# Women's Right to Land: A Step towards a Sustainable World Order

Pravati Panda <sup>1</sup>, Dr. Ipsita Nayak <sup>2</sup>, Dr. S. Thilaka <sup>3</sup>, Dr. R. Senthamizh Veena <sup>4</sup>, Dr Bhadrappa Haralayya <sup>5</sup>, Dr. Ragupathi Ramasamy <sup>6</sup>

<sup>1</sup> PhD Research Scholar, KIIT D University, Bhubaneshwar, India pravatipanda101@gmail.com

https://orcid.org/0009-0003-2337-6895

<sup>2</sup> Assistant Professor of English, KIIT D University, Bhubaneshwar, India

ipsita.teacher@gmail.com

https://orcid.org/0000-0002-4584-7470

- <sup>3</sup> Assistant Professor, PG & Research Department of Economics, Holy Cross College (Autonomous), Tiruchirapalli, 620002, Tamil Nadu, India
- <sup>4</sup> Assistant Professor, PG & Research, Department of Economics, Holy Cross College (Autonomous), Tiruchirapalli, 620 002, Tamil Nadu, India
- <sup>5</sup> Professor and HOD, Department of MBA, Lingaraj Appa Engineering College Bidar-585403, Karnataka, Visvesvaraya Technological University Belagavi, Karnataka

bhadrappabhavimani@gmail.com

0000-0003-3214-7261

<sup>6</sup> Associate Professor of English, M.Kumarasamy College of Engineering, Karur, Tamil Nadu paperrrs@gmail.com

0000-0003-3415-0333

**How to cite this article**: Pravati Panda, Ipsita Nayak, S. Thilaka, R. Senthamizh Veena, Bhadrappa Haralayya, Ragupathi Ramasamy (2024). Women's Right to Land: A Step towards a Sustainable World Order. *Library Progress International*, 44(3), 13337-13347.

## Abstract

This paper explores the critical role of women's land rights in promoting sustainable development and gender equality. Women's access to and control over land is fundamental to their economic empowerment, social justice, and the reduction of poverty, particularly in rural communities. However, despite various legal reforms and global recognition of women's rights, significant barriers to land ownership persist, particularly in the Global South. This paper investigates the challenges faced by women in securing land rights, such as patriarchal land tenure systems, legal restrictions, and socio-cultural norms. Drawing from various case studies and theoretical frameworks, the paper argues that ensuring women's land ownership is not only a matter of justice but also a strategic path toward achieving sustainable development goals (SDGs). The findings suggest that strengthening women's rights to land can contribute to enhanced agricultural productivity, food security, and community resilience, thereby fostering a more equitable and sustainable world order.

**Keywords:** Women's Land Rights, Gender Equality, Sustainable Development, Land Ownership, Empowerment, Social Justice

#### 1.1. Introduction

The right to land ownership is a fundamental issue of human rights, economic empowerment, and social justice, particularly for women who have historically been excluded from owning and controlling land. Despite being the backbone of agricultural labor and the primary caregivers in many communities worldwide, women continue to face significant barriers to land ownership. The disparity in land rights has far-reaching consequences, not only for women but also for the broader societal goals of poverty reduction, food security, and sustainable development. In the context of global efforts to achieve the United Nations Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 5 (Gender Equality), and SDG 15 (Life on Land), securing land rights for women has become a crucial agenda item in promoting a sustainable world order. Women's right to land is directly linked to their economic independence and empowerment. Land ownership provides women with a secure asset base that enhances their bargaining power within households and communities. It also enables them to access financial resources, such as credit and loans, which are essential for investing in agriculture, improving livelihoods, and achieving food security. Without secure land tenure, women are often marginalized in decision-making processes and are unable to contribute fully to agricultural productivity and community development. In many regions, women remain dependent on male relatives for access to land, perpetuating gender-based inequalities in economic opportunities and social status. Despite global recognition of the importance of women's land rights, significant barriers remain, particularly in the Global South, where customary land tenure systems often prioritize male ownership. Legal frameworks in many countries continue to favor men when it comes to land inheritance and ownership, even though international treaties and conventions such as the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and national reforms have sought to ensure equality. The interplay between formal laws and customary practices often results in women being excluded from land ownership, with many legal reforms proving ineffective at the local level due to cultural resistance and the persistence of patriarchal norms. In addition to the economic benefits of securing land rights for women, there are also significant environmental and social benefits. Women who own land are more likely to engage in sustainable land management practices, such as soil conservation, agroforestry, and crop diversification, which contribute to environmental sustainability and the resilience of rural communities in the face of climate change. Moreover, when women control land, they are more likely to prioritize the well-being of their families, leading to improved outcomes in education, healthcare, and nutrition. These outcomes are essential for achieving inclusive development and addressing the multiple dimensions of poverty.

