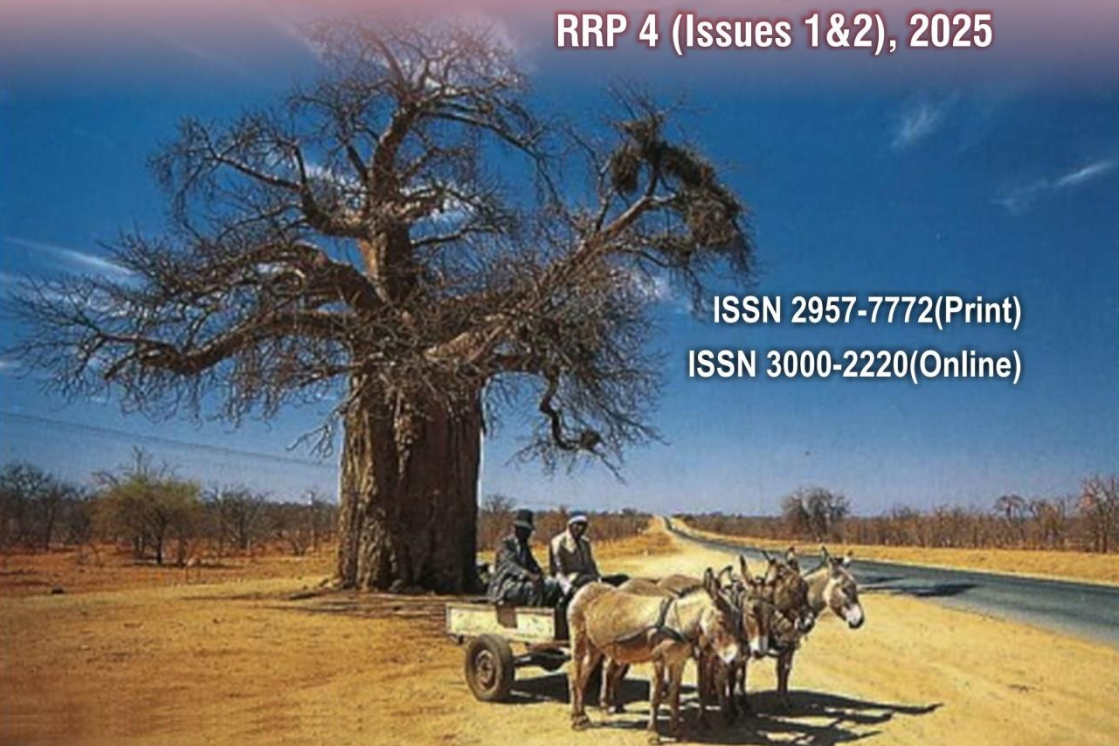




# REVIEW OF *Rural Resilience Praxis*

RRP 4 (Issues 1&2), 2025

ISSN 2957-7772(Print)  
ISSN 3000-2220(Online)



REVIEW OF  
***Rural  
Resilience  
Praxis***

RRP 4(Issues 1&2), 2025

ISSN 2957-7772 (Print)  
ISSN 3000-2220 (Online)

## ©ZEGU Press 2025

Published by the Zimbabwe Ezekiel Guti University Press  
Stand No. 1901 Barrassie Rd,  
Off Shamva Road  
Box 350  
Bindura, Zimbabwe

All rights reserved.

**“DISCLAIMER:** The views and opinions expressed in this journal are those of the authors and do not necessarily reflect the official position of funding partners”

Typeset by Divine Graphics  
Printed by Divine Graphics

### **EDITOR-IN-CHIEF**

Professor Innocent Chirisa, Zimbabwe Ezekiel Guti University, Zimbabwe

### **MANAGING EDITOR**

Mr Nyasha Ndemo-Masimbarasi, Zimbabwe Ezekiel Guti University, Zimbabwe

### **EDITORIAL ADVISORY BOARD**

Professor Billy Mukamuri, University of Zimbabwe, Zimbabwe  
Mrs Doreen Tirivanhu, University of Zimbabwe, Zimbabwe  
Dr Nelson Chanza, Bindura University of Science Education  
Dr Crescentia Gandidzanwa, University of Zimbabwe  
Dr Linda Kabaira, SCOPE Zimbabwe, Zimbabwe  
Dr Blessing Gweshengwe, Great Zimbabwe University, Zimbabwe  
Professor Bernard Chazovachii, Great Zimbabwe University, Zimbabwe  
Dr Tebeth Masunda, University of Zimbabwe, Zimbabwe

### **SUBSCRIPTION AND RATES**

Zimbabwe Ezekiel Guti University Press Office  
Stand No. 1901 Barrassie Rd,  
Off Shamva Road  
Box 350  
Bindura, Zimbabwe  
Telephone: ++263 8 677 006 136 | +263 779 279 912  
E-mail: zegupress@admin.uz.ac.zw  
<http://www.zegu.ac.zw/press>

# About the Journal

## JOURNAL PURPOSE

The purpose of the *Review of Rural Resilience Praxis* is to provide a forum for disaster risk mitigation, adaptation and preparedness.

## CONTRIBUTION AND READERSHIP

Sociologists, demographers, psychologists, development experts, planners, social workers, social engineers, economists, among others whose focus is that of rural resilience.

## JOURNAL SPECIFICATIONS

*Review of Rural Resilience Praxis*

ISSN 2957-7772(Print)

ISSN 3000-2220(Online)

## SCOPE AND FOCUS

As much as the urban territory is increasing by each day, the rural economy, especially in many developing countries, still retains a great proportion of the extractive and accommodation industry. Retaining some space as rural remains critical given the sectors role in providing ecosystem services to both wildlife and humanity. In this light, rural resilience as practice beckons for critical studies especially in the face of the ever-threatening extreme weather events and climate change that then impact on the livelihoods and lifestyles of the rural communities. Review of Rural Resilience Praxis (RRRP) comes in as a platform for critical engagement by scholars, practitioners and leaders as they seek to debate and proffer solutions of the rural sector and trying to champion the philosophy of the right to be rural. The issue of conviviality between the different constituencies of the sectors, compiled with the competing challenges of improving rural spaces while also making the conservation and preservation debates matter is the hallmark of this platform of criticality. The journal is produced bi-annually.

# Guidelines for Authors for the Review of Rural Resilience Praxis

Articles must be original contributions, not previously published and should not be under consideration for publishing elsewhere.

**Manuscript Submission:** Articles submitted to the *Review of Rural Resilience Praxis* are reviewed using the double-blind peer review system. The author's name(s) must not be included in the main text or running heads and footers.

