

# A Conceptual Framework for Resilience and Sustainability Development in Displaced Rural Communities: Addressing Socio-Economic Challenges in Sungai Asap, Sarawak

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## Abstract

Sungai Asap, located in the Belaga district of Sarawak, Malaysia, was established in 1998 to resettle communities displaced by the Bakun Dam, Southeast Asia's largest hydroelectric project. Predominantly home to Kayan, Kenyah, Penan, and Ukit ethnic groups, the community has encountered profound socio-economic transformations linked to forced relocation, infrastructure development, and large-scale modernization efforts. This paper presents a conceptual framework to analyze the socio-economic challenges faced by Sungai Asap, situating these within broader discussions of rural displacement, resilience, and sustainable development. This study explores the socio-economic impacts of displacement, focusing on poverty, unemployment, limited educational access, and infrastructural constraints that hinder sustainable development in Sungai Asap. Additionally, it examines the social and cultural disruptions stemming from relocation, with a particular focus on how developmental imbalances may compound these issues and affect quality of life. By synthesizing these factors within a conceptual framework, this paper seeks to advance understanding of the intersecting challenges faced by displaced rural communities in the context of large-scale development projects. Through this framework, the study generates strategic recommendations for enhancing resilience and sustainability, emphasizing the role of inclusive development and culturally sensitive policies. This conceptual paper also aims to serve as a reference point for further research, proposing new pathways for socio-economic stability and quality of life improvements in rural resettlement contexts.

**Keywords:** Rural Displacement, Socio-Economic Resilience, Sustainable Development, Community Livelihoods, Cultural Preservation

**Introduction**

Rural communities worldwide encounter a variety of socio-economic challenges that directly impact quality of life and sustainable development. Key issues—including poverty, unemployment, limited access to quality education, infrastructure deficits, and social issues such as crime and domestic violence—often interconnect, shaping both individual experiences and broader community welfare (Terminski, 2015; Wilson, 2022). These challenges are particularly pronounced in displaced rural communities, where resilience and adaptability become essential for maintaining community well-being (Mattiuzzi & Chapple, 2020). As recent research indicates, rural resilience plays a crucial role in helping communities cope with socio-economic vulnerabilities and navigate the impacts of global changes, including environmental and economic pressures that affect sustainable development (Wilson, 2022; Tiwari & Burkett, 2021).

Sungai Asap, located in the Belaga district of Sarawak, Malaysia, exemplifies these dynamics, having been established in 1998 to resettle approximately 10,000 residents displaced by the construction of the Bakun Dam, Southeast Asia's largest hydroelectric project (Dayak Daily, 2023). Currently home to a diverse population, including Kayan, Kenyah, Penan, and Ukit ethnic groups, the settlement has grown to approximately 20,000 residents, encompassing individuals from neighboring villages and workers from nearby plantations and logging camps. Despite basic amenities such as schools, clinics, and administrative offices, socio-economic issues such as poverty, unemployment, and limited infrastructure persist, complicating efforts toward sustainable development and community stability (Li, 2023).

As noted in studies on rural resilience, socio-economic transformations caused by relocation and large-scale development can destabilize rural communities, making sustainable development more difficult (Mattiuzzi & Chapple, 2020; Tiwari & Burkett, 2021). Sungai Asap residents have experienced disruptions in traditional income sources, altered social networks, and heightened dependency on external resources due to these developmental imbalances. This study aims to examine these intersecting challenges within a conceptual framework that situates socio-economic resilience in the context of rural displacement. Through a targeted analysis of the factors influencing resilience—such as poverty, limited educational access, and infrastructure deficits—this framework seeks to provide insights into sustainable development strategies for rural resettlement contexts like Sungai Asap. The study also aims to contribute to ongoing research, proposing strategic recommendations for inclusive, culturally sensitive knowledge transferring projects that promote resilience and socio-economic stability in Sungai Asap, Belaga, Sarawak.