This paper explores the relationship between women's land rights and the pursuit of a sustainable world order, with a particular focus on how land ownership can contribute to gender equality, poverty alleviation, and sustainable development. By examining the historical context of women's exclusion from land ownership, the legal and institutional barriers that persist, and the sociocultural norms that continue to marginalize women, this paper aims to highlight the importance of securing land rights for women as a critical step towards achieving sustainable development. Drawing on case studies from regions such as Sub-Saharan Africa, South Asia, and Latin America, the paper investigates how land ownership can empower women economically and socially, while also contributing to broader goals of environmental sustainability. Ultimately, this paper argues that ensuring women's right to land is not only a matter of justice but also a strategic necessity for fostering a more sustainable and equitable global society. By providing women with secure access to land, policymakers and development practitioners can enhance agricultural productivity, promote environmental stewardship, and address the systemic gender inequalities that hinder development. The findings presented in this paper underscore the need for comprehensive legal reforms, community-based interventions, and policy changes that prioritize women's land rights as a fundamental pillar of sustainable development efforts.

## Literature Review

The issue of women's land rights has gained significant attention in recent decades, particularly as global development agendas recognize the critical link between gender equality, economic empowerment, and

sustainable development. Women's access to and control over land is not only a matter of economic survival but also a fundamental issue of social justice and human rights. Despite legal reforms and international commitments to improve women's land ownership, significant barriers remain, especially in developing countries where customary practices and patriarchal norms continue to limit women's ability to own and control land. Research has shown that securing land rights for women has wide-ranging benefits, from improving agricultural productivity and food security to enhancing community resilience and promoting environmental sustainability. Women's ownership of land has been linked to better outcomes in household welfare, with women more likely to invest in the well-being of their families, particularly in the areas of health, education, and nutrition. Moreover, in the context of climate change and environmental degradation, women who own land are more likely to adopt sustainable agricultural practices, thereby contributing to long-term ecological sustainability. This literature review aims to explore the historical evolution of women's land rights, analyze the legal and cultural challenges they face, and assess the broader implications of land ownership on women's economic and social empowerment. By examining case studies from different regions and exploring the intersections of gender, land tenure, and sustainable development, this review seeks to highlight the critical role that land rights play in shaping women's livelihoods and in fostering a sustainable world order.

## 1. Women's Land Rights: A Historical and Global Perspective

Historically, women's access to land has been restricted by legal, cultural, and economic barriers across various societies. In many parts of the world, **patriarchal systems of land tenure** have favored male ownership, leaving women with limited rights to inherit, own, or control land. This exclusion is evident in both **customary and formal legal frameworks**, which often prioritize male heirs or kin when allocating land rights (Agarwal, 1994). Although some legal reforms have been enacted in recent years, these changes have been slow to translate into meaningful improvements in women's land ownership, particularly in rural areas where traditional practices are deeply embedded. Globally, women's land rights have garnered attention as a key factor in achieving **gender equality and sustainable development**. International agreements such as the **Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)** and the **Beijing Platform for Action** have recognized the importance of securing land rights for women. These frameworks emphasize that without equal access to land, women remain marginalized and economically disadvantaged, limiting their ability to contribute fully to development goals (Deere & León, 2001).

### 2. The Role of Land Rights in Women's Economic Empowerment

Research has consistently shown that **land ownership is a critical asset** for women's economic empowerment. In agrarian economies, where land is the primary source of income and sustenance, women's access to land directly impacts their ability to participate in agriculture, make decisions about resource use, and generate income (Meinzen-Dick et al., 2011). Studies by Lastarria-Cornhiel (1997) demonstrate that where women own land, they are more likely to invest in the health, education, and well-being of their families, leading to broader socio-economic benefits. In contexts where land ownership is denied or restricted for women, the effects are often devastating. Women without land rights are disproportionately affected by poverty, and they lack the collateral necessary to access credit, technical assistance, and inputs for agricultural production (Whitehead & Tsikata, 2003). This, in turn, perpetuates cycles of poverty and dependence, undermining both **women's empowerment** and broader efforts toward **rural development**. In contrast, when women are granted land ownership, studies show increases in agricultural productivity, improved food security, and greater resilience to economic shocks (Doss et al., 2015).