**A total number of words:** 5000-7000 words and set in 12-point font size width with 1.5 line spacing.

**Language:** British/UK English

**Title:** must capture the gist and scope of the article

**Names of authors:** beginning with the first name and ending with the surname

**Affiliation of authors:** must be footnoted, showing the department and institution or organisation.

**Abstract:** must be 200 words

**Keywords:** must be five or six containing words that are not in the title

**Body:** Where the authors are more than three, use *et al.*,

Italicise *et al.*, *ibid.*, words that are not English, not names of people or organisations, etc. When you use several authors confirming the same point, state the point and bracket them in one bracket and in ascending order of dates and alphabetically separated by semi-colon e.g. (Falkenmark, 1989, 1990; Reddy, 2002; Dagdeviren and Robertson, 2011; Jacobsen *et al.*, 2012).

**Referencing Style:** Please follow the Harvard referencing style in that:

— In-text, citations should state the author, date and sometimes the page numbers.

— the reference list, entered alphabetically, must include all the works cited in the article.

In the reference list, use the following guidelines, religiously:

## **Source from a Journal**

Anim, D.O and Ofori-Asenso, R (2020). Water Scarcity and COVID-19 in Sub-Saharan Africa. *The Journal of Infection*, 81(2), 108-09.

Banana, E, Chitekwe-Biti, B and Walnycki, A (2015). Co-Producing Inclusive City-Wide Sanitation Strategies: Lessons from Chinhoyi, Zimbabwe. *Environment and Urbanisation*, 27(1), 35-54.

Neal, M.J. (2020). COVID-19 and Water Resources Management: Reframing Our Priorities as a Water Sector. *Water International*, 45(5), 435-440.

## **Source from an Online Link**

Armitage, N, Fisher-Jeffes L, Carden K, Winter K *et al.* (2014). Water Research Commission: Water-sensitive Urban Design (WSUD) for South Africa: Framework and Guidelines. Available online: <https://www.greencape.co.za/assets/Water-Sector-Desk-Content/WRC-Water-sensitive-urban-design-WSUD-for-South-Africa-framework-and-guidelines-2014.pdf>. Accessed on 23 July 2020.

## **Source from a Published Book**

Max-Neef, M. (1991). *Human Scale Development: Concepts, Applications and Further Reflections*, London: Apex Press.

## **Source from a Government Department (Reports or Plans)**

National Water Commission (2004). Intergovernmental Agreement on a National Water Initiative. Commonwealth of Australia and the Governments of New South Wales, Victoria, Queensland, South Australia, the Australian Capital Territory and the Northern Territory. Available online: <https://www.pc.gov.au/inquiries/completed/water-reform/national-water-initiative-agreement-2004.pdf>. Accessed on 27 June 2020.

## **The source being an online Newspaper article**

*The Herald* (2020). Harare City Could Have Used Lockdown to Clean Mbare Market. *The Herald*, 14 April 2020. Available online: <https://www.herald.co.zw/harare-city-could-have-used-lockdown-to-clean-mbare-market/>. Accessed on 24 June 2020.

# Rural Housing Re-examined for Resilience Enhancement in Zimbabwe

NYASHA N'ONZWE<sup>1</sup> AND TAFADZWANASHE JAMES MAGAVUDE<sup>2</sup>

## Abstract

The current approach to rural housing in Zimbabwe requires re-evaluation to enhance resilience in the face of socio-economic and environmental challenges. The study assesses factors contributing to the vulnerability of rural housing and proposes strategies for resilience enhancement. A central question addressed is how rural housing can be made more resilient to withstand both current and future challenges. The study is anchored on two theories: the Sustainable Development Theory and the Resilience Theory, to provide a comprehensive framework for analysis. The study primarily relies on desk review, drawing from a wide range of literature, including books, policy documents and academic journals. Additionally, case studies are reviewed to provide empirical insights into the practical implications of housing strategies. The major finding of the study reveals that current rural housing practices in Zimbabwe lack adequate consideration for resilience factors, leading to increased vulnerability among rural communities. Consequently, the study concludes that integrating resilience principles into rural housing policies and practices is essential for sustainable development. Based on these findings, the study recommends the adoption of holistic approaches that consider socio-economic, environmental and cultural factors in rural housing development. Furthermore, it advocates for community engagement and capacity-building initiatives to foster resilience at the grassroots level.

**Keywords:** *vulnerability, sustainable development, resilience theory, socio-economic factors, capacity-building, community engagement*

---

<sup>1</sup> Department of Social Work and Applied Psychology, Zimbabwe Ezekiel Guti University: Bindura, Mashonaland Central, Zimbabwe, <https://orcid.org/0009-0001-2331-7401>, nonzwenyasha@gmail.com.

<sup>2</sup> Department of Social Work and Psychology, Zimbabwe Ezekiel Guti University, Bindura, Zimbabwe

## INTRODUCTION

In many communities worldwide, the availability and stability of rural housing are vital for sustaining livelihoods. Rural housing in Zimbabwe stands as a key component of the community's livelihoods, yet it struggles with a myriad of challenges threatening its sustainability and resilience. Rational and achievable rural development must be both resilient and sustainable (Huang *et al.*, 2018). The rural environment is characterised by many issues ranging from insufficient infrastructure (Aleixo *et al.*, 2019) to environmental vulnerabilities (Ezra, 2003; Chatiza, 2019) and socio-economic disparities (Standar and Kozera, 2019). Inadequate access to basic amenities such as water, sanitation and electricity exacerbates the already precarious living conditions in many rural areas (Chirisa, 2022). Environmental risks like floods and drought, are not an exception in this discourse, as they cause a significant threat to the integrity of housing structures and the well-being of the inhabitants. All these challenges call for an urgent need to re-examine rural housing practices through a lens of resilience enhancement to ensure sustainable development in these communities.

The study, therefore, explores the factors that contribute to the vulnerability of rural housing in the country to pave the way for more equitable and thriving rural communities. The goal is to propose comprehensive strategies for resilience enhancement, thereby fostering sustainable development in rural areas. Having identified all the aforementioned issues, the central question in the study is: How can rural housing in Zimbabwe be made more resilient to withstand the array of challenges it faces? This question serves as a signal that guides and directs the focus of the research toward exploring the paths for building resilience within the context of rural housing in Zimbabwe. To address this question effectively, the study draws upon two key theories: The Sustainable Development Theory and the Resilience Theory. Together, these theories offer a robust framework for analysing the difficulties of rural housing resilience, considering both the immediate challenges and long-term sustainability goals.

The significance of the study lies in its potential to deepen understanding and inform actions concerning rural housing resilience, which is key for sustainable development in Zimbabwe. The study seeks to contribute valuable insights to the existing body of knowledge in this field by shedding light on



the factors influencing vulnerability and proposing strategies for resilience enhancement. Understanding rural housing resilience is crucial, not only for safeguarding the well-being of rural populations but also for promoting broader socio-economic development agendas. The findings of the study hold implications for policy formulation and practical interventions in rural housing development, offering policy-makers and practitioners valuable guidance in designing more effective strategies.

