively working to enhance its LULUCF policies, achieving significant progress in policy formulation. Nevertheless, there is a need for further efforts to strengthen institutional capacity and allocate resources effectively for monitoring and implementing LULUCF projects. Although there is an increasing adoption of advanced technology in India, challenges persist in monitoring LULUCF activities, particularly in remote or underdeveloped areas.

In terms of emission trends and sequestration potential, the UK has experienced significant land-use changes due to industrialisation and urbanisation. Due to afforestation, reforestation, and sustainable land management practices, the UK has seen a decrease in emissions from LULUCF activities. India, on the other hand, struggles with challenges arising from a large agricultural sector and rapid urbanisation. Additionally, as a developed country, the UK leads in international climate negotiations and agreements. It has committed to ambitious emission-reduction targets, including LULUCF efforts. As a developing country, India has emphasised the importance of technology transfer, financial assistance, and capacity-building in international climate negotiations and agreements. Its LULUCF commitments are frequently linked to international community support. Further, in terms of adaptation and resilience, the UK has the resources to prioritise adaptation strategies to address the effects of climate change on land use, such as flood defences, coastal management, and sustainable agriculture practices. Whereas, India faces significant vulnerabilities to the effects of climate change on land use, such as changes in rainfall patterns and an increase in the frequency of extreme weather events.

In summary, both the UK and India are actively engaging in combating climate change through LULUCF policies. However, their approaches are shaped by distinct levels of development, socioeconomic contexts, and international commitments. The UK benefits from established policies and advanced technology, while India is in the process of fortifying its governance framework in this area.
Tribal People-Land Relations: Unlocking Indigenous Roles And Traditional Knowledge-Based Mechanisms For Integrated Climate Change Action In Protected Areas
Manisha Mallick, Forest Research Institute

Keywords: Climate adaptation, Protected Areas, Indigenous people

Land designated as protected areas to meet biodiversity conservation goals have increasingly been recognized globally as centres of climate action. In India, protected areas like biosphere reserves are home to resource-dependent populations, sparking concerns about the conflicting impacts of conservation models and climate actions on the forest-based livelihoods, identity, and culture of vulnerable tribal populations living along forest margins. India's forest policies, influenced by fortress conservation models emphasizing isolation of ecosystems from human access, have undergone varying degrees of devolution under different forest management schemes. This has ignited debates about the land rights of tribal communities, especially in the advent of the Forest Rights Act, 2006 that aims to empower them in managing forests for subsistence and livelihoods. Placing climate change at the centre of its environmental policies, India’s National Action Plan on Climate Change emphasizes protecting the poor and vulnerable from climate change impacts. India has also committed to one of the most substantial restoration pledges, promising to restore 21 million hectares of degraded and deforested land under the Bonn Challenge. Hence, a futuristic strategy that integrates national climate change action, conservation, sustainability targets, and supports tribal livelihoods is essential. Indigenous stewardship, globally acknowledged for protecting ecosystems, reducing climate change vulnerability, and supporting sustainable livelihoods, is crucial. Indigenous peoples are stewards of the world’s biodiversity and cultural diversity. Although they account for only around 5 percent of the world’s population, they effectively manage an estimated 20-25 per cent of the Earth’s land surface. This land coincides with areas that hold 80 per cent of the planet’s biodiversity and about 40 per cent of all terrestrial protected areas and ecologically intact landscapes. Analysing sustainable land-based practices of indigenous people can pave the way forward, strengthening their contribution to conservation, climate action, and sustainable development in biosphere reserves; transforming protected areas from contested zones to effective models of sustainable development. The current case study focuses on analysing traditional knowledge and culture-influenced land-use mechanisms in the Similipal Biosphere Reserve in Eastern India, including sacred groves, forest-farm rotational grazing, fractional tree cover on farms, and home gardens amidst tribal communities' land contexts. These practices are further complemented by indigenous roles in forest landscape restoration associated with top-down interventions by such as MGNREGA. The study is a part of a larger research that aimed to
study climate adaptations and risks of tribal communities in the Similipal Biosphere Reserve in India, where mixed methods research methodology had been employed comprising of questionnaires, focus group discussions and interviews of tribal households and key informants (agriculture, forest and animal husbandry and veterinary departments) across nine administrative blocks. The conceptual findings underscore how indigenous socio-ecological systems often embody nature-based, cost-effective, and resource-efficient characteristics with land use and tenure at its core. Without timely acknowledgement and incentivization of indigenous roles and traditional knowledge-based mechanisms, it is likely that we lose out on opportunities for effective forest governance in the protected areas and strategic alignment of interlinked goals- sustainability, conservation, climate change mitigation, and adaptation.

