



Faculty of Social Science and Humanities

**The Security-Development Nexus: Evaluating the Human Security
Impact of the Baleh Dam Development on the Iban Community in Nanga
Entawau, Kapit, Sarawak**

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The Security-Development Nexus: Evaluating the Human Security Impact of
The Baleh Dam Development on the Iban Community in Nanga Entawau,
Kapit, Sarawak

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DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.



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ABSTRACT

Hydropower development has emerged as a pivotal factor in advancing sustainable progress in Sarawak, epitomised by the ambitious Baleh HEP Dam project. This initiative underscores the nation's commitment to renewable energy. The primary objective of this research is to link human security and development within the security-development nexus, specifically in the context of the Baleh Hydropower Dam construction in Sarawak. This study primarily examines human and economic security using the security-development nexus framework, with a focus on the human security implications for the Iban community residing in Ulu Baleh, Kapit. By scrutinising the security-development nexus, this research explores the intricate relationship between dam development and the human and economic security of the affected community in Nanga Entawau, particularly the Iban in Baleh, Kapit. The Iban community's deep reliance on ancestral lands and rivers for sustenance and cultural identity makes them vulnerable to displacement and resource loss. The Baleh dam development has severely impacted local communities, with an estimated 1,345 square kilometres of land inundated by the dam, raising concerns about the rights and well-being of the Iban people. The findings of this research conclude that the increase in hydropower dam construction in Sarawak has led to the displacement of local communities, posing significant challenges to the human security of residents in maintaining a safe and clean environment in their villages. As these new challenges emerge, policymakers must adapt their strategies and respond effectively to ensure that development benefits local communities. This study argues that the Sarawak government needs to earnestly practice its stated commitment to sustainable development by actively engaging the affected communities. Otherwise, the government's purported sustainable development approach risks being dismissed as mere political rhetoric, further marginalising these communities and denying them active participation in their own

development. Thus, this research contributes valuable insights to the ongoing discourse on security, development, and livelihood preservation, emphasizing the necessity for sustainable progress that respects the rights and interests of local communities. The findings illuminate the interrelationship between security and development, asserting that the 1,392-strong Iban community's right to a peaceful livelihood, along with their human and economic security, is closely tied to the Baleh HEP Dam in Nanga Entawau, Kapit, Sarawak.

Keywords: Hydropower, security, development, sustainable, human security, iban community

***Pembangunan Keselamatan Nexus: Menilai Kesan Keselamatan Manusia
Pembangunan Empangan Baleh Terhadap Masyarakat Iban di Kapit, Sarawak***

ABSTRAK

Pembangunan tenaga air telah muncul sebagai faktor utama dalam memajukan kemajuan berkesinambungan di Sarawak, diikuti oleh projek ambisius Baleh HEP Dam. Inisiatif ini menekankan komitmen negara kepada tenaga boleh diperbaharui. Tujuan utama penyelidikan ini ialah untuk menghubungkan keselamatan manusia dan pembangunan dalam ikatan keselamatan-pembangunan, khususnya dalam konteks pembinaan Dam Hidroelektrik Baleh di Sarawak. Kajian ini terutamanya mengkaji keselamatan manusia dan ekonomi menggunakan rangka kerja keselamatan-pembangunan, dengan memberi tumpuan kepada implikasi keselamatan manusia bagi komuniti Iban yang tinggal di Ulu Baleh, Kapit. Dengan memeriksa hubungan keselamatan-pembangunan, penyelidikan ini mengkaji hubungan rumit antara pembangunan dam dan keselamatan manusia dan ekonomi masyarakat yang terjejas di Nanga Entawau, terutamanya Iban di Baleh, Kapit. Kepercayaan yang mendalam masyarakat Iban kepada tanah dan sungai nenek moyang untuk bekalan dan identiti budaya menjadikan mereka rentan kepada pengungsi dan kehilangan sumber. Pembangunan Dam Baleh telah memberi kesan yang teruk kepada komuniti tempatan, dengan kira-kira 1,345 kilometer persegi tanah dibanjiri oleh dam, menimbulkan kebimbangan mengenai hak dan kesejahteraan rakyat Iban. Temuan penyelidikan ini menyimpulkan bahawa peningkatan pembinaan gumpalan tenaga air di Sarawak telah menyebabkan pengasingan komuniti tempatan, menimbulkan cabaran yang besar kepada keselamatan manusia penduduk dalam mengekalkan persekitaran yang selamat dan bersih di kampung-kampung mereka. Apabila cabaran baru ini muncul, pembuat dasar mesti menyesuaikan strategi mereka dan bertindak balas secara berkesan

untuk memastikan pembangunan memberi manfaat kepada masyarakat tempatan. Kajian ini berpendapat bahawa kerajaan Sarawak perlu melaksanakan komitmen yang dinyatakan untuk pembangunan berkelanjutan dengan aktif melibatkan komuniti yang terjejas. Jika tidak, pendekatan pembangunan berkelanjutan yang dikehendaki Kerajaan berisiko ditolak sebagai retorika politik sahaja, lebih jauh mengasingkan komuniti-komuniti ini dan menahan mereka daripada mengambil bahagian aktif dalam pembangunan mereka sendiri. Oleh itu, penyelidikan ini menyumbang wawasan yang berharga kepada perbincangan yang berterusan mengenai keselamatan, pembangunan, dan pengkalan hayat, menekankan keperluan untuk kemajuan berkelanjutan yang menghormati hak-hak dan kepentingan masyarakat tempatan. Temuan ini menerangkan hubungan antara keselamatan dan pembangunan, mengesahkan bahawa hak komuniti Iban yang kuat 1,392 untuk kehidupan yang damai, bersama dengan keselamatan manusia dan ekonomi mereka, terikat erat dengan Dam HEP Baleh di Nanga Entawau, Kapit, Sarawak.

Kata kunci: *Tenaga hidro, keselamatan, pembangunan, kemampanan, keselamatan manusia, komuniti Iban*

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LIST OF ABBREVIATIONS

BN	<i>Barisan Nasional</i>
CGGC	China Gezhouba Group Company
CTGPC	China Three Gorges Project Corporation
DOSM	Department of Statistics Sarawak
GDP	Gross Domestic Product
GNI	Gross National Income
GPS	Gabungan Parti Sarawak
HDA	Highland Development Agency
HEP	Hydro-electric power
MLAs	Members of the Legislative Assembly
MDGs	Millennium Development Goals
NRDA	Northern Region Development Agency
PANAS	<i>Parti Negara Sarawak</i>
PBB	<i>Pertubuhan Bangsa-Bangsa Bersatu</i>
PBDSB	<i>Parti Bansa Dayak Sarawak Baru</i>
PBK	<i>Parti Bumi Kenyalang</i>
PBM	<i>Parti Bangsa Malaysia</i>
PCDS	Post COVID-19 Development Strategy
PDP	Progressive Democratic Party
PESAKA	<i>Parti Pesaka Sarawak</i>
PRS	<i>Parti Rakyat Sarawak</i>
PSB	<i>Parti Sarawak Bersatu</i>
RECODA	Regional Corridors Development Authority

SCORE	Sarawak Corridor of Renewable Energy
SEB	Sarawak Energy Berhad
SEC	Sarawak Energy Corporate
SDGs	Sustainable Development Goals
SNAP	Sarawak National Party
SUPP	Sarawak United People's Party
T-MEGA	<i>Tanjung Manis</i> Economic Growth Area
UN	United Nations
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
URDA	Upper Rajang Development Agency
WCD	World Commission on Dams

CHAPTER 1

INTRODUCTION

1.0 Introduction

The dam building has a long history, as it has to come with wider attention in recent years. By the late 20th century, growing awareness of the environmental and social consequences of large dams led to increasing opposition from activists, communities, and environmental groups (World Commission on Dams, 2000). Through dam buildings, large populations affected or threatened by dams have fiercely resisted dam building throughout the last century. Because of this population, they were often isolated, without help from outside sympathizers, affected people's resistance to dams often went unnoticed internationally, and, in some cases, the states concerned used intimidation and violence to suppress it. Over the past thirty years, the alliance of activist group includes the environmental and human rights groups with NGOs and affected groups' association has resulted in more vigorous and more coordinated opposition to dams worldwide.

Dams have been promoted as an important means of meeting perceived needs for water and energy services and as long-term, strategic investments with the ability to deliver multiple benefits. Some of these additional benefits are typical of all large public infrastructure projects, while others are unique to dams and specific to particular projects. Besides, regional development, job creation and fostering an industry base with export capability are most often cited as additional considerations for building large dams. Other goals include creating income from export earnings, either through direct sales of electricity,

or by selling cash crops or processed products from electricity intensive industry such as aluminium refining.

Hydropower development has emerged as a prominent contributor to driving sustainable development globally in recent decades, with Malaysia actively participating in this endeavor. Malaysia is a country with eco-rich natural resources and endowed with rivers. With its potential, Malaysia has actively involved and engaged in dam development to meet its Sustainable Development Goals (SDG) in fulfilling the energy developments for its states. Malaysia has embraced hydropower as its prior renewable energy commitment to advance its energy transition toward a more sustainable manner. Within Malaysia's diversified nation, Sarawak is the prominent state that gives the most initiatives in dam building for the country's long-term growth and development. Sarawak's ambitious dam projects provide a comprehensive insight into the delicate interplay of the state between hydropower and sustainable development.