**Theoretical Background**

The socio-economic challenges encountered by displaced rural communities like Sungai Asap can be understood through a multi-theoretical lens, incorporating insights from Impoverishment Risks and Reconstruction (IRR), Resilience Theory, and Sustainable Livelihoods Framework (SLF). These theories provide a foundation to analyze the impacts of large-scale displacement, enabling the development of resilience strategies and sustainable practices. The Impoverishment Risks and Reconstruction (IRR) Model was developed by Cernea (2008) offers a structured way to examine the risks of displacement, emphasizing impoverishment factors such as landlessness, joblessness, and marginalization. In Sungai Asap's case, the IRR model is applicable as residents faced the loss of traditional lands,

affecting their income sources and social structures. This model highlights the immediate risks and socio-economic vulnerabilities introduced by displacement and lays the groundwork for understanding how these issues affect long-term stability and quality of life.

Next, Resilience theory is also central to understanding how communities respond to socio-economic disruptions. The theory posits that resilience involves the ability to adapt and transform in response to external pressures (Li, 2023; Wilson, 2022). For rural, displaced rural communities, resilience is essential for managing economic uncertainties and social transformations. In Sungai Asap, resilience strategies are needed to address both economic adaptation and cultural preservation, enabling residents to rebuild livelihoods and maintain community cohesion following forced relocation.

Lastly, the Sustainable Livelihoods Framework (SLF) evaluates access to essential capital such as social, human, physical, financial, and natural is useful in assessing displaced rural communities' ability to maintain stable livelihoods (Scoones, 1998). For Sungai Asap, where access to essential resources and infrastructure is limited, SLF highlights the importance of sustainable development strategies that enhance resource availability and strengthen community assets. The framework also aligns with the need for culturally sensitive policies that respect and incorporate indigenous knowledge, promoting inclusive and holistic approaches to community development (Dabson, 2020). This study integrates the IRR Model, Resilience Theory, and SLF to create a conceptual framework for understanding the socio-economic, cultural, and infrastructural challenges of displacement. Together, these theories form a comprehensive lens through which to examine the resilience and sustainable development needs of displaced rural communities like Sungai Asap.

## **Literature Review**

This section reviews the literature on rural displacement and its associated impacts, focusing on the socio-economic challenges, social and cultural shifts, and limitations in infrastructure and essential services that affect displaced rural communities of Sungai Asap. By examining these interrelated factors, the literature reveals the broader implications of forced relocation and the need for resilient, sustainable strategies to support displaced rural communities.

## **Rural Displacement**

Rural displacement refers to the relocation or migration of rural communities due to large-scale development projects, environmental changes, or policy decisions. This displacement often occurs to make way for infrastructure projects like hydroelectric dams, mining, or urban expansion, which can disrupt traditional livelihoods, alter social structures, and create new socio-economic challenges for the displaced communities (Terminski, 2015; Cernea, 2008). Typically, rural displacement leads to significant changes in the lives of those affected, including loss of land, changes in income sources, and a shift from traditional lifestyles. Displaced rural communities may face limited access to essential services and infrastructure, including healthcare, education, and transportation. Furthermore, the loss of "place attachment" —the deep emotional and cultural ties people have to their land—can create challenges in adapting to new locations, affecting mental well-being and community cohesion (Manzo & Devine-Wright, 2014; Li, 2023). In the case of Sungai Asap, for example, rural displacement occurred due to the construction of the Bakun Dam, forcing residents to leave their ancestral lands. Such displacement exemplifies the broader impacts of rural

displacement, including socio-economic instability and the need for resilience strategies to support sustainable development in resettled communities.