Forest Management and landscape restoration in Indian Western Himalaya: Insights from Community Managed Forests


Keywords: Forest management, governance, stakeholder, Van Panchayats, Western Himalaya.

The Western Himalayan region poses significant challenges in realm of biodiversity conservation and its management due to its abundant nature which holds immense value in terms of natural resource availability, utilization, and its conservation to attain sustainable, nature-based employment opportunities for the dependent communities of the region. In the 19th century, the British colonial forest department's refusal to acknowledge the traditional rights of the communities of Uttarakhand, northern India. These historical conflicts shaped the establishment of Van Panchayats (VPs), recognized as a community managed forest system, officially in 1931. With India gaining independence in 1947, forest management entered a new era. Various initiatives, and VP regulations were adapted to evolving dynamics between local villages and the state Forest Department. Van Panchayats, viewed as a grassroots movement, aimed to restore customary rights, culminating in the enactment of the Forest Rights Act of 2006. Despite this progress, the ongoing struggle for complete empowerment of local villages in managing their forests and resources remains a significant challenge. In this context, the Community-Managed Forests (CMFs) or Van Panchayats (VPs) in Uttarakhand play a vital role. These VPs being common property resource (CPR) of the community residing in vicinity have the land tenure
and rights defined under the section 28(2) of the Indian Forest Act, 1927 and have been identified with having relatively homogenous groups of forest resource users, existence of various form of organization of forest resource users, authenticated management and their equitable distribution of forest resources amongst them, and a legal backup to enforce rules and regulation developed by the group of forest users for forest protection and management and in successful communal management of forests.

The present study aims to assess the extent and significance of these VPs towards their natural resource status, utilization patterns, management and governance issues in Uttarakhand. The study identifies the possible factors which can play significant role towards better resource management from the case studies of two VPs located in Hawalbagh Developmental block in Almora district of Uttarakhand. The study highlights the status of VPs status in forest management and their related implications, which impact forest resources and emphasizes their long-term sustainable utilization. Data on perception for management status and landscape restoration were collected by rigorous literature review followed by focus group discussions (n= 2) and semi structured interviews (n= 60 Households) through standard Participatory rural appraisal (PRA) techniques. The results provide specific insights to different challenges like inter and intra VP disputes, resources trade-offs, governance difficulties in surplus earnings for the community along with the assessment of rules related to monitoring, dispute resolution mechanisms, selection of guards for enforcement of rules, fines for rule breakers, management of finances, equitable distribution of usufructs, and change in land tenure and ownership in aspect of illicit encroachment if any. The results revealed that non-demarcated forest pose security issues for communities, and these tenurial confusions emerge due to unclear boundary demarcation in target VPs and many other VPs of Uttarakhand.

The solutions like local management practices adopted by stakeholders in examining their role in conserving and sustainably utilizing forest resources in Van Panchayats have also been taken into consideration during the study and it has been noted that these VP institutions need strengthening in terms of technical and financial powers and democratic character.

It is also analyzed that making the VP structure too rigid in management might reduce them to another layer of bureaucratic devices which is the pertaining situation in present day scenario of VP management as the tenurial significance is, a precursor to devolution of forest management authority and this has been changed since the recent rule’s modifications.

The results ascertained that across the dependent local communities and a truly decentralized forest administration such as VPs, the tenure management is of utmost significance. It is often observed that a sense of belonging motivates people to protect forests. However, when this is diminished people tend to relinquish forest management, ultimately resulting in forest degradation.
Thus, in present study, by showcasing the potential of community-based forest towards forest resource management in these selected VPs of Uttarakhand, an approach has been offered that can support policymakers and decision-makers in designing effective governance programs and suitable policy prescriptions for developing long-term local and regional management strategies ensuring community forest rights for these forests in the Himalayan region.

Climate change vulnerability of tribe managing indigenous Piper agroforestry systems in the Indian sub-Himalayan region

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Keywords: Adaptability; Climate risk; Indigenous communities; Nature based solution; Socio-ecological vulnerability.