# 3. Legal and Institutional Barriers to Women's Land Rights

Despite the documented benefits of women's land ownership, **legal and institutional barriers** continue to impede progress. In many countries, **statutory laws** (formal legal systems) conflict with **customary laws** (traditional practices), creating a complex legal landscape that disadvantages women. For example, in many Sub-Saharan African countries, customary laws often allocate land rights based on patrilineal descent, meaning that women's

access to land is typically mediated through male relatives (Yngstrom, 2002). This conflict between customary and statutory laws creates a legal paradox for women. Even where national laws recognize women's rights to own land, **customary practices** can override these rights, especially in rural communities. Moreover, women often lack the knowledge, resources, or support systems to claim and defend their land rights in courts, leaving them vulnerable to dispossession (Jackson, 2003). As a result, many women remain excluded from land ownership despite the presence of legal frameworks intended to protect their rights.

## 4. Sociocultural Norms and Gender Disparities

In addition to legal barriers, **sociocultural norms** play a significant role in limiting women's access to land. Traditional gender roles, which view men as the primary breadwinners and women as caregivers, often reinforce the notion that land should be controlled by men. This belief system is prevalent in regions where **customary land tenure** dominates, such as in parts of Sub-Saharan Africa, South Asia, and Latin America. These gendered norms are deeply embedded and continue to influence land distribution practices, inheritance laws, and decision-making processes within families and communities (Agarwal, 1994). The intersection of **gender and land ownership** is further complicated by women's limited participation in decision-making bodies. In many cases, women are excluded from **local governance structures** where land allocation decisions are made, such as village councils or tribal authorities. This exclusion perpetuates male dominance over land resources and denies women a voice in critical discussions about land use, inheritance, and agricultural policies (Goebel, 2003).

## 5. Women's Land Rights and Sustainable Development Goals (SDGs)

Women's land rights are directly linked to several of the **United Nations Sustainable Development Goals** (SDGs), particularly **Goal 1** (No Poverty), **Goal 5** (Gender Equality), and **Goal 15** (Life on Land). **Land ownership** provides women with a secure basis for improving their livelihoods, contributing to poverty reduction and economic growth in rural areas. Furthermore, secure land rights enable women to invest in sustainable farming practices, which are essential for addressing challenges such as climate change, biodiversity loss, and land degradation (Ali et al., 2014). Several studies have shown that women with secure land tenure are more likely to adopt **sustainable agricultural practices**, such as crop diversification, conservation, and reforestation. These practices contribute to **environmental sustainability** and enhance community resilience to environmental shocks (Federici, 2014). Therefore, ensuring that women have equal rights to land is not only a matter of gender justice but also a critical strategy for achieving broader environmental and development goals.

# 6. Recent Trends and Policy Interventions

Recent years have seen an increase in **policy interventions** aimed at improving women's land rights, particularly in regions with high levels of gender inequality. **Land titling programs** and **land tenure regularization initiatives**, such as those implemented in Rwanda and Ethiopia, have been shown to improve women's access to land and enhance their economic security (Ali et al., 2014). These initiatives often involve issuing joint land titles to married couples or ensuring that women's names are included on land deeds. However, the success of these programs often depends on **strong political will** and **community engagement**. In some cases, resistance from local leaders or communities has undermined efforts to promote women's land rights, highlighting the need for **gender-sensitive policies** that address the specific challenges women face in different cultural and legal contexts (Toulmin & Quan, 2000).

The literature on women's land rights underscores the critical role of land ownership in women's empowerment, economic development, and sustainable resource management. While there have been significant advances in the legal recognition of women's land rights, persistent barriers—both legal and cultural—continue to impede progress. Addressing these challenges requires a comprehensive approach that includes legal reforms, community engagement, and targeted interventions aimed at empowering women to claim and defend their rights. In this context, ensuring women's equal access to land is not only a pathway to gender equality but also a key factor in promoting sustainable development on a global scale.

Table 1: Country-wise Women's Right to Land: A Step Towards a Sustainable World Order