The construction of large-scale infrastructure projects, such as the Baleh Dam in Sarawak, Malaysia, often presents a complex interplay between development goals and the potential impacts on local communities. For the Iban people, an indigenous group deeply connected to the environment and traditional livelihoods, the dam's construction raises critical questions about their environmental and economic security. This thesis examines this intersection within the security-development nexus, focusing specifically on how the Baleh Dam has affected the Iban communities' access to resources, livelihoods, and overall well-being.

1.1 Background of Study

The Baleh Dam project in Sarawak, Malaysia, presents a critical case study for understanding the complex interplay between development, economic and environmental security of indigenous communities. For the Iban people, whose livelihoods and cultural identity are deeply intertwined with the natural environment, the dam's construction raises profound questions about their future. This thesis examines this intersection within the security-development nexus, focusing specifically on how the Baleh Dam has affected the Iban communities' access to resources, livelihoods, and overall well-being.

Besides, with the core principle of the nexus is the mutually reinforcing relationship between security and development: as the sustainable development requires a secure environment, and insecurity undermines development efforts. For the Iban, this is evident in their dependence on the natural environment for their livelihoods. The dam's impact on river ecosystems, for example, directly affects their ability to fish, thus undermining their economic security. This, in turn, can lead to other insecurities, such as food insecurity and social instability. The security-development nexus provides a crucial framework for understanding the challenges posed by large-scale infrastructure projects like the Baleh Dam. This framework is particularly relevant because it highlights human and economic security in shaping the livelihood of vulnerable communities. While this study focuses on the security-development nexus, the World Commission of Dams' Rights-Based Approach (RBA) provides valuable guidelines for analyzing how Sarawak's development policy, exemplified by the Baleh Dam, addresses these security issues.

According to World Commission on Dams (2000), its Rights-Based Approach (RBA) is a framework that prioritizes human rights, environmental justice, and equitable decision-making in dam planning and development. Central to the RBA is the principle of recognition of rights and risks, ensuring that those affected by dams have their rights acknowledged and protected. It also promotes participation and free, prior, and informed consent (FPIC), requiring that indigenous and local communities be meaningfully involved in decision-making processes before projects proceed (World Commission on Dams, 2000). Moreover, the approach emphasizes accountability and transparency, demanding that governments, developers, and financial institutions disclose project information and take responsibility for their decisions. It also highlights equity and benefit-sharing, ensuring that communities bearing the costs of dam construction receive fair compensation and share in the economic benefits (World Commission on Dams, 2000). Additionally, the WCD's framework prioritizes sustainable livelihoods and environmental protection, urging comprehensive assessments of how dam projects affect ecosystems and local communities, and recommending alternative solutions where necessary.

The WCD's RBA has influenced global hydropower governance, aligning with broader frameworks such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and the Sustainable Development Goals (SDGs) (United Nations, 2007). While some institutions, such as the World Bank and Asian Development Bank, have incorporated elements of the WCD guidelines into their policies, implementation remains inconsistent across different regions (Scudder, 2005). In the context of the Baleh Hydroelectric Project (HEP) in Sarawak, the WCD's RBA provides a critical lens for evaluating the economic security and environmental justice of the Iban community in Nanga Entawau. Key considerations include whether affected communities have been adequately

involved in decision-making, whether compensation and benefit-sharing mechanisms are just and effective, and how the project impacts indigenous rights, sustainable livelihoods, and environmental security.

The Belo Monte Dam in Brazil and the Baleh Hydroelectric Project (HEP) in Sarawak share significant parallels, particularly in their security-development nexus, where hydropower development intersects with human and economic security concerns. Both projects were initiated under green energy policies aimed at enhancing national energy security while promoting economic growth. However, their impacts on local communities, particularly indigenous and riverine populations, highlight the complex trade-offs between security and development.

In the case of Belo Monte, the diversion of the Xingu River led to a decline in fish stocks, threatening the economic security of indigenous and riverine communities that depend on fishing for their livelihoods (Fearnside, 2017). Similarly, while the Baleh Dam does not directly displace communities, it is expected to alter river ecosystems, potentially affecting fishing, water quality, and traditional subsistence activities. These environmental disruptions demonstrate how large-scale infrastructure projects towards the human security towards the local communities, even without direct displacement, can destabilize community livelihoods and challenge sustainable development goals.

Moreover, while Belo Monte created temporary employment opportunities during construction, the long-term economic benefits for local communities were minimal, as many jobs were not sustained after project completion. This mirror concerns surrounding Baleh HEP, where questions remain regarding whether local communities will truly benefit from economic spillovers or if development will primarily serve industrial and urban energy

demands. In both cases, the lack of inclusive benefit-sharing mechanisms raises issues of equity, governance, and social justice, reinforcing the argument that security and development must be pursued in an integrated manner.

These parallels between Belo Monte and Baleh Dam illustrate the security-development nexus, where energy security and economic growth objectives must be balanced with environmental protection and social justice. Without good governance, transparent decision-making, and meaningful community participation, hydropower projects risk exacerbating environmental insecurities and economic marginalization instead of fostering sustainable development. Thus, examining Belo Monte provides critical insights for assessing the potential long-term implications of Baleh HEP, particularly in ensuring that development does not come at the cost of environmental security and indigenous rights.

Existing research often falls short in capturing the long-term and cumulative impacts of large infrastructure projects on indigenous communities, particularly their economic and environmental security, and in understanding how these communities themselves perceive and respond to these changes. The interconnectedness of security and development, it often falls short in capturing the long-term and cumulative impacts of large infrastructure projects on indigenous communities, particularly their human and economic security. This can lead to inadequate mitigation strategies, exacerbate existing vulnerabilities, and perpetuate cycles of marginalization. Development interventions risk being ineffective, inappropriate, and even counterproductive if they fail to incorporate local perspectives.

Furthermore, there's a significant gap in understanding how these communities themselves perceive and respond to these changes. Without incorporating local perspectives, development interventions risk being ineffective, inappropriate, and even counterproductive,

potentially undermining the very security they aim to enhance. This thesis focused specifically on economic and environmental security. Economic security for the Iban encompasses their access to traditional livelihoods, including fishing, farming, and forest resource utilization, as well as their overall income and food security. Environmental security includes their access to clean water, the preservation of forest resources and biodiversity, and protection from environmental degradation resulting from the dam's construction.

The Security-Development Nexus

The concept of the security-development nexus, while not a new one, has gained increasing prominence since the end of the Cold War (Duffield, 2010). The nexus reflects a subjective reality but widespread discourse suggests that both security and development concepts' interplay is uniformly agreed upon. In actuality, there are many points of ideological departure around conflicts, security, and development.

The concept of the security-development nexus is highly debated. Despite the term suggesting a unified idea, it's far from simple. Both "security" and "development" are themselves complex and contested notions, and their combination creates even more intricate connections and interactions. For instance, Stern and Öjendal (2010) identify six different interpretations of the nexus, each applicable to both security and development individually, and all interconnected in various, often conflicting, ways. This illustrates the complex nature of security and development research, which lies at the intersection of several disciplines, including international relations, security studies, and development studies.

The nexus reflects a subjective reality but widespread discourse suggests these concepts' interplay is uniformly agreed upon. In actuality, there are many points of ideological departure around conflict, security, and development. Maria Stern and Joakim Öjendal highlighted that the nexus is differently experienced, instilled with meaning, and carried out (Stern & Öjendal, 2010). Comparably, David Chandler noted the panoply of theory, policy, and practice surrounding the nexus, particularly given the proliferation of development malaises (Chandler, 2007). Further, Eleanor O'Gorman has critically examined the failure of many "nexus operations" to adequately specify a "referent object", which whose security and development should prioritized (O'Gorman, 2011). This is a crucial point that highlights a fundamental weakness in how the nexus is often put into practice. Security-development nexus is seen as the one major focus in Instrument for Stability (IFS) to response to international and political crisis. Meanwhile, Jerpersion (2016) critics and argues that the security-development nexus framework emphasized more on the importance of an integrated approach to understand the post-conflict reconstruction. As for Walton and Johnstone (2023) questioned the relationships and the relevance of security-development nexus framework today, particularly raised by the turbulence in UK policies.

The debate surrounding the the integration of development and security concerns is highly relevant to the context of the Baleh Dam. While this project may not directly involve military actors, it does represent a prioritization of environmental and economic security concerns over others, particularly the human security of the Iban communities. This raises questions about the potential for development initiatives to be driven by security agendas. The Baleh Dam case can thus serve as a valuable case study for examining the subtle ways in which security priorities can shape development policy and the potential consequences for marginalized communities. Frequently in discussions of the security–development nexus

it is unclear whose security is being referred to; a sharp distinction needs to be drawn between the security of those people in the countries where development is being pursued and security in the country of the donor.

Different ways of understanding the world lead to disagreements about the true meanings of "security" and "development." These terms aren't just used to understand and describe global events; they also actively shape our understanding of reality. Both concepts have been defined through a lens of linear progress, rooted in European thought and echoing colonial power structures. Therefore, applying a fixed idea of the security-development nexus can serve specific agendas and interests. Moreover, the ability to define development, security, and how they connect gives some actors significant power, potentially hiding the unequal power relationships that are actually at play.