The structure of the article reflects a systematic approach to address these objectives. Following this introduction, the subsequent sections will probe into a comprehensive literature review, providing theoretical foundations and empirical evidence. This is followed by an exposition of the methodology employed, detailing the research approach and data collection methods. Subsequently, the findings of the study are presented, followed by a thorough discussion of their implications. Finally, the article will conclude with actionable recommendations aimed at fostering resilience in rural housing contexts, thereby offering a roadmap for future research and practice.

## **THEORETICAL FRAMEWORK**

To address the question at hand effectively, the study draws upon two key theoretical frameworks: the Sustainable Development Theory and the Resilience Theory. Rural sustainability and resilience have garnered increased attention among scholars (Robinson 2008; Wilson 2010; McManus *et al.* 2012). The Sustainable Development Theory provides a holistic perspective, emphasising the interconnectedness of environmental, social and economic factors in achieving long-term viability. Complementing this, the Resilience Theory offers insights into the capacity of systems to absorb shocks, adapt to changing circumstances and maintain functionality. Together, these theories offer a robust framework for analysing the complexities of rural housing resilience, considering both the immediate challenges and long-term sustainability goals. Golding and Winkler (2020) define rural housing as typically situated in regions distant from urban centres, where there exists convenient access to healthcare facilities, well-maintained roads and improved settlement arrangements fostering safety during times of disaster.

Within the context of rural housing resilience enhancement in Zimbabwe, the Sustainability and Development Theory encompasses a framework that

integrates environmental, social and economic considerations to ensure the long-term viability of housing interventions, while addressing the specific challenges faced by rural communities. The intertwined concepts of sustainability and development are linked to concerns about the health of social-ecological systems and the increasingly evident human dimensions of global change (Steffen *et al.*, 2015a). Sustainability may be defined as the capacity to maintain or improve the state and availability of desirable materials or conditions over the long term (Harrington, 2016).

Environmental sustainability emphasises the importance of minimising environmental impact and promoting ecological balance in housing interventions. In the context of rural Zimbabwe, this could involve using locally sourced and renewable building materials to reduce carbon emissions associated with transportation and construction. Moreover, incorporating passive design strategies to maximise energy efficiency and minimise reliance on non-renewable energy sources can contribute to environmental sustainability. Social sustainability focuses on promoting social cohesion, equity and community well-being within housing interventions. In rural Zimbabwe, this might entail engaging local communities in decision-making processes and ensuring that housing solutions are culturally appropriate and meet the diverse needs of residents. Furthermore, fostering inclusive and participatory approaches to housing development can empower marginalised groups, such as women and youth and enhance social resilience within rural communities.

Economic sustainability emphasises the importance of ensuring the affordability, viability and economic prosperity of housing interventions over the long term. In the context of rural Zimbabwe, this could involve implementing innovative financing mechanisms, such as microfinance or community savings schemes, to make housing more accessible to low-income households. Furthermore, promoting income-generating activities and livelihood opportunities within housing projects can contribute to economic resilience and poverty alleviation in rural areas.

The Resilience Theory provides a framework for understanding and addressing the capacity of rural communities to withstand and recover from housing-related challenges, including environmental hazards, socio-economic

vulnerabilities and institutional constraints. Resilience is understood as the ability of a system, community or society exposed to shocks or disturbances to resist, absorb, accommodate and recover from shocks or disturbances including through the preservation and restoration of its essential basic structures and functions (Wilson, 2012a). Rural resilience refers to the capacity of rural regions, as dynamic socio-ecological systems, to adapt to changing external circumstances in such a way that a satisfactory standard of living is maintained (Heijman *et al.*, 2007). Cradock-Henry (2017) defines resilience as the ability to recover and continue to provide the main functions of living, agriculture and social gathering in the face of calamities and other hazards. Success in resilience implementation and sustainability starts with the way rural people are settled and their housing facilities.

The concept of resilience is appealing in rural development theorising in terms of highly complex, vulnerable and adaptive systems (Huang *et al.*, 2018). The Resilience Theory views socio-ecological systems as complex and dynamic, where social and ecological components interact and influence each other. In the context of rural housing in Zimbabwe, this perspective emphasises the interconnectedness between housing infrastructure, natural resources and human well-being. It recognises that changes in one component, such as environmental degradation or economic shocks, can have cascading effects on others, impacting the resilience of rural communities. According to Scott and Gkartzios (2014), resilience describes the ability of a system to absorb or accommodate disturbances without experiencing changes to the system.

The theory highlights the importance of adaptive capacity, the ability of individuals and communities to anticipate, cope with and adapt to change in enhancing resilience. In the context of rural housing in Zimbabwe, this involves building the capacity of communities to respond effectively to housing-related challenges, like climate change impacts or economic fluctuations. This may include promoting knowledge sharing, skills development and innovation within communities and fostering collaboration with external stakeholders, such as government agencies or non-governmental organisations (NGOs).

The theory also recognises the role of governance structures and institutional arrangements in shaping the resilience of socio-ecological systems. Resilience

has also been applied to examine social-ecological systems, particularly how communities and societies cope or respond to environmental crises and risks (Scott and Gkartzios, 2014). Adger (2003) suggests that resilience is the ability of groups or communities to adapt in the face of external social, political or environmental stresses and disturbances, highlighting the importance of institutions, behaviour, rules and norms, for instance, property rights that govern the use of natural resources, creating incentives for sustainable or unsustainable use. In the context of rural housing in Zimbabwe, this entails examining the policies, laws and regulations governing housing development and disaster risk management and the effectiveness of local institutions in implementing and enforcing these measures. It also involves fostering multi-level governance approaches that promote collaboration and coordination among different stakeholders at the local, regional and national levels to enhance the resilience of rural housing.

## LITERATURE REVIEW

The concept of community resilience' has garnered significant attention in contemporary global discourse, particularly as many communities worldwide face challenges such as climate change, youth outmigration and socio-economic disruptions (Wilson *et al.*, 2018). This focus on resilience has been embraced by a wide array of stakeholders including NGOs, governments, planners, architects and social scientists, with a notable surge in academic and policy discussions surrounding the topic (McPhearson, 2014). However, it is worth noting that while resilience has been extensively studied in communities of the global north, there remains a relative dearth of research on resilience in the Global South (Rigg *et al.*, 2012).