### **Socio-Economic Challenges**

Rural communities impacted by displacement face a range of socio-economic challenges, with poverty and unemployment among the most pressing issues. In Sungai Asap, the loss of traditional lands and income sources has led to increased economic vulnerability. Cernea's (2008) Impoverishment Risks and Reconstruction (IRR) model highlights how forced relocation disrupts traditional livelihoods, leaving many in poverty and driving the economically disadvantaged to urban areas in search of employment, which can significantly alter local demographics (Cernea, 2008; Mattiuzzi & Chapple, 2020). Additionally, limited access to healthcare, education, and essential services exacerbates economic dependency and reinforces socio-economic challenges, particularly in rural communities where infrastructure and opportunities are scarce (Dabson, 2020; Calhoun et al., 2022). These challenges align with findings from the OECD (2022), which underscores the need for resilient, adaptable development policies tailored to address systemic barriers faced by rural populations.

### **Social and Cultural Shifts**

Relocation often causes profound social and cultural transformations, impacting community cohesion and cultural heritage. In Sungai Asap, the relocation of indigenous groups, including the Kayan, Kenyah, Penan, and Ukit, disrupted social bonds and communal structures that previously supported shared cultural practices. Manzo and Devine-Wright (2014) discuss how such displacements contribute to the "dislocation of identity," especially among older generations who experience psychological strain when adapting to new environments. Li (2023) further emphasizes that rural resilience is closely tied to "place attachment," whereby cultural and social connections within communities are crucial to maintaining stability and identity in the face of change. These social changes underscore the importance of preserving cultural heritage within displaced communities to ensure resilience and sustained socio-cultural continuity (OECD, 2022; Dabson, 2020).

### **Infrastructure and Service Limitations**

The lack of adequate infrastructure and essential services, such as healthcare, education, and transportation, significantly impacts quality of life and hinders sustainable development in rural communities. In many resettled communities, including Sungai Asap, existing infrastructure is often insufficient to meet the needs of growing populations. Studies have shown that without investment in scalable and sustainable infrastructure, such communities experience limited access to education and healthcare, which perpetuates socio-economic disadvantages (Mattiuzzi & Chapple, 2020; Calhoun et al., 2022). Furthermore, research from the Aspen Institute (Dabson, 2020) and the Texas Tribune (Calhoun et al., 2022) highlights how effective rural infrastructure is vital for supporting economic and social resilience, as it enables better access to opportunities and essential services, ultimately promoting long-term socio-economic stability.

### **Method**

This study employs a conceptual framework approach to systematically analyze the socio-economic challenges faced by the displaced rural community of Sungai Asap. It begins with an in-depth literature review on the socio-economic impacts of rural displacement, identifying core themes such as poverty, unemployment, limited access to education, and infrastructural constraints. Following this, qualitative insights will be synthesized to establish a foundation for the framework. The conceptual framework maps socio-economic barriers to resilience pathways, emphasizing how structural challenges hinder sustainable development. Based on this framework, strategic recommendations are formulated, focusing on culturally sensitive and inclusive development policies tailored to support socio-economic stability and quality of life improvements in rural resettlement contexts.

### Conceptual Framework

Building on these theoretical foundations, the conceptual framework proposed in Figure 1.0 for this study synthesizes socio-economic, cultural, and infrastructural dimensions to analyze the intersecting challenges of displacement, resilience, and sustainable development in Sungai Asap.