The security-development nexus encountered a great evolution, as its shift from traditional state-centric security to a more holistic approach incorporating human security, recognizes the broader range of threats beyond military aggression, including poverty, inequality, and environmental degradation (Annan, 2000). As former United Nations Secretary-General Kofi Annan boldly states that, development and security are inextricably linked. It is now beyond doubt that attention to the security–development nexus has become commonplace in national and global policymaking.

Moreover, the security-development nexus is significant because it's translated into a practical model through the use of political and economic power. This model is treated as an established, unquestioned truth, and it subsequently shapes global interactions. For instance, Duffield argues that development efforts, rather than simply fostering international security, aim to spread specific values and behaviors favored by liberal states (Duffield,

2010). This process of societal transformation through development aid serves to maintain the existing global inequalities, thereby ensuring a form of security for the Western liberal state. Recognizing this pattern in North and South relations reveals that the practices associated with the contemporary nexus have a longer history than their post-Cold War emergence suggests. The humanitarian language often used within the nexus framework actually functions to preserve these long-standing power imbalances. Historically, the West prioritized its own security at the cost of the Global South's; the modern nexus simply continues this dynamic, pursuing traditional objectives through new methods.

The connection between security and development, often framed as the security-development nexus, is sometimes presented as a new paradigm in policy and academic discussions. However, this perspective overlooks the reality that security has always been a fundamental component of development strategies, even if it was not explicitly articulated in earlier frameworks. Historically, development initiatives have often been shaped by stability concerns, whether in the context of colonial administration, Cold War-era modernization programs, or post-conflict reconstruction efforts (Duffield, 2001). The securitization of development, particularly in the post-9/11 era, has brought greater visibility to these linkages, but the underlying relationship between security, governance, and economic development has long been embedded in state-building and global governance efforts (Chandler, 2007). This historical continuity challenges the notion that the security-development nexus is a novel concept, instead highlighting how its framing and emphasis have evolved in response to contemporary geopolitical and economic challenges.

Initially conceived as separate domains, security and development are now understood as mutually reinforcing. Indeed, attention to 'security' was a pinnacle of much

‘development’ strategy during the colonial era; similarly, the Marshall Plan offers an example of ‘development’ concerns as central to Western security policies (Stern & Öjendal, 2010). However, contrary to the contemporary scene, none of this was carried out in the name of a nexus, that is, an explicit articulation of the connections between the two. Furthermore, and perhaps most importantly, an ever-growing amount of economic resources and political will is being poured into the security–development nexus and the attendant revamping of national and multilateral institutions and actions designed to address it. Hence, the ‘nexus’ matters.

Most modern wars are intra-state conflicts that frequently possess extensive regional and international implications. Such conflicts not only disrupt a nation's developmental initiatives. The relationship between development and security is significant, yet it is only now being comprehensively understood and addressed by the international community. The International Peace Academy's Security-Development Nexus Program, aligned with the adaptation of the security-development nexus framework, concentrated on recent conceptual, policy, and programming innovations at the intersection of development and security during the 2004 New York Seminar (International Peace Academy, 2004). The seminar analysed global initiatives addressing the complex socio-economic, political, environmental, and security challenges in conflict-affected and post-conflict nations, and evaluated the efficacy of new programs in three critical sectors deemed vital for establishing sustainable peace: governance, security sector reform, and rule of law (International Peace Academy, 2004).

It is widely recognised that fortifying state institutions and augmenting their capacity to deliver security and development in accordance with good governance principles are crucial for effective conflict management. An efficient, credible, and accountable security

sector establishes a safe environment conducive to the implementation of additional programming initiatives. Consequently, effective governance and security sector reform must be integrated within a stable legal framework bolstered by culturally relevant rule of law initiatives (Jenkins & Hänggi, 2020). However, it is not clear that numerous initiatives implemented by international entities to promote good governance, security sector reform, or rule of law are effective, mutually reinforcing, or contribute to a broader conflict management strategy. The International Peace Academy (2004) emphasised that international obligations to merge security and development initiatives within a broader conflict management strategy necessitate enhanced programmatic, institutional, and operational endeavours, guided by thorough policy analysis and underscored the opportunities and challenges associated with integrated strategies for conflict prevention, peacemaking, and peacebuilding, particularly in the post-9/11 context where hard security threats jeopardise the development agenda's securitisation.

Related back to World Commission on Dam's Rights-Based Approach (RBA) towards the world's development agenda, the World Commission on Dams (WCD) developed a rights-based approach to dam projects centered on several key principles (World Commission on Dams, 2000). First and foremost is the recognition of the rights of all stakeholders, especially vulnerable groups like indigenous communities. This includes rights to land, resources, livelihoods, and cultural preservation. For the Iban people, whose lives are deeply interconnected with the environment impacted by the Baleh Dam, these rights are paramount. Secondly, the WCD stresses the importance of participation and consultation. Affected communities must be involved in decision-making processes from the initial planning stages onward. This principle of participation and FPIC is essential to understanding the Iban's experience with the Baleh Dam. Thirdly, the WCD promotes equity

and benefit-sharing, ensuring that communities impacted by dams receive fair compensation and a share of the project's benefits. This is a critical consideration when evaluating the Baleh Dam's long-term effects on the Iban's economic security. Finally, the WCD emphasizes environmental and social safeguards, demanding that projects minimize negative impacts and protect ecosystems. This principle is central to assessing the Baleh Dam project's sustainability and its consequences for the Iban's human security.

Furthermore, the International Commission on Large Dams (ICOLD) that is primarily concerned with the environmental concerns throughout the engineering and technical aspects of dam safety and performance. By acknowledging environmental concerns, ICOLD's focus has historically been on the safe and efficient construction and operation of dams. In 1997, ICOLD published a document that presents guidance for environmental consideration, assessment and mitigation. It highlighted that the need of increased awareness of the natural environment and its endangered situation is one of the most important developments of the late 20th century (International Commission on Large Dams, 1997).

Despite the WCD and ICOLD emphasis on these crucial rights and principles, contemporary experiences of development-induced displacement and environmental change, particularly in the context of large infrastructure projects such as dams, often challenge existing frameworks for understanding the security-development nexus. While these frameworks acknowledge the interconnectedness of security and development, they often fall short in capturing the long-term and cumulative impacts on vulnerable communities, such as indigenous groups. Furthermore, there's a significant gap in understanding how these communities themselves perceive and respond to these changes. This thesis addressed this

gap by examining the specific case of the Baleh Dam and its impacts on the Iban people of Sarawak, Malaysia. It investigates how the dam has affected their access to resources, livelihoods, and overall well-being. Within this broader context, the thesis will concentrate on the interplay between security and development as it relates to governance and rule of law, exploring how these elements have influenced the project's development and its impact on the Iban.

1.1.1 Background of Sarawak, Malaysia

Sarawak is a state rich in cultural diversity, a unique history, lush rainforests, and a vibrant indigenous community. Sarawak's unique blend of culture and natural prosperity makes it compelling for the Malaysian government to enhance its participation in the country's future development plan- Sustainable Development Goals (SDGs). The recognition of Sarawak as an independent state occurred in 1850 by the United States and in 1864 by Great Britain. In 1868, Sarawak was ruled by three white rajahs: James Brooke, Charles Brooke, and Charles Vyner Brooke. The demise of Brooke's ruling lasted from 1842 to 1946, except for a brief period of the Japanese occupation between 1941 and 1945. After 1946, Sarawak came under British administration, triggering widespread protests among the local population. From 1946 until 1963, the British governed Sarawak. In September 1963, Sarawak, along with Sabah and Malaya, formed the Federation of Malaysia

1.1.2 Geography of Sarawak, Malaysia

Sarawak is a historic region that is now a state of Malaysia. Sarawak, also known as "The Land of Hornbills", is situated northwest on the island of Borneo. Sarawak is bounded by the sultanate of Brunei and Sabah on the north and by Indonesian Borneo (Kalimantan) on the east and south. The coastal region of Sarawak exhibits a predominantly low-lying topography with pronounced indentations along the shoreline adjacent to the South China

Sea. A significant portion of its territory is encompassed by primary rainforest. The coastal plain, characterized by alluvial and swampy terrain, is adjacent to a region of undulating topography, traversed by mountain ranges and many rivers suitable for navigation. Moreover, Sarawak has strong primeval forces and tribal traditions in every corner of the state. The riches in cultural heritage and diverse natural beauty have made Sarawak a more immersive insight.



Figure 1.1: Diagram of the Administrative Divisions of Sarawak.
(Source: Sarawak Government Official Portal (2024))

Sarawak also covers an area of approximately 125,000 square kilometers. Figure 1.1 shows the administrative divisions of Sarawak. Sarawak is divided into 11 divisions: Kuching, Sri Aman, Sibu, Miri, Limbang, Sarikei, Kapit, Samarahan, Bintulu, Betong, Mukah and Serian.