In countries undergoing rapid urban and rural transformations like China, the issue of resilience takes on added significance (Tian, 2016; Wang, 2016). The Chinese government's response to natural disasters, such as the 'Post-disaster Reconstruction Regulation for the Sichuan Earthquake', underscores the importance of a comprehensive approach to community reconstruction, addressing economic, social and environmental dimensions (Wilson *et al.*, 2018). However, rural communities in China face ongoing challenges due to factors like urbanisation, industrialisation and shifting stakeholder expectations, which have transformed them from production-oriented to consumption-oriented locales (*ibid.*).

In European contexts like Ireland and England, resilience manifests in unique ways within rural communities. In Ireland, for instance, resilience often manifests through familial strategies, such as accessing land for self-built housing, which help mitigate financial strains associated with rural housing (Scott and Gkartzios, 2014). Similarly, in England, stringent regulations on rural housing development have contributed to socio-spatial inequities and exclusions, leading to highly gentrified rural areas (Shucksmith, 2012). Identifying the place-based characteristics associated with resilience, as highlighted by scholars, like Wilson (2010) and Schouten *et al.* (2012), can provide valuable insights for policy-makers seeking to enhance rural resilience amidst unpredictable events.

Climate change and rising sea levels pose significant threats to coastal cities, rural communities, ecosystems and agricultural systems worldwide (Lane *et al.*, 2013). This global environmental transformation necessitates the development of adaptive measures in coastal regions to bolster resilience (Bostick *et al.*, 2016). In the United States, projections indicate that approximately 4.2 million coastal residents will face vulnerability to sea level rise by the year 2100 (Hauer *et al.*, 2016). Coastal rural areas, often reliant on natural resources for their economies such as farming, logging, fishing and tourism, are particularly susceptible to saltwater intrusion, leading to habitat alterations, agricultural abandonment and diminished land and development prospects (Poulter *et al.*, 2009). Moreover, storm-related flooding exacerbates the salinisation of groundwater and soils, posing threats to drinking water quality and quantity in rural coastal regions where residents heavily rely on well water (Morss *et al.*, 2011; Qi and Qiu, 2011).

Asia stands out as the continent most frequently affected by natural disasters, with rural housing constantly at risk due to recurrent floods and other calamities (Busby *et al.*, 2018; Ling and Chiang, 2018). Countries like China, that have experienced devastating events such as the 2008 Sichuan earthquake, the 2013 Typhoon Haiyan and the 2015 Nepal earthquake, have witnessed significant damage to rural communities, resulting in loss of lives and destruction of homes (Chan *et al.*, 2019). Indonesia, prone to tsunamis, faced the 2006 Pangandaran Tsunami, prompting swift responses from relief agencies focusing on housing rights and environmental resilience (Prasada, 2020; Isaac, 2021). Efforts to enhance resilience include initiatives like rural

tree planting programmes and the construction of free homes for impoverished rural dwellers (Sungh, 2020; Zhou *et al.*, 2021).

Even in developed nations, rural populations are not immune to the impacts of natural disasters, as they often reside in disaster-prone areas. In the United Kingdom, for example, rural housing provision is deemed inadequate, exacerbating vulnerabilities during crises (Chen, 2021). Additionally, language barriers, as observed in the United States among Latino communities, further heighten vulnerability to disasters (Donor and Rodrigues, 2016). Conversely, countries like Ireland, Romania and Slovenia, boast majority rural populations, yet their advanced developmental stages contribute to the swift recovery of rural areas following natural disasters (Mathews, 2019; Mitrică *et al.*, 2020).

Africa faces significant vulnerability to natural disasters, exacerbated by weak economies which hinder the construction of high-quality rural housing, impeding post-disaster recovery efforts (Sungh, 2020). Countries like Mozambique, South Africa and Zambia are among the most disaster-prone, with rural environments bearing the brunt of these events due to limited development (Chirisa, 2022). Initiatives in countries like Kenya aim to bolster environmental resilience as a proactive measure to mitigate disaster impacts. In South Africa, rural areas, historically designed for the poor and marginalised, lack adequate living standards compared to urban centres, leaving residents vulnerable to various hazards (Mlambo, 2018; Bennett *et al.*, 2019). The layout of these settlements often fails to protect them from disasters, highlighting the urgent need for improved spatial planning and settlement development (Brunetta *et al.*, 2019; Jamshed *et al.*, 2020). Enhancing communication infrastructure in rural areas, including network connectivity, facilitates timely warnings and evacuation procedures (Vitale *et al.*, 2020). Access to better-quality housing materials, such as cement and durable bricks, contributes to safer rural communities, offering a sustainable solution to vulnerability.

Aligning planning efforts with the UN Sustainable Development Goal (SDG) 10 strengthens natural disaster resilience in rural areas, emphasising infrastructure development and economic support for less developed regions (Nhamo and Chikodzi, 2021). However, remote rural areas continue to

struggle with limited access to essential services, technology and housing upgrades, hindering the realisation of smart rural communities (Chirisa, 2022). In addition, inadequate support from financial institutions further complicates efforts to improve rural infrastructure (Bosworth *et al.*, 2020). SDG 11 promotes sustainable communities, underscoring the importance of renewing both urban and rural areas to foster resilience (Shafqat *et al.*, 2021). Establishing safe rural housing is fundamental to building resilience.

Rural areas in developing nations face disproportionate vulnerability to projected changes in temperature, precipitation and extreme events, making resilience strategies crucial for addressing disaster risks sustainably (Skjeflo, 2013). Cyclone Eline, for instance, inflicted extensive damage on infrastructure like roads, bridges, clinics and schools in rural Zimbabwe in 2000 (DCP, 2015). Subsequent floods in 2015 and 2017 further exacerbated social distress, particularly among smallholder farmers, with Chipinge and Chimanimani bearing the brunt of Cyclone Idai in 2019 (CRED, 2018; Chatiza, 2019). These disasters not only resulted in loss of lives and homes, but also highlighted the need for adaptive coping mechanisms.

In Zimbabwe, the construction of rural homes often lacks proper regulation by local authorities, leading to inadequate safety measures and heightened vulnerability to disasters (Chatiza, 2019). Traditional leaders' allocation of land without adhering to relevant procedures exacerbates this issue, underscoring the necessity of planning with a focus on reducing inequality to enhance disaster resilience in rural housing (Chirisa, 2022). Access to healthcare facilities and essential building materials in disaster-prone rural areas is crucial for prompt medical assistance and safety (*ibid.*). Policy support from the private sector is essential in ensuring the provision of adequate resources and promoting safer construction practices, moving away from building homes on slopes or low-lying areas towards elevated land that facilitates quicker recovery post-disaster.