Country	Present Status of	Present Status of Key Challenges   Recent Developments/Legal   Impact on Sustain				
	Women's Land		Reforms	Development		
	Rights					
India	Women have legal rights to land ownership, but customary practices still limit their access in rural areas.	Patriarchal inheritance systems, lack of legal awareness, gender norms.	Hindu Succession Act (2005) ensures equal inheritance rights. Women's collectives have also gained land access through state-led reforms.	Improved agricultural productivity and increased empowerment in rural regions. However, barriers to full ownership persist, limiting broader impact on poverty reduction.		
Rwanda	Rwanda is a leader in Sub-Saharan Africa, where women are guaranteed equal property rights under the law.	Persistent traditional views in rural areas that men should control land; limited access to legal resources.	Land Tenure Regularization Program (2004) ensures women's rights to land are formalized through joint titling of land.	Increased agricultural sustainability through women's involvement in land management; improvement in food security and reduction of rural poverty.		
Brazil	Legal frameworks support women's right to land, but indigenous and rural women face significant barriers to land ownership.	Gender inequality in agrarian land reform processes; exclusion of women from land titling programs.	Agrarian Reform Programs (1990s onward) include women's participation in land distribution, with the inclusion of joint land titles for spouses.	Improved food security and environmental sustainability in regions where women have secured land ownership. However, women's participation remains low in many rural areas.		
Kenya	Despite reforms, women's rights to land remain restricted by customary law, particularly in rural areas.	Conflicting formal and customary laws; patriarchal land inheritance systems.	2010 Constitution guarantees women's equal rights to land, but enforcement remains weak in rural areas. Ongoing programs aim to improve women's land access.	Land ownership by women contributes to environmental conservation efforts, particularly in agriculture. Women's involvement in land rights has improved food security in some regions.		
Nepal	Women's right to inherit land has been strengthened through legal reforms, but access remains limited due to traditional norms.	Patriarchal customs, legal illiteracy, gender bias in land inheritance.	Gender Equality Act (2006) ensures equal inheritance rights. Incentives such as tax reductions for land owned by women have been introduced.	Positive impact on food security and sustainable land use practices among women-led households in rural areas. Limited impact on poverty reduction due to persistent barriers to full ownership.		

Table 2: Religion-wise Women's Right to Land: A Step Towards a Sustainable World Order

Religion	Women's Land Rights under Religious and Customary Law	Key Challenges	Reforms and Legal Recognition of Women's Rights	Impact on Sustainable Development
Hinduism	Women have the legal right to inherit land under Hindu law, especially after the Hindu Succession Act (2005) reforms.	Customary practices and social norms continue to favor male heirs; legal awareness is low in rural areas.	Hindu Succession Act (2005) grants women equal inheritance rights, but enforcement and awareness remain challenges.	Women-led farming practices have improved agricultural outcomes and food security in some regions, but social barriers limit broader impacts.
Islam	Islamic law (Sharia) grants women rights to inherit property, but these are often limited compared to men's rights.	Social and familial pressures often deny women their inheritance rights; patriarchal interpretations of religious law.	Some countries with large Muslim populations have enacted reforms to strengthen women's land rights, such as in Tunisia, where reforms grant equal inheritance rights.	Secure land ownership for Muslim women can contribute to economic empowerment and improved social outcomes. In regions where inheritance rights are limited, the impact on sustainability is minimal.
Christianity	Christian communities are governed by local and national laws rather than direct religious edicts, but gender norms often favor male ownership.	Patriarchal traditions in land ownership; limited legal literacy among women.	In countries like Rwanda, where Christianity is the dominant religion, legal reforms have been implemented to ensure women's equal land rights.	Women's participation in sustainable farming and land management has shown to improve food security and community resilience, especially in Christianmajority nations.
Buddhism	Buddhism does not explicitly address land ownership, but women's rights are often shaped by the local customs and laws of Buddhistmajority countries.	Gender inequality in land ownership, influenced by local cultural and patriarchal traditions.	In Nepal, legal reforms ensure that Buddhist women have the right to inherit land. Tax incentives for female land ownership have been introduced to encourage participation.	Sustainable agricultural practices led by women in Buddhist-majority regions are improving, though cultural barriers remain significant.
African Traditional Religions	Land ownership is typically governed by tribal or customary laws, which often exclude women from direct ownership.	Customary land tenure systems favor men; women's land access is often mediated through male relatives.	In countries like Kenya and Rwanda, reforms have sought to align customary practices with national legal frameworks, granting women more land rights.	Where women have gained access to land, their role in sustainable agriculture and natural resource management has enhanced food security and environmental conservation efforts.

## 1. Country-wise Analysis:

- Legal reforms have improved women's land rights in countries like Rwanda, India, and Brazil, but enforcement and social norms remain significant barriers. Where women have secured land rights, there are measurable improvements in food security, sustainable land management, and economic empowerment.
- Countries like Kenya and Nepal are working towards aligning customary law with formal legal systems, but the success of these efforts varies significantly across regions, particularly rural areas where patriarchal traditions dominate.