1.1.3 Baleh HEP Dam

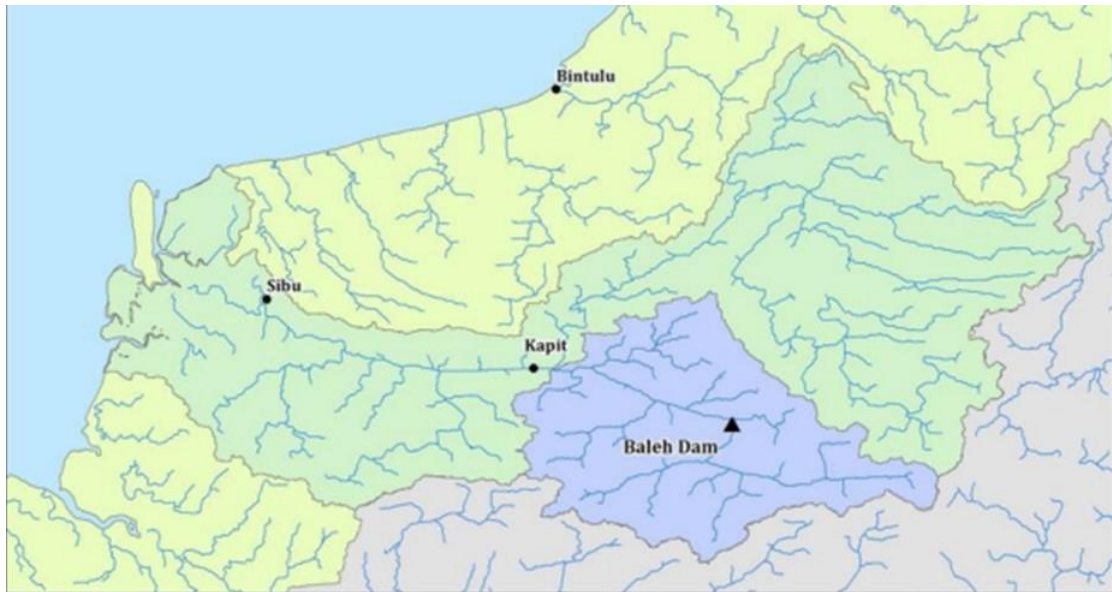


Figure 1.2: Location of the Rajang River and the Baleh Dam in Kapit.
(Source: Sarawak Government Official Portal (2024))

Figure 1.4 shows the specific location of the Baleh Dam in Ulu Kapit (Luke et al., 2018). It is allocated in the upper stream of the Rajang River. The Baleh Dam is a 1,285MW project under construction in Sarawak, Malaysia. The Baleh Dam is the second largest in Sarawak, submerging an area of 5,625 square km (Sarawak Energy Berhad, 2020). The Baleh Dam project is located on the Baleh River, about 105 km upstream from its confluence with the Rejang River in Kapit. The Baleh Dam is one of the focus hydropower projects in Sarawak, which started its construction in 2016 and is targeted for completion in 2026. The Baleh Dam was developed by Sarawak Energy Berhad (SEB), a state-owned Sarawak Energy Corporate (SEC) subsidiary. According to Sarawak Energy Berhad (2020), several local and foreign partners engaged in the Baleh dam construction, such as China Gezhouba Group Company (CGGC), Yellow River Engineering Consulting Company, Untang Jaya, Perbena Emas GE Hydro France, GE Renewable Malaysia, and Sinohydro Bureau Corporation. Besides, according to Tham (2022), the Sarawak Energy Berhad financed an estimated 8 billion ringgit towards the Baleh Dam construction. According to Tham (2022),

Sarawak Energy Berhad financed an estimated 8 billion ringgit towards the Baleh Dam construction. In short, the Baleh Dam reflects Sarawak's ambition of achieving a high-income and developed status in the coming 2030 by adapting the Sarawak Corridor of Renewable Energy. In short, the Baleh Dam reflects Sarawak's ambition of achieving a high-income and developed status in the coming 2030 by adapting the Sarawak Corridor of Renewable Energy.

1.1.4 Kapit and the Population

This research centres on Nanga Entawau, Ulu Baleh, Kapit, as the primary site for the construction of the Baleh HEP Dam. Kapit, the largest division in Sarawak, comprises approximately 31 percent of the state's total land area, followed by Miri and Sibiu. Historically, Kapit was officially designated as the Seventh Division on 2 April 1973. Located centrally on the island of Borneo, the Kapit Division spans 38,934 square kilometres, accounting for over a third of Sarawak's total geographical area. It is also the largest division in the state, encompassing 124,450 square kilometres (Sarawak Government, n.d.).

The division is traversed by the Rejang River, which at 551 kilometres is Malaysia's longest river, along with its major upper tributaries: Batang Baleh, Batang Katibas, Batang Balui, and Sungai Belaga. These rivers constitute the primary modes of transportation within the division. Figure 1.5 illustrates the map of the Kapit Division (Luke et al., 2018).

Due to its numerous rivers, Kapit was strategically chosen to help Sarawak achieve its development objectives. Consequently, the Upper Rajang Development Agency (URDA) was established to oversee the development of dams. The late Tan Sri Dr James Masing famously coined the phrase "no dam, no road" to justify the development of the Baleh Dam (*Malaysiakini*, 2017). He argued that dam construction is essential for building the much-needed physical infrastructure for the people of Kapit. Currently, the only mode of

transportation to reach Kapit and other areas within the division is by boat. Leveraging the local population's urgent need for infrastructure, the state government initiated the dam development project in Baleh.



Figure 1.3: Map of Kapit Division (Source: Sarawak Government, n.d).

Kapit is a mountainous region, which is mostly 80% covered by dense primary forest and rivers (Abdullah, 2016). According to the 2020 census, the Kapit Division had a total population of 134,800 people. Throughout Figure 1.5, Kapit Division comprises three districts (Kapit, Song, and Belaga) and two sub-districts (Nanga Merit and Sungai Asap) (Sarawak Government, n.d). The population of Kapit is 65,800; Song is 20,046, and Belaga is 44,500, with a population density of 4.2. (person per square km). Meanwhile, the Iban make up 67.4% of the Kapit population. The remaining ethnic groups are Orang Ulu (18.7%), Chinese (6.7%), Malay (3.4%), and Melanau (1.2%). The division has 534 longhouses, most located along major rivers. Approximately 90% of the Iban live in the Rejang up to and beyond Kapit and the lower reaches of the Baleh and its tributaries.

1.1.5 The Historical Migration of Iban Communities to the Baleh Region

The Baleh River watershed was occupied by nomadic ethnic groups such as the Ukit, Penan, and Bukitan, who lived directly from the forest and its produce. The Seru, an original group in the Baleh, had been living in the Gaat River since the 18th century. The expansion of the Kayan in the early 19th century led to their expulsion from the Baleh around 1850, and some fled to the Kapuas and others to the Rejang. The Iban, who had moved into the Rejang from the Katibas, attacked them and eventually disappeared as an ethnic entity in Sarawak (Sandin, 2016).

The Iban movement into the Rejang valley via the Katibas River began in the early 19th century as migrants sought land to expand. By 1850, the Iban had moved northwards and reached the Rejang Valley. The movement was largely a response to the Rajah's presence and perceived interference with their ways of life. Rajah James Brooke annexed the Rejang watershed in 1861 and began to extend the Rajah's presence into the vast territory. The Iban forged an alliance of cooperation with the Bukitan, who acted as guides to the Iban expansion.

In the mid-1800s, the Kayan already present in the Rejang River were less keen about the Rajah's efforts to control their movement and raids on downstream communities. Brooke enlisted the support of Iban communities from the Skrang, Krian, and Saribas Rivers and led an expedition of 10,000 men into the Kayan territory in 1863, effectively quelled any resistance by the Kayan. The Kayan tribes in the Rejang valley faced threats from the downriver Iban tribes, who threatened to attack them. The Rajah's attempts to control the Iban movement led to the construction of a fort at Nanga Baleh and the stationing of a steam launch at the mouth of the Baleh River. This clash with the Ibans led to the lower reaches of the Baleh River being occupied by 1880 (Padoch, 1982).

The Iban rebelled against the Rajah's attempts to restrict their presence and impose taxes, retreating to a rocky cliff up the Mujong River at Bukit Batu. They were eventually forced out of the Mujong and Baleh in 1881. The Baleh River was closed to settlement and the government fort was moved downriver to Kapit. The Iban migration displaced the original Baleh residents, including the Sebatu, Sihans, Lugats, and Lisuns, compelling them to relocate to the Balui River (Padoch, 1982). The Ukits, long-time opponents, managed to resist the Iban expansion, but this could have been a war of extermination. In 1883, permission was granted for the Ukits to move to the Mujong River to live with the Sihans and Punans. In 1884, the Bulan Kenyahs requested permission to move with some of their compatriots from the Batang Kayan into Sarawak waters. They were advised to come down the Baleh River to avoid the Kayan country and nearer to the Chinese bazaars. Despite Rajah's attempts to keep the Iban out of the Baleh, the situation did not last long, and by 1890, Iban migrants were moving overland.

The Iban movement into the Baleh overland from Kapit continued into the 20th century, with Pengulu Meram leading his group down the Sut to the Baleh River proper settling at the mouth of the Mujong River. By 1905, the settlement numbered 700 individuals in 14 longhouses (128 doors). The Rajah allowed the occupation of the Baleh as far upriver as the Gaat River, resulting in a rush of migration. By 1910, Iban settlers had pushed further upriver and entered the Gaat and Merirai Rivers, accompanied by increased headhunting.