## **RESEARCH METHODOLOGY**

The study employs a multimodal approach, integrating desk research with case study analysis. Three case studies are analysed to get deeper insights on the topic. The rationale for this methodology lies in its ability to gather extensive data from diverse sources, facilitating a comprehensive

understanding of rural housing resilience in Zimbabwe. Information for the study was sourced from a variety of outlets, including official publications, scholarly journals and NGOs, ensuring the incorporation of scholarly investigations, official data and pragmatic perspectives. A broad assessment of literature from various sources such as books, journal articles and government policy documents formed the backbone of data acquisition. This method facilitated the collection of data from both developed and developing nations, enabling comparative analysis and identification of best practices. Search engines like Libgen, Scopus, ScienceDirect and Google Scholar were utilised to access pertinent scholarly papers and documents, ensuring the inclusion of recent research findings.

Thematic analysis is employed to identify recurrent themes and patterns in the literature, simplifying the organisation and interpretation of information. This analysis provides a deeper understanding of rural housing resilience in Zimbabwe by synthesising a wide range of information sources. Furthermore, content analysis is applied to policy papers to comprehend legislative initiatives and regulatory frameworks relevant to rural housing resilience. This method helped identify potential implementation challenges and placed the findings within the broader policy context. In addition to literature analysis, case study methodology is employed to examine real-world examples of rural housing resilience initiatives. Case studies supplemented theoretical viewpoints with practical insights, enriching the discourse with empirical evidence.

## **FINDINGS**

The findings present the culmination of the research efforts aiming to clarify the factors influencing rural housing resilience in Zimbabwe and propose strategies for enhancement. Drawing upon an extensive literature review, the findings are organised around key themes identified during the study, aligning with the research objectives and central question posed in the introduction. Firstly, the findings reveal that inadequate infrastructure remains a significant challenge in rural housing resilience. As documented in the literature, deficiencies in road networks, bridges and other critical infrastructure hinder access to rural areas, exacerbating vulnerabilities during disasters. Moreover, limited access to basic amenities such as water, sanitation and electricity



compounds the challenges faced by rural communities, highlighting the urgent need for infrastructure development to bolster resilience.

Environmental vulnerabilities emerge as another critical theme in the findings, underscoring the impact of natural disasters such as floods and droughts on rural housing integrity and resident well-being. The study identifies Cyclone Eline in 2000 and subsequent floods in 2015 and 2017 as significant events that caused extensive damage to housing structures and infrastructure in rural Zimbabwe. Moreover, the aftermath of these disasters has led to social distress and loss of lives, emphasising the urgent need for adaptive coping mechanisms and resilience-building strategies.

Socio-economic disparities also emerge as a critical determinant of rural housing resilience, with marginalised communities facing heightened vulnerabilities. The findings indicate that rural areas in Zimbabwe, particularly those designated for the poor and disadvantaged, lack adequate living standards compared to urban centres. This is reflected in limited access to quality housing, basic infrastructure and essential services such as clean water, healthcare and reliable energy, which collectively undermine the resilience of these communities to socio-economic and environmental shocks. Moreover, traditional land allocation practices exacerbate vulnerabilities by exposing residents to hazards without proper planning or infrastructure support. Addressing socio-economic disparities thus emerges as a crucial component of resilience enhancement efforts in rural housing contexts.

The study also identifies the role of governance and policy frameworks in shaping rural housing resilience. Inadequate regulation of rural housing construction by local authorities and traditional leaders is found to contribute to vulnerability, highlighting the need for stronger governance mechanisms to ensure safety and sustainability. Moreover, policy interventions aimed at promoting resilience, such as the incorporation of sustainability principles and disaster risk reduction measures into housing policies, are identified as critical for fostering sustainable development in rural areas. Furthermore, the study sheds light on the significance of community resilience-building initiatives in rural housing contexts. Findings indicate that community-based approaches, including participatory decision-making processes and capacity-building programmes, play a pivotal role in strengthening resilience at the grassroots

level. Community engagement fosters ownership and empowerment, enabling rural residents to actively participate in resilience-building efforts and adapt to changing environmental and socio-economic conditions. Moreover, fostering social cohesion and networks within rural communities enhances collective action and mutual support during times of crisis, contributing to overall resilience.

The study highlights the importance of leveraging technology and innovation to enhance rural housing resilience. Findings suggest that digital solutions, such as mobile applications for early warning systems and remote monitoring of infrastructure, can significantly improve disaster preparedness and response in rural areas. Innovative housing designs and construction techniques, including eco-friendly materials and energy-efficient technologies, hold promise for enhancing resilience, while minimising environmental impact. Embracing technological advancements and promoting innovation in rural housing development can unlock new opportunities for sustainable and resilient communities in Zimbabwe, paving the way for a brighter future.

The study reveals several critical factors influencing rural housing resilience in Zimbabwe. Addressing infrastructure deficits emerges as a pressing need, as inadequate road networks and essential services hinder disaster preparedness and response efforts. Moreover, environmental vulnerabilities, such as floods and droughts, pose significant threats to housing integrity and resident well-being, highlighting the urgency of implementing mitigation measures. In addition, socio-economic disparities exacerbate vulnerabilities, particularly among marginalised communities, underscoring the importance of addressing inequities in housing access and provision. Furthermore, governance and policy frameworks play a crucial role in shaping rural housing resilience. Weak regulation of rural housing construction by local authorities and traditional leaders contributes to vulnerability, necessitating stronger governance mechanisms to ensure safety and sustainability. Moreover, policy interventions aimed at promoting resilience, such as integrating sustainability principles and disaster risk reduction measures into housing policies, are essential for fostering sustainable development in rural areas. The study provides valuable insights into the complexities of rural housing resilience in Zimbabwe. The study further explored three case studies in Zimbabwe

### **CASE STUDY: MUZARABANI**

Muzarabani district is located approximately 250 km north of Harare, Zimbabwe's capital city. The district sheds light on the difficult challenges faced by rural communities in enhancing the resilience of their housing infrastructure (ZimStat, 2012). With a population of around 123 000 people distributed across 29 wards, Muzarabani predominantly relies on small-holder rain-fed agriculture for livelihoods (*ibid.*). However, the region's susceptibility to recurrent droughts, poor soils and seasonal flooding poses significant threats to both agricultural productivity and community well-being (Mavhura *et al.*, 2013).

The term "Muzarabani", meaning a plain inundated with water in the local Shona dialect, underscores the region's vulnerability to flooding, particularly during the peak of the rainfall season between January and February (Mavhura *et al.*, 2013). Worsened by human-engineered factors, such as the management of dams upstream, including Lake Kariba and Cahora-Basa Dam, Muzarabani is at high risk of backflow flooding when discharge levels exceed thresholds (*ibid.*). Additionally, intense rainfall and tropical cyclones contribute to flash flooding, severe land degradation and water-borne diseases such as malaria and cholera, further impacting rural communities (Mudavanhu *et al.*, 2015; Mavhura *et al.*, 2017).