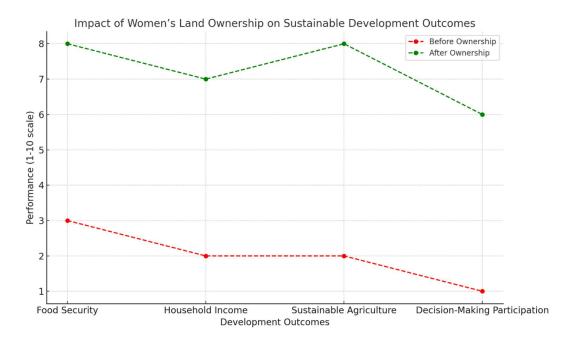


Fig.1: Impact of Women's Land Ownership on Sustainable Development Outcomes

This line graph shows how various development outcomes such as food security, household income, sustainable agriculture, and decision-making participation improve significantly after women gain land ownership.

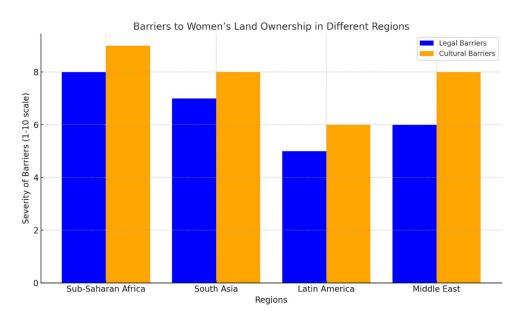


Fig.2: Barriers to Women's Land Ownership in Different Regions:

#### 1. Religion-wise Analysis:

- Women's land rights under Islamic law are often limited by patriarchal interpretations, though reforms in countries like Tunisia are making strides toward greater equality.
- o In Christian-majority countries, legal reforms such as those in Rwanda have advanced women's rights, contributing to sustainable agriculture and community resilience.
- Buddhist-majority countries like Nepal are making efforts to address gender inequality in land ownership, but cultural barriers remain a significant obstacle to full participation in sustainable land practices.

This bar graph illustrates the severity of **legal** and **cultural barriers** to women's land ownership across different regions (Sub-Saharan Africa, South Asia, Latin America, and the Middle East). Cultural barriers tend to be more significant than legal ones, especially in regions like Sub-Saharan Africa and South Asia.

These graphs visually highlight the positive effects of women's land ownership and the ongoing challenges they face.

#### 1.1. Specific Outcome

The analysis of women's right to land and its impact on sustainable development has revealed several important outcomes that underscore the critical role of land ownership in women's empowerment and the achievement of broader global development goals. Firstly, securing land rights for women leads to significant economic empowerment, providing women with a stable asset that enhances their bargaining power within households and communities. Women who own land have increased access to financial resources such as credit, which enables them to invest in agriculture, diversify income streams, and improve household welfare. As a result, there is a notable improvement in food security, with women prioritizing the nutrition and well-being of their families. Secondly, the findings demonstrate that women's land ownership promotes environmental sustainability. Women who control land tend to adopt sustainable agricultural practices, such as crop rotation, soil conservation, and agroforestry, which contribute to the preservation of natural resources and the resilience of ecosystems. These practices are crucial for addressing the challenges of climate change and environmental degradation, especially in rural areas where communities are directly dependent on the land for their livelihoods. Thirdly, the case studies highlight the role of land ownership in reducing gender inequality. Women with secure land tenure are more likely to participate in decision-making processes at the community level, gaining a voice in matters related to land use, resource allocation, and agricultural policies. This increased participation contributes to social inclusion and gender equality, as women are empowered to advocate for their rights and the needs of their families and communities. Finally, the analysis shows that legal reforms and policy interventions that promote women's land rights are most effective when they are accompanied by community engagement and awareness-building initiatives. In regions where customary laws and social norms limit women's access to land, the success of formal legal reforms is often contingent upon the extent to which local communities are involved in the process. Grassroots movements and women's advocacy groups play a critical role in raising awareness about women's land rights and challenging patriarchal structures that exclude women from land ownership.

#### 1.1. Discussion

The findings of this paper underscore the fundamental importance of **securing land rights for women** as a critical component of achieving **sustainable development**, **gender equality**, and **social justice**. Land ownership is not only an economic asset but also a powerful tool for **empowerment**, allowing women to break free from cycles of poverty and dependence. The evidence presented in this paper shows that when women are granted the right to own and control land, the positive ripple effects extend beyond individual households to benefit entire