After repeated appeals from the Dutch administration, the Rajah launched the Gaat Expedition in 1915 to drive the Iban out of the Baleh. By 1918, the Baleh region had been cleared, and the Iban people were relocated to the Rejang River. Temenggong Koh, also known as Koh Anak Jubang (1870-1956), was a powerful Iban chief who ruled the Balui River region in Upper Rajang, Sarawak who emerged as an influential leader among the Iban.

Temenggong Koh recognizes the futility of challenging the Rajah's superior firepower and discerns the advantages inherent in cooperating with the system since the 20th century. Despite the earlier imposition of stringent movement controls, the authorities opted to reopen the Baleh River for settlement in 1922. Hence, in order to control over the settlement of the Baleh, the Rajah appointed Koh as the overall leader and requested that he occupy the upper most part of the river at Nanga Entawau (Baring & Bampfylde, 1909). With Koh situated at Nanga Entawau, Senada (Koh's son) on the Mujong River and Grinang (Koh's son-in-law) on the Gaat, it was possible to monitor the main rivers and regulate the influx of settlers. By the late 1920s, peace had prevailed sufficiently to allow the re-establishment of cross-border trade with Dutch Borneo traders. The newly established system of Penghulus under an overall Temenggong directed the upriver tribes to cease movement and concentrate on establishing permanent farms. During the period of the Japanese occupation, the Rajah's officers fled the area, leaving the Baleh mostly to its own administration. The communities persisted in their traditional farming practices; however, with the markets in disarray, their primary focus shifted to subsistence and survival.

In the late 1940s, the Baleh region in Sarawak experienced a resurgence of commerce and connections with the outside world. Inter-tribal tensions were once again reported, but these were eventually put to rest. The area continued to develop, with the Borneo Company engaging in elephant logging along the Bah River. In 1948, a group of Penghulus led by Jugah opened a shop in Kapit, and communities began establishing boundary pegs and creating communal forests. The vast area of the Baleh and upper Rejang was still uninhabited and attractive to immigration from Kalimantan. According to O'Gorman (2011), a Dutch Borneo Kenyah community settled in Long Itam, which later moved back to Long Bahau in 1949. The last major migration into the Baleh occurred in 1965 when a group of Kenyah

from Metalung, Kalimantan crossed into the upper Baleh and settled at Long Singut. This move caused a group of Ukit to move into Indonesia. Since 1965, the only other influxes of outsiders into the area have been associated with the timber industry. Much of the upper Baleh has been licensed for timber extraction since the early 1980s, requiring the establishment of large timber camps and smaller sub-camps. Workers residing in these camps are mainly from urban areas with permanent homes in Sibu, Miri, Bintulu, or Kuching.

1.2 The Development Agenda and Policy of Sarawak

Sarawak is actively promoting a sustainable energy supply that balances economic, social, and environmental considerations through its Green Economy Policy. This policy, introduced by Premier Abang Johari, outlines Sarawak's vision for sustainable economic growth driven by green initiatives, aligning with global sustainability agendas like the UN Sustainable Development Goals (SDGs). While these initiatives encompass a wide range of areas, hydropower development plays a crucial role in Sarawak's plan to achieve its sustainability targets by 2030. Sarawak Energy Berhad, a privatized company, has evolved into an integrated energy development corporation over the past decade and is now positioning Sarawak to become a leading energy provider in ASEAN, supplying neighbouring countries with clean, primarily renewable hydropower.

Building on its commitment to a sustainable energy future outlined in the Green Economy Policy, Sarawak launched the Sarawak Corridor of Renewable Energy (SCORE). Sarawak has experienced outstanding development successes and per capita GDP growth since 1970. The federal and state government has advocated a multibillion ringgit for Sarawak's regional development in the Sarawak Corridor of Renewable Energy (SCORE). The SCORE was launched in 2008 as it is one of the five regional development corridors established throughout Malaysia during the Abdullah Badawi administration. SCORE is

administered by the Regional Corridors Development Authority (RECODA), a state government agency created through an Ordinance of the State Legislative Authority in Sarawak. The SCORE initiative leverages Sarawak's abundant resources, particularly its hydropower potential, to drive regional development

Initially, the launch of SCORE was to enhance Sarawak's region development, hence improving the state's economic growth and reaching its national Vision 2020 goal of becoming a developed state. The SCORE development corridor also targets to create 1.5 million employment opportunities in the coming 2030.

Moreover, SCORE is the significant development agenda for Sarawak, as the state uses abundant clean, renewable energy such as hydroelectric power and natural resources to propel Sarawak as an energy-intensive industry and attract more foreign investment. According to Regional Corridor Development Authority (2023), promoting the major implementing agency towards SCORE and promote, manage, and oversee the implementation of Sarawak development projects inside the corridor.

In addition to the specific initiatives under SCORE, Sarawak has also articulated a broader vision for sustainability through the Sarawak Sustainability Vision 2030. This comprehensive plan builds on the principles of sustainable development and renewable energy use, aiming to achieve the sustainability development goals by balancing economic prosperity with environmental stewardship and social inclusivity, particularly in achieving the state's sustainability (Regional Corridor Development Authority, 2023). It aims to transform Sarawak into a thriving society driven by data and innovation, ensuring a sustainable future for all its citizens. Along with the Sarawak Sustainability Vision 2030, Sarawak promoted 10 Strategic Thrusts, designed to achieve its sustainability vision, that

demonstrate a strong alignment with the United Nations Sustainable Development Goals (SDGs), showcasing the state's commitment to a holistic approach to development.



Figure 1.4: The Sarawak Map on the different Allocation of the URDA, HDA, and NRDA responsibilities (Source: Regional Corridor Development Authority, 2023)

For instance, RECODA introduced three significant agencies to expand the SCORE initiative to develop rural Sarawak. Figure 1.4 above shows the three respective agencies under RECODA: Upper Rajang Development Agency (URDA), Highland Development Agency (HDA), and Northern Region Development Agency (NRDA). The following section will touch on URDA, an agency established under SCORE in 2017 to drive development in Kapit division.

In the setting area for this research, this research is under the responsibilities of the Upper Rang Development Agency (URDA), is one of the regional development agencies under SCORE. URDA was established on 12 July 2017 to spur the development in Kapit, Kanowit, Song, Belaga, and Bukit Mabong, which encompasses 41,186 km² (Regional Corridor Development Authority, 2023). Recently, URDA has established nine sub-committees to address the issues and challenges that accelerated the socio-economic development in its region (Regional Corridor Development Authority, 2023). The nine sub-committees of URDA are the infrastructure and security, agriculture, animal husbandry and

fisheries, tourism, arts and culture, forestry and environmental sustainability, community development and land matters, education and health, utilities and telecommunications, industrial and entrepreneurial development and youth, sports, and technical training.

By harnessing green energy, Sarawak embarks on its visionary stride through strategic dam development, particularly in Kapit and Baram soon. Sarawak has progressed with its major development projects for URDA such as the Bakun Dam, Murum Dam, and the ongoing Baleh Dam. The Baleh HEP Dam, a pivotal element of the Sarawak Corridor of Renewable Energy (SCORE) initiative, is progressing towards success, with SMEC significantly contributing to its implementation. This ambitious project, situated in Sarawak, East Malaysia, is set to revolutionise the region's energy sector, providing economic development and employment prospects. The Baleh HEP Dam portrays its potential to boast a capacity of 1,285MW, which positioning it as the second-largest dam in the region (Sarawak Energy Berhad, 2020). It spans an expansive area of 5,625 square kilometers and is strategically situated on the Baleh River, approximately 105 kilometers upstream from its confluence with the Rejang River in Kapit (Sarawak Energy Berhad, 2020).

The Baleh HEP Dam stands as a tangible manifestation of Sarawak's ambition to achieve high-income and developed status by 2030, aligning with the goals outlined in the Sarawak Corridor of Renewable Energy (SCORE). To fully understand the implications of projects like Baleh, it's crucial to delve into the specific policy frameworks that guide their execution and the nature of Sarawak's engagement with international partners, notably China. China has emerged as a significant development partner in Sarawak. This role has predominantly transformed into a technical one rather than a financial one, as the state government has transitioned to exert greater control over strategic sectors. Alterations in the

Sarawak government's forthcoming development priorities may diminish China's significance as a development partner.

China has assumed a significant role in the development projects of Sarawak over the past decade. Chinese companies have played a pivotal role in enhancing the state's renewable energy capacity and physical infrastructure, both essential components of the government's long-term development strategy. Nonetheless, China's contribution to foreign direct investment (FDI) in Sarawak's development initiatives has been limited, as the state government progressively assumes responsibility for financing these projects (Koh, 2023). This restricted financial engagement has positioned Chinese companies as technical partners rather than investors in development initiatives. This represents a significant divergence from analogous initiatives in other regions of Malaysia, likely indicative of the Sarawak government's priorities, which are renowned for exercising greater financial and administrative authority over essential economic sectors compared to other state governments. Alterations in its developmental priorities and collaborations with other international entities may also constrain China's potentially significant role in Sarawak's future advancement (Koh, 2023).