The physical infrastructure in Muzarabani, including houses, roads, schools and clinics, suffers significant damage during flooding events, further undermining the community's social, economic and human systems (Sekovski *et al.*, 2012). The poor quality of housing, water and sanitation services contributes to frequent illness, malnutrition and discomfort, adversely affecting both adult earning potential and children's educational outcomes (*ibid.*). In light of these challenges, the study underscores the importance of re-examining rural housing practices to enhance resilience in Muzarabani. The findings highlight the need for context-specific interventions that integrate environmental sustainability, social equity and economic viability (Cramb *et al.*, 2004). Furthermore, enhancing disaster risk management, promoting affordable housing solutions and investing in capacity building and education programmes are essential steps towards fostering resilience in rural communities (Siebeneck *et al.*, 2015; Mavhura *et al.*, 2017). In conclusion, the case study of Muzarabani provides valuable insights into difficulties of rural

housing resilience in Zimbabwe. By addressing the interconnected challenges of environmental hazards, socio-economic vulnerabilities and institutional constraints, stakeholders can work towards building more resilient communities that are better equipped to withstand and recover from disasters.

***CASE STUDY: RURAL HOUSING CHALLENGES IN CHIMANIMANI AND CHIPINGE***

Located in the eastern highlands of Zimbabwe's Manicaland Province, Chimanimani and Chipinge are home to Shona indigenes of Manyika and Ndaou origin. Despite the inherent risks, housing structures often emerge in vulnerable valleys, reflecting both the challenges and resilience of these communities in the face of adversity.

In 2019, President Emmerson Mnangagwa embarked on a visit to the Cyclone Idai-affected regions of Chimanimani and Chipinge in Zimbabwe. The visit aimed to assess the devastation caused by Cyclone Idai and formulate strategies for recovery. During his visit, he announced the imminent unveiling of a rural housing policy to address the pressing need for better housing infrastructure, emphasising strength and durability. Chimanimani and Chipinge communities have long grappled with underdevelopment across various spheres, leaving them in precarious conditions even before the cyclone struck. The vulnerability of these communities, however, was not fully comprehended until the catastrophic impact of Cyclone Idai. The cyclone left a trail of destruction, destroying 150 houses in Chimanimani and 234 houses in Chipinge, alongside wiping out eight bridges and causing significant damage to schools, crops and livestock. Tragically, nearly 200 lives were lost, with hundreds more reported missing or marooned.

In the aftermath of Cyclone Idai, Chimanimani and Chipinge districts faced immense challenges in recovering from the devastation, aggravated by their limited capacity to rebuild independently. The urgent need for housing restoration underscored the critical importance of effective policies and governance structures to ensure resilient communities. The piecemeal and haphazard human settlements in Chimanimani and Chipinge, influenced by political considerations and patronage, have perpetuated vulnerabilities rather than addressing them. Political patronage has often dictated access to land, leading to inadequate governance, corruption and ineffective housing policies (Marongwe, 2003). Consequently, the proposed rural housing policy must

navigate administrative, social and technical obstacles to be truly effective, prioritising community involvement and addressing systemic issues of governance and corruption.

Drawing on Hayes (2001), a robust rural housing policy should emerge as a purposeful response to the perceived problems of these constituencies, formulated through inclusive political processes and enforced by public agencies. It must tackle the root causes of poor land governance and corruption while prioritising the needs and aspirations of rural communities.

A transformative rural housing policy for Chimanimani and Chipinge must transcend mere policy formulation, fostering coordinated action across government ministries, private sectors and civil society. It should prioritise balanced development, enhance intergovernmental relations and establish strong coordination mechanisms to ensure effective implementation.

## **DISCUSSION**

The Resilience Theory and the Sustainable Development Theory offer important theoretical frameworks for understanding Zimbabwe's challenges with resilient rural housing. These theories provide complementary viewpoints: the former concentrates on a system's ability to withstand shocks, adjust to changing conditions and retain functionality, while the latter emphasises the interdependence of environmental, social and economic factors in achieving long-term viability (Robinson, 2008; Wilson, 2010; McManus *et al.*, 2012). It is clear from analysing the convergence of theory and data that the difficulties Zimbabwe's rural housing faces reflect resilience and sustainability ideas. To improve resilience, the findings emphasise how critical it is to solve infrastructure deficiencies, mitigate environmental threats, lessen socioeconomic gaps and strengthen governance frameworks. These are quite like the principles of sustainability, which highlight the need for development strategies that are holistic and balance social, economic and environmental factors (Steffen *et al.*, 2015). Moreover, the results offer fresh proof that the Resilience Theory may be applied to comprehend the dynamics of rural housing. The study's problems align with the definition of rural resilience, as given by Heijman *et al.* (2007). This definition highlights the significance of preserving a good level of living when confronted with external shocks and disturbances. The results emphasise how housing

infrastructure, natural resources and human well-being are interconnected, that highlights how dynamic and intricate socio-ecological systems are (Huang *et al.*, 2018).

These findings have important implications for theory and practice. The study advances theoretical understanding in this subject by proving the applicability of resilience and sustainability frameworks in understanding resilience in rural housing. Furthermore, the results provide useful information for practitioners and policy-makers, emphasising the necessity of integrated approaches to rural development that support social justice, economic prosperity and environmental sustainability. Future studies should concentrate on finding practical methods for boosting resilience and advancing sustainable development as the relationship between sustainability and resilience ideas in rural housing environments is investigated.

## **CONCLUSION AND RECOMMENDATIONS**

The study has shed light on the intricate network of variables affecting Zimbabwe's rural housing resilience. The interdependence of environmental, social and economic factors in determining resilience outcomes through an analysis based on sustainability and resilience theories, were discovered. It is obvious that tackling vulnerabilities in rural housing calls for an all-encompassing strategy that takes the larger socio-ecological system into account. It is imperative to have integrated methods to improve the resilience of rural housing, as failing to acknowledge these interdependencies could result in measures that are either unsustainable or ineffective. The study also emphasises the significance of context-specific solutions made to address the difficulties that rural Zimbabwean communities face. Initiatives aimed at enhancing resilience must be properly planned and executed while taking cultural, economic and geographic aspects into account. In addition, strong institutional frameworks and governance systems are critical for establishing the policy framework required to promote the development of resilient and sustainable housing. Furthermore, community involvement and engagement are crucial because they promote social cohesiveness and a sense of ownership, both of that are essential to resilience-building initiatives. Based on the findings of the study and the reviewed literature, several recommendations can be made to enhance rural housing resilience in Zimbabwe:

- Adopt policies and programmes that integrate environmental sustainability, social equity and economic viability into rural housing development initiatives. This could involve promoting eco-friendly building practices, supporting community-driven development projects and fostering partnerships between stakeholders.
- Enhance disaster risk management strategies to mitigate the impact of environmental hazards on rural housing. This may include improving early warning systems, investing in infrastructure resilience and providing support for community-based disaster preparedness and response efforts.
- Implement policies to make housing more affordable for rural populations, particularly low-income households. This could involve providing subsidies or incentives for housing construction, facilitating access to microfinance or community savings schemes and exploring alternative housing models such as cooperative housing.
- Invest in capacity-building and education programmes to empower rural communities with the knowledge and skills needed to build resilience. This could include training programmes on sustainable building practices, disaster preparedness and income-generating activities and initiatives to promote environmental awareness and conservation.
- Address issues of land tenure insecurity to provide rural communities with greater stability and resilience. This may involve reforming land tenure laws, promoting community land rights and facilitating access to formal land titles for rural households.