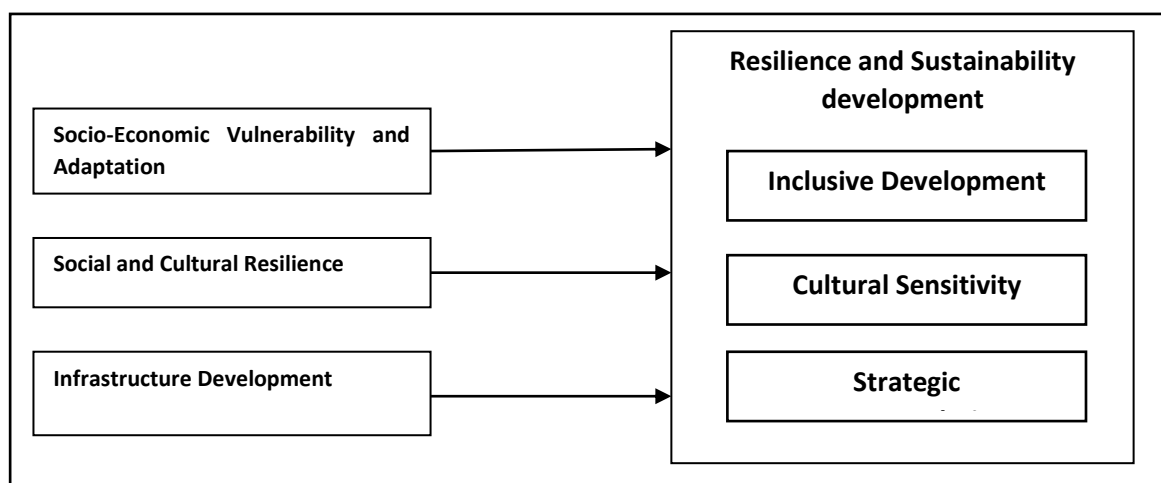


Figure 1.0 The conceptual framework for Resilience and Sustainability development in Displaced rural Communities

### Socio-Economic Vulnerability and Adaptation

This component applies the IRR model and SLF to analyze socio-economic vulnerabilities, focusing on poverty, unemployment, and limited access to education. By assessing the primary challenges faced by Sungai Asap residents, this component identifies essential resources needed to rebuild sustainable livelihoods. Additionally, it explores pathways to resilience through adaptive economic measures, skill-building programs, and enhanced service access, providing a foundation for targeted support and capacity-building initiatives.

### Social and Cultural Resilience

Using Resilience Theory, this element of the framework examines how social and cultural disruptions from relocation affect community cohesion and individual well-being. It considers the impact of weakened social ties and cultural dislocation, particularly among indigenous groups, and evaluates strategies to strengthen community bonds and maintain cultural identity in the face of modernization pressures. Community participation and culturally

sensitive policies are emphasized to ensure that resilience-building efforts respect and preserve the community's unique cultural heritage.

### **Infrastructure Development**

This component assesses the adequacy of infrastructure in meeting the needs of a growing, resettled population, drawing on insights from SLF and resilience-based development models. It considers the limitations of existing infrastructure in Sungai Asap and the implications of these gaps for sustainable development, focusing on areas like clean water access, healthcare, and educational facilities. The framework proposes sustainable infrastructure investments and policy recommendations to improve service provision, support economic opportunities, and build long-term resilience.

By integrating these theoretical perspectives into a cohesive framework, this study provides a comprehensive approach to addressing the socio-economic, cultural, and infrastructural challenges of displacement. The framework not only highlights essential resilience strategies for communities like Sungai Asap but also serves as a foundation for future research, aiming to guide inclusive development policies that enhance socio-economic stability and quality of life for displaced rural populations.

### **Conclusion**

The socio-economic challenges facing Sungai Asap reflect the broader difficulties encountered by communities displaced by large-scale development. Addressing these issues requires a holistic, inclusive approach focused on enhancing economic opportunities, education, infrastructure, and essential services. Moreover, it is crucial to ensure that ongoing development benefits community in Sungai asap while preserving the cultural and environmental foundations of their livelihood. This study provides a conceptual framework for understanding the complex socio-economic, cultural, and infrastructural challenges encountered by displaced communities, using Sungai Asap as a case study. Integrating the Impoverishment Risks and Reconstruction (IRR) Model, Resilience Theory, and the Sustainable Livelihoods Framework (SLF), the framework reveals how displacement-induced disruptions extend beyond immediate economic impacts, affecting long-term community stability, cultural continuity, and quality of life. The theoretical integration offers a comprehensive approach to analyzing and addressing the challenges faced by Sungai Asap, proposing a foundation for inclusive, culturally sensitive policies and development strategies that prioritize both resilience and sustainability. This conceptual framework contributes to the broader understanding of displaced rural communities, serving as a reference point for further research on fostering socio-economic stability and improving quality of life in similar resettlement contexts.

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