Spearheaded by Sarawak Energy Berhad (2020), a subsidiary of Sarawak Energy Corporate (SEC), the dam project has engaged both local and international partners. Noteworthy contributors to the construction include China Gezhouba Group Company (CGGC), Yellow River Engineering Consulting Company, Untang Jaya, Perbena Emas GE Hydro France, GE Renewable Malaysia, and Sinohydro Bureau Corporation. The partnership is expected to enhance Sarawak's renewable energy infrastructure, significantly contributing to economic growth and sustainability. According to Tham (2022), Sarawak

Energy Berhad has signed collaboration contract in 2017 and allocated an estimated 8 billion ringgit for the financing of the Baleh Dam construction (Sarawak Energy Berhad, 2020).

As a member of the International Hydropower Association (IHA), Sarawak Energy is committed to undertaking the Baleh project in accordance with the guidelines set out by the Hydropower Sustainability Assessment Protocol (Sarawak Energy Berhad, 2020). Consequently, like all of Sarawak Energy's hydropower electricity plants (HEPs), the Baleh project is constructed according to international best practices for large dams. Specifically, the International Commission on Large Dams (ICOLD) provides the primary standards and guidelines, ensuring that these hydropower projects are built and operated safely, thereby guaranteeing structural integrity and safety. By following the ICOLD's primary standards Sarawak Energy Berhad strictly portrayed the key aspects for the Baleh HEP Dam project as ICOLD provided safety guidelines for ensuring the structural integrity of the dam and minimizing the risk of failure. The project presently employs approximately 700 individuals on-site, with an anticipated peak workforce of 3,500, comprising both highly skilled Sarawakian and foreign labourers. Initiatives will persist to optimise local employment by training workers in the diverse skill sets necessary for the project. Additionally, local community briefings have commenced to inform them about the river's diversion and to solicit their feedback and concerns through a structured Grievance Mechanism System being put in place (Sarawak Energy Berhad, 2020). The dam project does not necessitate the relocation of any villages or settlements; however, community concerns regarding its impact are monitored through engagement sessions and interactions that commenced in 2015. Furthermore, social investment programs have been established and executed in collaboration with local communities, encompassing the training of local youth to secure a

pipeline of local resources, the provision of scholarships, and the implementation of entrepreneurial development initiatives (Sarawak Energy Berhad, 2020).

Besides, throughout the ICOLD guidelines, Sarawak Energy Berhad promotes the sustainability of the modern dam construction that took into account on the environmental impacts and mitigation. For example, Sarawak Energy Berhad adopted the Hydropower Sustainability Assessment Protocol (HASAP) for governing structure to intensify our efforts to incorporate sustainability into our hydropower development and operation processes (Sarawak Energy Berhad, 2020). This is essential to ensuring our hydropower development and operations support the sustainability agenda. Sarawak Energy Berhad also committed their corporate social responsibility (CSR) programmes in line to further strengthen relationship with the community, manage stakeholder expectations and maintain the social license to operate the dam development plans.

1.3 Problem Statement

While the International Commission on Large Dams (ICOLD) provides essential guidance for environmental consideration, assessment, and mitigation in dam development, the World Commission on Dams (WCD) (2000) highlighted that significant dam developments have disproportionately affected indigenous communities' lands, cultures, and livelihoods. Therefore, a critical gap exists in comprehensively addressing both the technical and socio-cultural impacts of large dams. This impact is particularly evident in Sarawak, where the Iban community has experienced land and livelihood losses, cultural erosion, fragmentation of political institutions, identity breakdown, and human rights abuses (Aiken & Leigh, 2015). The government's and stakeholders' insufficient attention to the local community's human security regarding resettlement, compensation, and reparations has been

slow and poorly planned. Consequently, the security and rights of the local community to exercise their freedom, economic activities, and other rights have been severely restricted.

The ongoing construction of the Baleh Dam in Kapit, predominantly an Iban area, underscores these issues. Kapit, chosen for its numerous rivers, was seen as strategic for Sarawak's development goals. Consequently, the Upper Rajang Development Agency (URDA) was established to oversee dam development. The late Tan Sri Dr. James Masing (Borneo Post, 2017) famously stated, "no dam, no road," arguing that dam construction was essential for the necessary infrastructure development in Kapit. Leveraging the local population's urgent need for infrastructure, the state government initiated the Baleh Dam project.

To date, there is limited research on the specific issues related to the construction of the Baleh Dam and its impact on the human security of the local Iban community in Kapit, Sarawak, within the framework of the security-development nexus. Existing research focuses on displacement and resettlement, and the social, environmental, and cultural impacts of dam development in Sarawak. These studies employ frameworks such as development-induced displacement and resettlement, sustainable development, social justice, and political ecology (Hassan, 2012; Kallang, 2017; Soo, 2019; Ismail, 2010 & Balasubramaniam, 2017). This highlights the need for further investigation to understand the development project's potential consequences and identify measures to mitigate negative impacts and promote the human security of affected communities. Therefore, this study aims to explore the environmental security challenges and analyse the economic security of the Iban's socio-economic aspects due dam development policy that had been implemented by the lens the security-development nexus framework.

1.4 Research Questions

The following research question guides this study:

1. To what extent does the Baleh Dam development project affect the human security of the Iban community, particularly concerning human and economic security in Baleh, Kapit, Sarawak, within the framework of the security-development nexus?

1.5 Research Objectives

The study emphasizes the following research objectives:

1. To analyse the human security challenges arising from the Baleh Dam development on the Iban community in Nanga Entawau.
2. To investigate the influence of the Baleh Dam development on the economic security of the Iban community by examining its broader socio-economic implications towards the livelihoods in Nanga Entawau.

1.6 Significance of Study

This study is significant as it contributes to academic knowledge, policy development, and practical community engagement regarding the economic and environmental security of indigenous communities affected by large-scale development projects, particularly the Iban community in Nanga Entawau in relation to the Baleh HEP dam. The findings will provide valuable insights into the implications of dam construction on local livelihoods, governance structures, and environmental sustainability, offering a nuanced perspective grounded in the security-development nexus.

Besides, this study expands the theoretical understanding of the security-development nexus by incorporating principles of good governance, social justice, and the

sustainable livelihoods framework. By adopting a constructivist approach, it challenges the conventional economic security discourse, which often relies on quantitative indicators, and instead highlights the subjective realities of affected communities. The research also contributes to the growing body of literature on environmental security by demonstrating how development-induced environmental changes shape community resilience, adaptation strategies, and socio-economic well-being.

For methodological Contribution, the study employs a qualitative research design, integrating semi-structured interviews, focus group discussions, document analysis, and non-participant observation. The application of triangulation enhances data reliability and provides a comprehensive analysis of the research problem. Furthermore, the use of snowball sampling to identify participants in a remote and affected community presents a methodological contribution by demonstrating its effectiveness in capturing voices that might otherwise be overlooked in traditional sampling methods.

Furthermore, the research findings have practical implications for policymakers, government agencies, and development planners, particularly in the context of Sarawak's green economy policy and future hydropower projects. By highlighting the governance challenges, economic insecurities, and environmental concerns experienced by the Iban community, this study can inform more inclusive and sustainable policy frameworks. It underscores the need for participatory decision-making, improved compensation mechanisms, and long-term socio-economic support for displaced communities. Additionally, the findings may guide Sarawak Energy Berhad (SEB) in refining its corporate social responsibility (CSR) initiatives to align with the actual needs of affected groups.

To add on, this research provides a platform for the Iban community in Nanga Entawau to voice their experiences, concerns, and aspirations regarding the Baleh HEP dam project. By documenting their perspectives, the research seeks to empower local communities in advocating for their rights and ensuring that their economic security and environmental well-being are considered in development planning. Furthermore, the study serves as a resource for non-governmental organizations (NGOs), advocacy groups, and other stakeholders working on indigenous rights and environmental justice in Sarawak.

Lastly, this study lays the groundwork for future research on the socio-economic and environmental impacts of large-scale infrastructure projects on indigenous communities. It encourages further exploration into the long-term effects of hydropower projects on cultural identity, land rights, and intergenerational economic security. Additionally, it provides a foundation for comparative studies examining similar cases in other regions, contributing to global discussions on sustainable development and indigenous or local communities' rights.

1.7 Conclusion

Chapter 1 has provided the information for the researcher to understand the research focus on the Ibans community particularly toward the Nanga Entawau. The background of Sarawak as the important basic for the researcher to conduct further study onto the research question and research objective. The next chapter will deeply portrait the literature parts of the important foundation for the research frameworks and concepts that used to study and fulfil the research study for the Iban community's human security issue that impacted by the Baleh HEP Dam in Nanga Entawau. Chapter 3 will be portraited the methods used for the data collection and analysis process. Chapter 4 and Chapter 5 will be the important chapter in discussing and answering the research objectives. Hence, Chapter 6 will be the conclusion chapter.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

Drawing from Chapter 1, hydropower development as seen as the states' initial development plan as it portrays either pros to the states while high rises the concerns of the people. As the World Commission on Dams stated large dams emerged as one of the most significant and visible tools for the management of water resources (World Commission on Dams, 2000). Furthermore, World Commission on Dam (2000) also highlighted that there are more than 45 000 large dams around the world have played the important role in helping the communities and economies harness water resources for food production, energy generation, flood control and domestic use. So, the dam development as viewed as the symbols of modernisation and humanity's ability to harness nature where dam development accelerated dramatically.