Stakeholders can work towards fostering sustainable development and improving the well-being of rural populations in Zimbabwe through implementing these recommendations and adopting a holistic approach.

## REFERENCES

Aleixo, B. *et al.* (2019). Infrastructure is a Necessary but Insufficient Condition to Eliminate Inequalities in Access to Water: Research of a Rural Community Intervention in Northeast Brazil. *Science of the Total Environment*, 652, 1445-1455.

- Bari, E., Haque, A. E and Khan, Z. H. (2022). Local Strategies to Build Climate Resilient Communities in Bangladesh. In: Enamul Haque, A.K. *et al.* (eds.) *Climate Change and Community Resilience: Insights from South Asia*. Singapore: Springer, pp.175-189.
- Bennett, B. M. and Van Sittert, L. (2019). Historicising Perceptions and the National Management Framework for Invasive Alien Plants in South Africa. *Journal of Environmental Management*, 229, 174-181.
- Bostick, T. P., Holzer, T. H. and Sarkani, S. (2017). Enabling Stakeholder Involvement in Coastal Disaster Resilience Planning. *Risk Analysis*, 37(6), 1181-1200.
- Bosworth, G. *et al.* (2020). Unequal Futures of Rural Mobility: Challenges for a “Smart Countryside”. *Local Economy*, 35(6), 586-608.
- Busby, J. *et al.* (2018). In Harm's Way: Climate Security Vulnerability in Asia. *World Development*, 112, 88-118.
- Chan, E. Y. Y., Man, A. Y. T. and Lam, H. C. Y. (2019). Scientific Evidence on Natural Disasters and Health Emergency and Disaster Risk Management in Asian Rural-based Areas. *British Medical Bulletin*, 129(1), 91.
- Chatiza, K. (2019). An Analysis of Policy Implications for Post-Disaster Institutional Development to Strengthen Disaster Risk Management: Cyclone Idai in Zimbabwe. Oxfam, Zimbabwe. Available online: [www.oxfam.org](http://www.oxfam.org). Accessed on 15 October 2021.
- Chirisa, I. (2021). Infusing Disaster Resilience Thinking and Practice into Rural Settlement Planning, Development and Management in Zimbabwe. Doctoral Dissertation, University of the Free State.
- Cramb, R. A. *et al.* (2009). Swidden Transformations and Rural Livelihoods in Southeast Asia. *Human Ecology*, 37, 323-346.
- DCP (Department of Civil Protection) (2015). Topical Issues about Zimbabwe's Disaster Risk Profile. Harare. Available online: <http://www.drmzim.org.zw>. Accessed on 16 Jun 2018.
- Ezra, M. (2003). Environmental Vulnerability, Rural Poverty, and Migration in Ethiopia: A Contextual Analysis. *Genus*, 59(2), 63-91.
- Fu, C., Leoutsakos, J. M. and Underwood, C. (2014). An Examination of Resilience Cross-Culturally in Child and Adolescent Survivors of the 2008 China Earthquake Using the Connor–Davidson Resilience Scale (CD-RISC). *Journal of Affective Disorders*, 155, 149-153.



- Golding, S. A. and Winkler, R. L. (2020). Tracking Urbanisation and Exurbs: Migration Across the Rural—Urban Continuum, 1990—2016. *Population Research and Policy Review*, 39(5), 835-859.
- Harrington, L. M. B. (2016). Sustainability Theory and Conceptual Considerations: A Review of Key Ideas for Sustainability, and the Rural Context. *Papers in Applied Geography*, 2(4), 365-382.
- Hauer, M. E., Evans, J. M. and Mishra, D. R. (2016). Millions Projected to be at Risk from Sea-Level Rise in the Continental United States. *Nature Climate Change*, 6(7), 691-695.
- Heijman, W., Hagelaar, G., Heide, M. (2007). Rural Resilience as a New Development Concept. *Gen. Inf.* 1, 383—396.
- Isaac, R. (2021). Media Experiences of Asian Disasters — A Way Forward. In: Yamaji, M., Kakuchi, S. and Shaw, R. (eds.). *Media and Disaster Risk Reduction: Advances, Challenges and Potentials*, 13-29. Amsterdam: Springer.
- Jamshed, A. *et al.* (2020). A Conceptual Framework to Understand the Dynamics of Rural—Urban Linkages for Rural Flood Vulnerability. *Sustainability*, 12(7), 2894.
- Kelly, C. *et al.* (2015). Community Resilience and Land Degradation in Forest and Shrubland Socio-Ecological Systems: Evidence from Gorgoglione, Basilicata, Italy. *Land Use Policy*, 46, 11-20.
- Lane, D. *et al.* (2013). The Gathering Storm: Managing Adaptation to Environmental Change in Coastal Communities and Small Islands. *Sustainability Science*, 8, 469-489.
- Li, X., Wang, L. and Liu, S. (2016). Geographical Analysis of Community Resilience to Seismic Hazard in Southwest China. *International Journal of Disaster Risk Science*, 7, 257-276.
- Ling, T. Y. and Chiang, Y. C. (2018). Well-being, Health and Urban Coherence - Advancing Vertical Greening Approach Toward Resilience: a Design Practice Consideration. *Journal of Cleaner Production*, 182, 187-197.
- Marongwe, N. (2003). Farm Occupations and Occupiers in the New Politics of Land in Zimbabwe. In: Hammar, A., Raftopoulos, B. and Jensen, S. (eds.), *Zimbabwe's Unfinished Business: Rethinking Land, State and Nation in the Context of Crisis*, 155—190). Harare: Weaver Press.