The agrarian society of the Himalayan landscape is experiencing the continuous growing ill impact of climate change. The impacts are compounding due to age-old shifting agriculture, which has jeopardized the ecological balance mainly by reducing the cultivation fallow cycles. Pnars, a hill tribe of the southern Himalayan state of Assam, India, has transitioned shifting cultivation to indigenous Piper agroforestry (Piper betle L.), providing them numerous tangible and non-tangible benefits. Understanding climate change impact on indigenous agroforestry is crucial to address the climate crisis and to provision the adaptation of the tribe for successful promotion. A total of 171 randomly selected households across 15 randomly selected tribe villages were surveyed using the household-level questionnaire to assess the cause and nature of vulnerability in the region. Villages with lower land holdings, higher loss of crop productivity due to extreme events, disease infestation and lower livelihood diversification were considerably highly susceptible towards climate change. The prominent diseases “leaf spot” and “root rot” were identified as a serious concern among the Piper cultivators responsible for a decline in crop yield; the severity of losses in productivity leads to economic instability among households. The prevalent sustainable farm management practices of Piper agroforestry systems represented climate-smart agriculture, appears to favour the presence of high tree densities and species numbers in Piper agroforestry responsible for greater accumulation of atmospheric carbon.
while providing numerous provisioning services to the cultivators. Villages with prominent farm management strategies with greater decision-making abilities were contributing explicitly to lower vulnerability. In contrast, villages with lower adaptive strategies were found specifically due to poor social networking and inadequate household infrastructure besides poor literacy levels. Additionally, the lack of multi-cropping farming was a major cause of high climate sensitivity. Therefore, effective policy interventions are required to invest in crop diversification, better decision-making capability of tribes through education, and improved infrastructure besides diversifying the rural economy. Furthermore, the Pnar families lease lands from the revenue or the forest department for cultivation. Farmers with small landholdings cannot take adequate measures that could enhance farm productivity. National Forest Policy 1988 and Forest Act of 2006 acknowledge secure land tenure, which still needs to be operational at the local level. The security of land rights is ineffective without securing their ability to share natural resources among the communities. A secure tree tenure involves the ability to register, harvest, transport, and market trees and tree products. However, successful implementation of tree tenure in indigenous agroforestry systems requires an in-depth understanding of local tenure systems, including resource utility and management. Hence, secure land rights and tree tenure may be essential to avail the multidimensional benefits of Piper agroforestry while maintaining cultural values.

**Spatial Distribution of Soil Organic Carbon And Macronutrients in the Deep Soil Across a Chronosequence of Tea Agroforestry**

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Keywords: Monotonic distribution, Stratification ratio, Soil nutrients, Ecosystem carbon stock, Small-holder.

Climate change is an urgent global crisis, driven by several human activities, which can disrupt societal, economic and ecological settings. Therefore, there is an urgent need to find innovative solutions for reducing atmospheric carbon dioxide levels to mitigate the impacts of anthropogenic climate change. Proper land use management can significantly contribute to the mitigation of climate change. There are growing pieces of evidence that sustainable agriculture practices, agroforestry systems, and reforestation activities can significantly serve
the purpose along with the improvement of soil quality. Therefore, agroforestry systems have gained much interest among the inter-disciplinary scientific communities. Agroforestry systems can store a significant amount of carbon in their biomass and soil. Notably, this approach not only facilitates the sequestration of atmospheric carbon dioxide but also fosters heightened soil fertility, diminished water usage, and diversified income streams for agricultural practitioners. Among the notable agroforestry systems, tea agroforestry is emerging as a pioneer land management strategy that harmoniously combines tea cultivation with strategically integrated trees, shrubs, and other vegetation. This approach enhances the sustainability and productivity of tea plantations, with shade trees serving not only to safeguard the delicate tea bushes from extreme climatic conditions but also to yield additional products such as timber. Furthermore, these shade trees play a pivotal role in fixing atmospheric nitrogen in the soil, thereby enriching the soil's nitrogen content. However, there is a debate that due expansion of the global tea plantation area resulted in the conversion of marginal-quality croplands and natural forests into tea plantations, causing habitat fragmentation, decreased landscape connectivity, and a loss of biodiversity. On the contrary, ancient tea forests, rustic tea farming and mixed agroforestry have shown the potential to support and maintain the native biodiversity. In addition, tea production has contributed significantly to rural development, poverty alleviation, and food security for many low-income families. However, data on the potential of tea agroforestry systems (TAFS) to store soil organic carbon (SOC) and macronutrients in its deeper soil horizon is limited. For the first time, here we provided the estimation of SOC and macronutrient concentrations and stocks in the deep soil in different aged tea agroforestry and adjacent natural forests. The SOC concentration across all the sites was decreased with increasing soil depth. The 60 year TAFS had the highest SOC stock of 213.2 Mg C ha\(^{-1}\) and it ranged from 174.5 Mg C ha\(^{-1}\) to 213.2 Mg C ha\(^{-1}\) among the different aged TAFS. Whereas, natural forest (NF) had the highest SOC stock (311 mg C ha\(^{-1}\)) among all the sites. Furthermore, it was found that more than 50% of SOC stock was stored in the upper 100 cm of the soil. The distribution patterns of SOC content and other soil nutrients show a similar trend. The highest available N was found in 60 year TAFS (181.7 kg ha\(^{-1}\)) while the available P and K were highest in the forest soils (22.42 kg ha\(^{-1}\) and 56.86 kg ha\(^{-1}\)). In general clay content declined with soil depth for all the study sites. The SOC: clay ratio of the study sites signifies a good structure of the soil. Across all the sites,
NF had the highest ecosystem carbon stock (375.12 Mg C ha\(^{-1}\)) of which 17\% was contributed by the biomass component. Among the TAFS, the ecosystem carbon stock ranged from 204.8 Mg C ha\(^{-1}\) to 251.76 Mg C ha\(^{-1}\). The present study provides insight into the role of TAFS in climate change mitigation. Around 25\% of the total tea production in India (335 M. kg), comes from smallholder tea farms, signifying their important role in country’s economy. Additionally, smallholder tea farms provides an excellent opportunity for livelihood improvement while advancing soil health and biodiversity conservation. The outcome of the present study may be scaled up at small tea farms for better understanding of the land people relation and their potential role in long term carbon sink management. We suggest, further research to explore the role of deep soils of small-holder tea farming in climate change mitigation.
Community Forestry: a paradigm for conserving forest sustainably in Nepal
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Key words: community forestry, biodiversity conservation, climate change, deforestation