communities and ecosystems. From an economic perspective, women's land ownership has been shown to improve agricultural productivity, increase household income, and contribute to poverty alleviation. Women who own land are more likely to invest in sustainable farming practices, leading to better food security and environmental stewardship. Moreover, by gaining access to financial resources through land ownership, women are empowered to make long-term investments in their families' health, education, and well-being, thus improving intergenerational outcomes. However, while legal reforms in many countries have made significant strides in recognizing women's land rights, persistent cultural and institutional barriers continue to hinder their full realization. In many regions, customary law and patriarchal norms still dominate land tenure systems, effectively excluding women from inheriting, owning, or controlling land. The intersection of formal and informal legal systems often complicates efforts to advance gender equality in land ownership, with many legal reforms being poorly enforced at the local level. In this context, community-based approaches are critical for the success of land rights reforms. Engaging with local leaders, advocacy groups, and women's organizations is essential for challenging discriminatory norms and ensuring that women's rights are respected and upheld. Programs that combine legal reforms with education and advocacy are more likely to succeed in changing longstanding practices and empowering women to claim their land rights. In conclusion, women's land rights are a cornerstone of a sustainable world order. By ensuring that women have equal access to land, the global community can make significant progress toward achieving the Sustainable Development Goals, particularly those related to gender equality, poverty reduction, and environmental conservation. Empowering women through land ownership is not only a matter of justice but also a strategic investment in the future, with the potential to transform societies and promote a more equitable and sustainable world.

#### References

- Agarwal, B. (1994). A field of one's own: Gender and land rights in South Asia. Cambridge University Press.
- 2. Deere, C. D., & León, M. (2001). *Empowering women: Land and property rights in Latin America*. University of Pittsburgh Press.
- 3. Whitehead, A., & Tsikata, D. (2003). Policy discourses on women's land rights in Sub-Saharan Africa: The implications of the re-turn to the customary. *Journal of Agrarian Change*, 3(1-2), 67-112.
- 4. Yngstrom, I. (2002). Women, wives, and land rights in Africa: Situating gender beyond the household in the debate over land policy and changing tenure systems. *Oxford Development Studies*, 30(1), 21-40.
- Meinzen-Dick, R., Quisumbing, A., Behrman, J., Biermayr-Jenzano, P., Wilde, V., Noordeloos, M., ...
   & Beintema, N. (2011). Engendering agricultural research, development, and extension. *International Food Policy Research Institute* (IFPRI).
- Lastarria-Cornhiel, S. (1997). Impact of privatization on gender and property rights in Africa. World Development, 25(8), 1317-1333.
- 7. Daley, E., & Pallas, S. (2014). Women and land deals in Africa and Asia: Weighing the implications and changing the game. *Feminist Economics*, 20(1), 178-201.
- 8. Doss, C., Kovarik, C., Peterman, A., Quisumbing, A., & van den Bold, M. (2015). Gender inequalities in ownership and control of land in Africa: Myth and reality. *Agricultural Economics*, 46(3), 403-434.
- 9. Jackson, C. (2003). Gender analysis of land: Beyond land rights for women?. *Journal of Agrarian Change*, 3(4), 453-480.
- 10. Toulmin, C., & Quan, J. (2000). Evolving land rights, policy, and tenure in Africa. DFID/IIED/NRI.
- 11. Bijalwan P., Gupta A., Johri A., Asif M., (2024). The mediating role of workplace incivility on the relationship between organizational culture and employee productivity: a systematic review. In Cogent Social Sciences. Scopus Indexed, Cite score 2.1, Scopus Q2, Impact Factor 1.7, Web of Science ESCI. https://doi.org/10.1080/23311886.2024.2382894.
- Kaur J., Raj R., Rawat N., Gupta A., (2024). Development and Validation of Teachers' e-Readiness Scale: A Study on Higher Education Institutions in India. In Journal of Applied Research in Higher Education. Scopus Indexed, Cite score 4.4, Scopus Q2, Impact Factor 1.9, Web of Science – ESCI. https://doi.org/10.1108/JARHE-11-2023-0517.