But there's happened of unfolding scenerio for water use in many parts of the world is one of increasing concern about access, equity and the response to growing needs which identified to affects the relations within the nations, rural and urban populations, upstream and downstream interests, agricultural, industrial and domestic sectors and between of human needs and the requirements of a healthy environment. The challenge is not to mobilise so as to compete successfully, but to co-operate in reconciling competing needs. It's essentially need to find ways of sharing water resources equitably and sustainably which able to meet the needs of all people as well as those of the human and economic security. These needs are intertwined, portraying the nexus of security and development, to achieve equitable and sustainable benefits for all.

As the development take into account, dam development portrait immediate benefits such as food security consideration, local employment and skills development, rural electrification and the expansion of physical and social infrastructure such as roads. But, the full cost of the large dam began to emerge as serious public concerns. More debate and controversy raised up by questioning the impacts of the dams to people, river basins and ecosystems, as well as their economic performance. According to the World Dam on Commission (2000), stated that almost 40-80 million people displaced by dams while 60% of the world's rivers have been affected by dams and diversions. The nature and magnitude of the impacts of dams on affected communities and in the environment have now become established as key issues in the debate.

Conflicts over dams have heightened in the last two decades due largely to the social and environmental impacts of dams that were either disregarded in the planning process or unanticipated. However, it also stems from the failure by dam proponents and financing agencies to fulfill commitments made, observe statutory regulations and abide by internal guidelines. Whereas far-reaching improvements in policies, legal requirements and access procedures have occur in particular countries an institution, in the 1990s it appears that business-as-usual too often prevailed. Further, past short comings and inequalities remains unsolved, and experience with appeals, dispute resolution and recourse mechanism has been pour. Hence the nexus of security and development questioned here, particularly towards the dams.

2.1 Concept of Security

Before gaining a deeper understanding of the security-development nexus, it is essential to first examine the concept of security itself. Security, as a multidimensional construct, encompasses traditional state-centric notions of national defense as well as broader human-centered perspectives that include economic, environmental, and social dimensions.

By understanding the evolving definitions and frameworks of security, it becomes possible to establish the foundational linkages between security and development, highlighting their interdependence in policy and practice. The word "security" comes from the Latin word *securitas*, which is derived from the word *securus*, which means freedom or carefree (Baldwin, 1997). When it comes down to it, security is defined as the absence of fear and violence, as well as the fulfilment of fundamental needs. The Treaty of Westphalia, which was signed in 1648, is the source of the concept of sovereignty, which is inextricably linked to the concept of security. The principle of state sovereignty was established by this treaty. According to this principle, states were under primary responsibility for their own security, which led to an emphasis on the integrity of their territories and the strength of their military (Ballin et al., 2020). Consequently, state security became intertwined with regime security, and the focus shifted from protecting the territory of the state to protecting the government or political system that was in power at the time. With the advent of human security in 1994, the concept of security underwent further development. The United Nations Development Program's Human Development Report was largely responsible for popularising this concept.

Despite security emerging as a novel concept in the post-Second World War era (Yergin, 1978; Waever, 2006), its ramifications for a broader, non-exclusive military-political comprehension of the topic were not fully recognised until relatively late in the Cold War. Throughout the majority of the Cold War, International Security Studies (ISS) was characterised by a predominantly military focus on issues related to nuclear armaments and a pervasive belief that the Soviet Union represented a significant military and ideological menace to the West. Beginning in the 1970s, as the nuclear dynamics between superpowers evolved, the initial scope of the term security re-emerged, prompting a push to expand the international security agenda beyond its military-political emphasis. Economic and environmental security became established, if controversial, parts of the agenda during the later years of the Cold War, and were joined during the 1990s by societal (or identity) security, human security, food security and others. A significant portion of this literature remained confined to the prevailing national security paradigm of the Cold War; however, some works began to contest the focus on material capabilities and state-centric assumptions, thereby paving the way for investigations into the significance of ideas and culture, as well as alternative referent objects for security beyond the state.

The delineation of security is complicated by the fact that as time goes by we get a different perspective on what falls in and what does not. To paraphrase Foucault's genealogical understanding of history as always being told from the point of the present, the fact that we tell the story of ISS from a 2008 perspective means that we look at a field which has some strikingly different preoccupations, both substantive and epistemological, from those that dominated it in, say, 1972. And it would have been easier to delineate ISS had it always been explicitly centred on the concept of security. Unfortunately, this has not been the case. Indeed, after its first decade of explicit theoretical and conceptual innovation, the

field's mainstream carried out its work without much conceptual reflection (Baldwin, 1997). During the 'golden age' of Strategic Studies it would have been easy to think that 'strategy' was the dominant concept, albeit strategy now dominated by civilian rather than military thinkers. Thus in 1983, Buzan (2008) could point out that security was an 'underdeveloped concept' and 'seldom addressed in terms other than the policy interests of particular actors or groups, and the discussion has a heavy military emphasis.

Security is about constituting something that needs to be secured: the nation, the state, the individual, the ethnic group, the environment or the planet itself. Whether in the form of 'national security', or later, as traditionalist 'international security', the nation or state was the analytical and normative referent object. 'International security' was not about replacing the security of the state with the security of humanity, or the individual or minorities within or across state boundaries. Securing the state was seen instrumentally as the best way of protecting other referent objects. 'National security' should thus, as many observers have pointed out, more appropriately have been labelled 'state security', yet, what the Cold War concept of 'national security' entailed was more accurately a fusion of the security of the state and the security of the nation: the nation supported a powerful state which in turn reciprocated by loyally protecting its society's values and interests. To what extent this was a proper way of understanding the relationship between states and their nations, between governments, citizens and populations – that is, the question of 'what or whom should be the "referent object" for security?' (Bernard, 1998; Chandler, 2007). During the Cold War, Peace Researchers pointed to the necessity of granting equal priority to basic human needs and 'structural violence', and challenges to military security became an established part as scholars called for the inclusion of environmental and economic security (Buzan, 2008).

Later a more general sectoral widening of security included societal, economic, environmental, health, development and gender.

Security derives from the word secure, which means being or feeling safe and free of fear, anxiety, anger, doubt, etc. Something that provides or ensures safety, tranquility, and certainty. Furthermore, security means being safe against forced aggression in terms of people; people are not afraid to exercise their legitimate rights and have freedom (Ajdari et al., 2011).

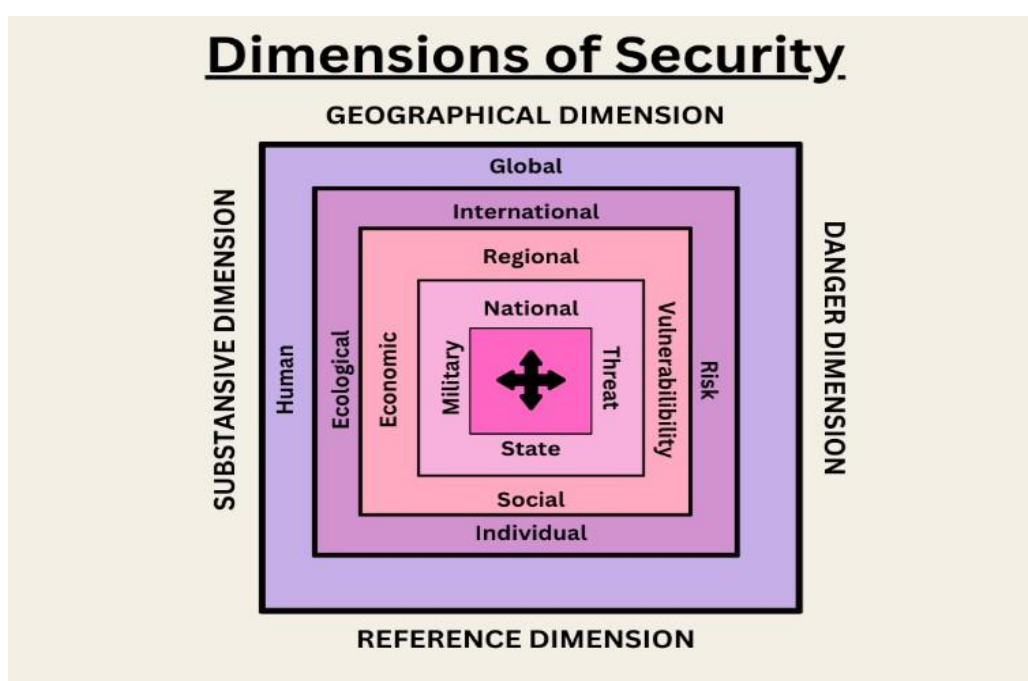


Figure 2.1: Dimensions of security. (Source: Ballin et al., 2020)

Security, stemming from the term “secure”, denotes a state of being or feeling protected and devoid of apprehension, worry, agitation, or uncertainty. It encompasses entities or measures ensuring safety, peace, and assurance. Moreover, security entails protection against coerced aggression concerning individuals, fostering a climate where individuals can exercise their lawful rights without fear (Ajdari & Asgharpour, 2011). Figure 2.1 shows security is a broad concept to be studied more based on sociology which consists

of four different dimensions in showing the evolving security concept (Ballin, & de Goede, 2020).