Community Forestry (CF) is major category of prevailing forest management regimes which covers 2.23 million hectares (22,37,670 ha) of forest area and is managed by 22,516 community forest user groups (CFUGs). CF accounts for 33 percent of total forest area of Nepal and around 2.9 million households are directly associated with management of CF. The existing ownership over forest under Community forestry maintains owner and tenant relationship between the Community forestry users’ groups and the government. Legally, land ownership within CF remains with the government. The Act has defined the tenure rights of communities to access forest products through various directives, and government decisions have established provisions for the sharing of timber products between communities and the government. Concerning non-timber forest products (NTFPs), the act grants local communities the right to create management plans and have them approved by the District Forest Office (DFO). Nepal's CF stands out as one of the most advanced tenure types, securing local communities' rights to access, utilize, and govern forest resources under approved operational plans. This management regime has proven successful in achieving both the objectives: the conservation of forests and the enhancement of local livelihoods. The effectiveness of CF can be attributed to entrusting local communities with rights over forest resources and providing them with secure tenure, fostering a strong sense of collective action among locals. CF program has made positive contribution to forest biodiversity and natural ecosystems through various means. Key indicators such as biomass, carbon stock, growing stock, soil organic carbon, forest cover and forest product yields have all seen enhanced under CF management. In Nepal, local communities have made substantial progress in conserving forest ecosystems and nurturing local democratic institutions promoting social justice. Studies have provided evidence that CF programs have led to the rejuvenation of previously degraded forests and substantial improvements in their condition. Consequently, CF has become a prominent forest management approach, delivering positive environmental and socio-economic outcomes that align with principles of sustainable forest management (SFM). CF has broadened the conservation agenda, with local people and other stakeholders developing a strong sense of stewardship towards conservation. Many CFUGs have actively engaged in activities such as wildlife poaching prevention, forest fire management, controlling excessive grazing, preventing encroachments on forest areas, and regulating the harvesting of forest...
products—all of which contribute to biodiversity protection. Furthermore, Nepal's National Adaptation Plan of Action (NAPA) in 2010 has emphasized the significance of CF as a vital local-level institution for community-based adaptation measures. Nepal's second Nationally Determined Contribution (NDC) envisions expanding community-based forest management (CBFM), including community forestry, to cover 60 percent of nation's forested area to fulfill national emissions reduction commitments. Similarly, Nepal's National REDD+ strategy in 2018 has identified community forests as a suitable approach for reducing deforestation and forest degradation, thereby enhancing carbon sequestration. Moreover, integrating climate change considerations into community CF implementation guidelines underscores the role of community forests in addressing climate change challenges.
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