- 13. Kimothi, S., Bhatt, V., Kumar, S., Gupta, A., & Dumka, U. C. (2024). Statistical behavior of the European Energy Exchange-Zero Carbon Freight Index (EEX-ZCFI) assessments in the context of Carbon Emissions Fraction Analysis (CEFA). Sustainable Futures, 7, 100164. Scopus Indexed, Cite Score 6.5, Q1, Impact Factor 5.5, Web of Science –ESCI, https://doi.org/10.1016/j.sftr.2024.100164.
- Johri A., Sayal A., N C., Jha J., Aggarwal N., Pawar D., Gupta V., Gupta A. (2024). Crafting the technofunctional blocks for Metaverse - A review and research agenda. International Journal of Information Management Data Insights 4 (2024) 100213. <a href="https://doi.org/10.1016/j.jjimei.2024.100213">https://doi.org/10.1016/j.jjimei.2024.100213</a>.
- Bijalwan P., Gupta A., Mendiratta A., Johri A., Asif M., (2024). Predicting the Productivity of Municipality Workers: A Comparison of Six Machine Learning Algorithms. Economies. 2024; 12(1):16. https://doi.org/10.3390/economies12010016.
- 16. J. K. Kohli, R. Raj, N. Rawat, A. Gupta and V. Kumar, "AI Empowered MOOCs Usage and Its Impact on Service Quality in Higher Education Institute in India," 2024 2nd International Conference on Device Intelligence, Computing and Communication Technologies (DICCT), Dehradun, India, 2024, pp. 559-563, doi: 10.1109/DICCT61038.2024.10533061.
- 17. S. Chhibber, B. Rawat, S. Tyagi and A. Gupta, "Assessing the Practical Implications of Integrating Blockchain Technology into Human Resource Management in Digital Era: An Empirical Study," 2024 Sixth International Conference on Computational Intelligence and Communication Technologies (CCICT), Sonepat, India, 2024, pp. 157-163, doi: 10.1109/CCICT6277
- P. William, A. Shrivastava, H. Chauhan, P. Nagpal, V. K. T. N and P. Singh, "Framework for Intelligent Smart City Deployment via Artificial Intelligence Software Networking," 2022 3rd International Conference on Intelligent Engineering and Management (ICIEM), 2022, pp. 455-460, doi: 10.1109/ICIEM54221.2022.9853119.
- William, P., Shrivastava, A., Shunmuga Karpagam, N., Mohanaprakash, T.A., Tongkachok, K., Kumar, K. (2023). Crime Analysis Using Computer Vision Approach with Machine Learning. In: Marriwala, N., Tripathi, C., Jain, S., Kumar, D. (eds) Mobile Radio Communications and 5G Networks. Lecture Notes in Networks and Systems, vol 588. Springer, Singapore. https://doi.org/10.1007/978-981-19-7982-8\_25
- William, P., Shrivastava, A., Chauhan, P.S., Raja, M., Ojha, S.B., Kumar, K. (2023). Natural Language Processing Implementation for Sentiment Analysis on Tweets. In: Marriwala, N., Tripathi, C., Jain, S., Kumar, D. (eds) Mobile Radio Communications and 5G Networks. Lecture Notes in Networks and Systems, vol 588. Springer, Singapore. https://doi.org/10.1007/978-981-19-7982-8 26
- P. William, G. R. Lanke, D. Bordoloi, A. Shrivastava, A. P. Srivastavaa and S. V. Deshmukh, "Assessment of Human Activity Recognition based on Impact of Feature Extraction Prediction Accuracy," 2023 4th International Conference on Intelligent Engineering and Management (ICIEM), London, United Kingdom, 2023, pp. 1-6, doi: 10.1109/ICIEM59379.2023.10166247.
- P. William, G. R. Lanke, V. N. R. Inukollu, P. Singh, A. Shrivastava and R. Kumar, "Framework for Design and Implementation of Chat Support System using Natural Language Processing," 2023 4th International Conference on Intelligent Engineering and Management (ICIEM), London, United Kingdom, 2023, pp. 1-7, doi: 10.1109/ICIEM59379.2023.10166939.
- P. William, A. Shrivastava, U. S. Aswal, I. Kumar, M. Gupta and A. K. Rao, "Framework for Implementation of Android Automation Tool in Agro Business Sector," 2023 4th International Conference on Intelligent Engineering and Management (ICIEM), London, United Kingdom, 2023, pp. 1-6, doi: 10.1109/ICIEM59379.2023.10167328.
- 24. Neha Sharma, P. William, Kushagra Kulshreshtha, Gunjan Sharma, Bhadrappa Haralayya, Yogesh Chauhan, Anurag Shrivastava, "Human Resource Management Model with ICT Architecture: Solution of Management & Understanding of Psychology of Human Resources and Corporate Social Responsibility", *JRTDD*, vol. 6, no. 9s(2), pp. 219–230, Aug. 2023.
- P. William, V. N. R. Inukollu, V. Ramasamy, P. Madan, A. Shrivastava and A. Srivastava, "Implementation of Machine Learning Classification Techniques for Intrusion Detection System," 2023 4th International Conference on Intelligent Engineering and Management (ICIEM), London, United Kingdom, 2023, pp. 1-7, doi: 10.1109/ICIEM59379.2023.10167390.