- Mathews, A. (2019). What Developing Countries Can Learn from Europe's Experience with Rural Revitalisation? Available online: <https://www.ifpri.org/blog/what-developing-countries-can-learn-europes-experience-rural-revitalization/>
- Mavhura, E., Manyena, S. B. and Collins, A. E. (2015). Institutional and Policy Frameworks for Disaster Risk Reduction in Zimbabwe. *Journal of Disaster Risk Studies*, 7(1), 1-8.
- Mavhura, E., Manyena, S. B. and Collins, A. E. (2017). Unpacking Community Resilience through Disaster Risk Reduction: Insights from Zimbabwe. *International Journal of Disaster Risk Reduction*, 21, 330-339.
- Mavhura, E., Manyena, S. B. and Manatsa, D. (2013). Flood Disaster Risk Management in Zimbabwe: A Review of Urban and Rural Lower Order Human Settlements. *Jamba: Journal of Disaster Risk Studies*, 5(1), 1-8.
- Mccabe, J.T. and Quandt, A. (2019). Drought: A Challenge to Livelihoods, Sustainability and Resilience. in: *The Angry Earth*, 212-226. London: Routledge.
- Mcwilliam, M. (2003). Zimbabwe and the Commonwealth. *The Round Table*, 92(368), 89-98.
- Meerow, S.A., Baud, I., 2012. Generating Resilience: Exploring the Contribution of the Small Power Producer and Very Small Power Producer Programmes to the Resilience of Thailand's Power Sector. *Int. J. Urban Sustain. Dev.* 4(1), 20–38.
- Meng, U. I. (2016). The Development of Grand Mediation and Its Implications for China's Regime Resilience: The Li Qin Mediation Office. *The China Review*, 16(1), 95-119.
- Mitrică, B. et al. (2020). Social Development and Regional Disparities in the Rural Areas of Romania: Focus on the Social Disadvantaged Areas. *Social Indicators Research*, 152, 67-89.
- Mlambo, V. (2018). An Overview of Rural-Urban Migration in South Africa: Its Causes and Implications. *Archives of Business Research*, 6(4).
- Morss, R. E. et al. (2011). Improving Societal Outcomes of Extreme Weather in a Changing Climate: An Integrated Perspective. *Annual Review of Environment and Resources*, 36, 1-25.
- Mudavanhu, C., Manatsa, D. and Magidi, J. (2015). Floods and Food Security: Implications for Zimbabwe's Rural Livelihoods. *Jambá: Journal of Disaster Risk Studies*, 7(1), 1-8.

- Murphy, H.H.E. (1997). Rural Lessons for Urban Services. *Journal of Mental Health*, 6(1), 11- 22.
- Nhamo, G., & Chikodzi, D. (2021). The catastrophic impact of tropical Cyclone Idai in Southern Africa. In: Nhamo, G. and Chikodzi, D. (eds.). *Cyclones in Southern Africa: Volume 1: Interfacing the Catastrophic Impact of Cyclone Idai with SDGs in Zimbabwe* (pp. 3-29). Cham: Springer International Publishing.
- Poulter, B. *et al.* (2009). Sea-Level Rise Research and Dialogue in North Carolina: Creating Windows for Policy Change. *Ocean and Coastal Management*, 52(3-4), 147-153.
- Prasada, D. V. P. (2020). Climate Resilience and Varietal Choice: A Path Analytic Model for Rice in Bangladesh. *Journal of Agribusiness in Developing and Emerging Economies*, 12(1), 40-55.
- Qi, S. Z. and Qiu, Q. L. (2011). Environmental Hazard from Saltwater Intrusion in the Laizhou Gulf, Shandong Province of China. *Natural Hazards*, 56, 563-566.
- Rigg, J., Salamanca, A. and Parnwell, M. (2012). Joining the Dots of Agrarian Change in Asia: A 25 Year View from Thailand. *World Development*, 40(7), 1469-1481.
- Schouten, M.A.H. *et al.* (2012). A. Resilience-based Policy Evaluation Framework: Application to European Rural Development Policies. *Ecological Economics*, 81, 165-175.
- Scott, M. and Gkartzios, M. (2014). Rural Housing: Questions of Resilience. *Housing and Society*, 41(2), 247-276.
- Sekovski, I. *et al.* (2012). Measuring the Direct Effects of Salinity on Community Structure and Ecosystem Processes in Marine Benthic Microalgae. *Marine Pollution Bulletin*, 65(4-9), 387-399.
- Shafqat, R., Marinova, D. and Khan, S. (2021). Placemaking in Informal Settlements: The Case of France Colony, Islamabad, Pakistan. *Urban Science*, 5(2), 49-59.
- Shammin, M. R., Enamul Haque, A. K. and Faisal, I. M. (2022). A Framework for Climate Resilient Community-based Adaptation. in *Climate Change and Community Resilience*, 11-30. Singapore: Springer.
- Shucksmith, M. (2012). Class, Power and Inequality in Rural Areas: Beyond Social Exclusion? *Sociologia Ruralis*, 52(4), 377—397.

- Siebeneck, L. K., Cigler, B. A. and Tierney, K. J. (2015). Community Resilience and Oil Spills in Coastal Louisiana. *Ecology and Society*, 20(1), 12-25.
- Skjeflo, S.W. (2013). Measuring Household Vulnerability to Climate Change. *Glob. Environ. Change* 23(6), 1694–1701.
- Standar, A. and Kozera, A. (2019). The Role of Local Finance in Overcoming Socioeconomic Inequalities in Polish Rural Areas. *Sustainability*, 11(20), 5848.
- Tian, G. (2016, August). The Rapid Decline of Villages and Rural Landscapes in China. Unpublished paper presented at the IGU International Conference on Land Use and Rural Sustainability, Xi'an (China), Aug. 17 - 20, 2016.
- Vitale Brovarone, E. and Cotella, G. (2020). Improving Rural Accessibility: A Multilayer Approach. *Sustainability*, 12(7), 2876
- Wang, J. (2016, August). Rural Depopulation and Its Effects on Settlements in the North China Plain. Unpublished paper presented at the IGU International Conference on Land Use and Rural Sustainability, Xi'an (China), Aug. 17 - 20, 2016.
- Wilson, G. (2012). *Community Resilience and Environmental Transitions*. London: Earthscan
- Wilson, G. A., Hu, Z. and Rahman, S. (2018). Community Resilience in Rural China: The Case of Hu Village, Sichuan Province. *Journal of Rural Studies*, 60, 130-140.
- Wilson, G et al. (2016). Community Resilience, Land Degradation and Endogenous Lock-in Effects: Evidence from the Alento Region, Campania, Italy. *Journal of Environmental Planning and Management*, 59(3), 518-537.
- Zhou, W. et al. (2021). Livelihood Capital, Evacuation and Relocation Willingness of Residents in Earthquake-Stricken Areas of Rural China. *Safety Science*, 141, 105350.
- Zimstat (2012). Dam Infrastructure Provision in Rural Africa Zimbabwe Population Census 2012. Zimbabwe National Statistical Agency. Harare