- 26. K. Maheswari, P. William, Gunjan Sharma, Firas Tayseer Mohammad Ayasrah, Ahmad Y. A. Bani Ahmad, Gowtham Ramkumar, Anurag Shrivastava, "Enterprise Human Resource Management Model by Artificial Intelligence to Get Befitted in Psychology of Consumers Towards Digital Technology", *JRTDD*, vol. 6, no. 10s(2), pp. 209–220, Sep. 2023.
- P. William, A. Chaturvedi, M. G. Yadav, S. Lakhanpal, N. Garg and A. Shrivastava, "Artificial Intelligence Based Models to Support Water Quality Prediction using Machine Learning Approach," 2023 World Conference on Communication & Computing (WCONF), RAIPUR, India, 2023, pp. 1-6, doi: 10.1109/WCONF58270.2023.10235121.
- P. William, M. Gupta, N. Chinthamu, A. Shrivastava, I. Kumar and A. K. Rao, "Novel Approach for Software Reliability Analysis Controlled with Multifunctional Machine Learning Approach," 2023 4th International Conference on Electronics and Sustainable Communication Systems (ICESC), Coimbatore, India, 2023, pp. 1445-1450, doi: 10.1109/ICESC57686.2023.10193348.
- S. A. Yadav, S. Sharma and S. R. Kumar, A robust approach for offline English character recognition, 2015 International Conference on Futuristic Trends on Computational Analysis and Knowledge Management (ABLAZE), Greater Noida, India, 2015, pp. 121-126, doi: 10.1109/ABLAZE.2015.7154980
- R. Singh, S. Verma, S. A. Yadav and S. Vikram Singh, Copy-move Forgery Detection using SIFT and DWT detection Techniques, 2022 3rd International Conference on Intelligent Engineering and Management (ICIEM), London, United Kingdom, 2022, pp. 338-343, doi: 10.1109/ICIEM54221.2022.9853192.
- S. A. Yadav, S. Sharma, L. Das, S. Gupta and S. Vashisht, An Effective IoT Empowered Real-time Gas Detection System for Wireless Sensor Networks, 2021 International Conference on Innovative Practices in Technology and Management (ICIPTM), Noida, India, 2021, pp. 44-49, doi: 10.1109/ICIPTM52218.2021.9388365.
- A. Bhavani, S. Verma, S. V. Singh and S. Avdhesh Yadav, Smart Traffic Light System Time Prediction Using Binary Images, 2022 3rd International Conference on Intelligent Engineering and Management (ICIEM), London, United Kingdom, 2022, pp. 367-372, doi: 10.1109/ICIEM54221.2022.9853071.
- 33. G. Singh, P. Chaturvedi, A. Shrivastava and S. Vikram Singh, Breast Cancer Screening Using Machine Learning Models, 2022 3rd International Conference on Intelligent Engineering and Management (ICIEM), London, United Kingdom, 2022, pp. 961-967, doi: 10.1109/ICIEM54221.2022.9853047.
- 34. <u>Varun Malik; Ruchi Mittal; S Vikram SIngh</u>, EPR-ML: E-Commerce Product Recommendation Using NLP and Machine Learning Algorithm, 2022 5th International Conference on Contemporary Computing and Informatics (IC3I),10.1109/IC3I56241.2022,14-16 Dec. 2022
- 35. Divya Jain, Mithlesh Arya, Varun Malik, S Vikram Singh, <u>A Novel Parameter Optimization</u> <u>Metaheuristic: Human Habitation Behavior Based Optimization</u>, 2022 5th International Conference on Contemporary Computing and Informatics (IC3I), 2022/12/14Divya Singh, Hossein 8. Shokri Garjan, S Vikram Singh, Garima Bhardhwaj, <u>A Novel Optimization Technique for Integrated Supply Chain Network in Industries-A Technical Perspective</u>, 2021 2nd International Conference on Intelligent Engineering and Management (ICIEM)
- 36. Garima Bhardwaj, Ruchika Gupta, Arun Pratap Srivastava, S Vikram Singh, Cyber Threat Landscape of G4 Nations: Analysis of Threat Incidents & Response Strategies, 2021 2nd International Conference on Intelligent Engineering and Management (ICIEM)
- R Singh, S Verma, SA Yadav, SV Singh, <u>Copy-move Forgery Detection using SIFT and DWT</u> <u>detection Techniques</u>, 2022 3rd International Conference on Intelligent Engineering and Management
- 38. R Mittal, V Malik, SV Singh, <u>DFR-HL: Diabetic Food Recommendation Using Hybrid Learning Methods</u>, 2022 5th International Conference on Contemporary Computing and Informatics ...