In the swiftly changing and globally interconnected milieu, the conventional notion of security has undergone substantial evolution. Presently, security is perceived as a multidimensional construct encompassing a broader spectrum of concerns (see Figure 2.3). Initially centred on military and defence matters, the traditional security paradigm, as articulated by Ballin et al. (2020) extensively focused on nation-states and safeguarding their territorial integrity. Figure 2.1 illustrates how the modern interpretation of security transcends national boundaries to encompass multifaceted threats and challenges.

The Cold War's conclusion marked a fundamental shift in the security landscape. During that era, security studies primarily revolved around issues of control, threat, or application of force. Dominant perspectives, as articulated by Bernard (1998:3), highlighted a state-centric and military-centric view of security, with states both employing and being targets of force. Consequently, security became predominantly associated with the state and its military (Bernard 1998; Baylis 2001). Bernard (1998) further expounded that security was primarily linked to national security and external military threats. Additionally, Grizold underscored security's significance in early state relations, emphasizing mutual defence and military alliances among nation-states for securing their populace's well-being and development (Grizold, 1998).

In the traditional sense, International Relations scholars have been preoccupied with security, particularly viewing the state as the principal referent. The security discourse, during the World Wars, largely viewed states as engaged in power struggles. Security characterized as a derivative of power, simplifying the intricate concept to a synonym for power from a realist standpoint.

Figure 2.1 illustrates the interplay among diverse security dimensions and their ramifications on global governance and policy formulation. The interconnectedness of environmental, economic, social, and political factors necessitates a comprehensive security framework to effectively address underlying insecurity causes. With globalization's advent and the rise of new economic powers, the nexus between economic and military security assumes greater significance. Indeed, non-state actors such as transnational corporations, non-governmental organizations, and global institutions play pivotal roles in shaping the post-Cold War security landscape. Safeguarding global flows of goods, services, and critical infrastructure emerges as paramount in this era of transnational interconnectedness, where economic prowess assumes a central role alongside territorial defence.

Subsequently, security's purview has expanded to encompass human rights and human security concerns within the nation-state's economic and social development ambit. The security paradigm, to a significant extent, now views the state's security not merely as an end in itself but for societal benefit. Figure 2.1 underscores the implications of this broadened security perspective on human rights, privacy, and civil liberties (Ballin et al., 2020). Achieving a balance between societal safeguarding and upholding individual freedoms emerges as a crucial consideration in this evolving discourse.

Moreover, in the realm of international relations, security's conceptualisation has evolved, delineated across three pivotal levels: individual, state, and international systems. This conceptualisation, often attributed to the realist school of thought, underscores power's primacy and the pursuit of national interests in the security context. Notably, scholars like Kenneth Waltz and Hans Morgenthau have significantly contributed to realism's development, particularly in associating security with distinct levels of analysis.

For instance, Morgenthau, in his seminal work "Politics Among Nations" (1948), accentuates the nation-state's pivotal role in power and security pursuit. His work laid the groundwork for state-level security analysis, emphasising state leaders, interests, and domestic politics' role in shaping security policies. Similarly, Waltz (1979) contends that comprehending international phenomena necessitates scrutiny at different levels—individual, state, and international system—each governed by distinct factors and dynamics. While Waltz downplays the human level's significance, he regards the state level as critical, highlighting elements such as a state's capacity, national interests, and internal dynamics in shaping its behaviour. Additionally, Waltz views the international system level as paramount, focusing on its structure and power distribution among states to decipher security dynamics.

However, security's post-Cold War evolution has rendered it increasingly complex and intertwined. Buzan (2008) critiques the conventional security paradigm as excessively narrow and advocates for a more holistic framework that encompasses regional, societal, and environmental security dimensions. Buzan's approach, rooted in neorealist beliefs, adopts a constructivist perspective, scrutinising and re-evaluating each security component for a nuanced understanding.

Furthermore, Buzan's analysis, aligned with the English School, adopts a pluralistic approach to International Relations, broadening the analytical scope to offer a comprehensive understanding of security complexities. His delineation of five security sectors—military, political, economic, societal, and environmental—provides a framework for comprehending security challenges beyond conventional military realms.

In Buzan's framework, the military sector encompasses traditional military threats, analysing armed conflict potential, power balances, and use of force. The political sector examines political system stability, governance, human rights, and rule of law. The

economic sector scrutinises economic system stability, resource access, growth, trade, investment, and employment. The societal sector evaluates societal well-being, encompassing social stability, cultural identity, public health, migration, crime, and terrorism. Lastly, the environmental sector focuses on natural environment protection and resource sustainability, including climate change, pollution, and deforestation.

Conversely, contemporary security's scope extends beyond traditional military threats to encompass diverse non-traditional security threats, including transnational crimes, terrorism, pandemics, natural disasters, and environmental degradation. Addressing these threats necessitates a holistic approach, involving collaboration among governments, international organizations, civil society, and the private sector. For instance, dam development projects, while contributing to economic growth and energy security, can also engender social displacement and environmental degradation, necessitating comprehensive risk assessment and mitigation strategies. The evolution of the security-development nexus, emphasising the interconnectedness among security, development, and the adoption of the Sustainable Development Goals, has engendered another security concept: human security.

2.1.1 Human Security

The post-colonial era emphasised the particularities of non-Western states, global economic frameworks, and consequently, development challenges. The United Nations Development Programme introduced the concept of Human Security in 1994, which broadened the definition of security to encompass development. Human Security benefits from a robust institutional foundation and, akin to Common Security in the early 1980s, merges political activism with academic pursuits. The initial UNDP formulation chose to broaden security across multiple dimensions. The concept of 'security' must be expanded beyond territorial defence, national interests, and nuclear deterrence to encompass 'universal

concerns' and conflict prevention, while also emphasising a collaborative global initiative to eliminate poverty and underdevelopment (United Nations Development Programme, 1994). In 1994, the referent object was changed from nation-states to "people." To be "people-centred" meant to be "concerned with how people live and breathe in a society, how freely they exercise their many choices, how much access they have to market and social opportunities, and whether they live in conflict or in peace" (United Nations Development Programme, 1994). This indicated a significant expansion of the categories of threats and sectors relevant to security, including food, health, the environment, population growth, economic disparities, migration, drug trafficking, and terrorism.

The concept of human security places the citizen at the centre of security, highlighting the connection between the sovereignty of the state and the obligation to safeguard its citizens. This approach differs from state security in that it places more of an emphasis on the individual as opposed to the state. It encompasses a variety of dimensions, such as economic, food, health, environmental, personal, community, and political security. In addition to this, there is an emphasis placed on the relationships that exist between governance, development, and violent acts. On the other hand, the idea of human security continues to be a contentious topic, concerning its scope and how it should be implemented.

The concept of human security emerged in the late 1990s in response to the evolving security landscape following the Cold War. Kofi Annan articulated human security as a global notion integrating various agendas, including peace, development, and security (Annan, 2000). He emphasised its implementation should ensure "freedom from fear, freedom from want, freedom to live in dignity" (Annan, 2000). Human security represents a paradigm shift in understanding global vulnerabilities. Advocates argue that security should be centred at the individual level rather than the national level. This perspective offers an

international, people-centred, and multidisciplinary comprehension of security. Unlike traditional security, which focuses on state-centric concerns, human security emphasizes safeguarding individuals from diverse threats such as poverty, disease, environmental degradation, and violence.

Proponents assert that securing individuals is the goal of security and traditional measures like military force are inadequate for addressing today's complex challenges. Human security gained prominence in the international security agenda, prompting organisations like the United Nations Development Programme (UNDP) to redirect their focus through the Human Development Report in 1994. This shift expanded the scope to encompass individuals rather than exclusively focusing on the state, as was typical during the Cold War.

Sen (1981) noted that human security aims to reduce and, when possible, eliminate insecurities affecting human lives. The Commission on Human Security (2003) emphasized that human security should extend beyond the absence of war, encompassing effective state governance, equal access to healthcare and education, and individuals' freedom to pursue happiness. In the realm of human security strategies, development plays a pivotal role, as underscored by Ul Haq (1995), the special adviser to the UNDP. Haq defined human security as the protection of people, not just territory, individuals, not just nations, and security through development rather than arms. Various schools of thought, including the Copenhagen school, English school, realism, liberalism, constructivism, and critical security studies, have contributed valuable insights to the understanding of human security. Barry Buzan's perspectives serve as a framework in this study.

Realists contend that the international system is anarchic, with states as the primary actors driven by self-interest and a focus on state security. Liberals, on the other hand,

emphasize state cooperation, international institutions, and individual rights. Constructivists highlight the role of ideas and norms in shaping international relations, emphasizing socialization and identity formation. Critical security studies focus on power relations, ideology, and social justice.

The Copenhagen School emphasizes the importance of securitization, suggesting that security is a socially constructed concept that can rationalize various policies. In contrast, the English School emphasizes international society, asserting that strengthening international institutions can promote human security. Buzan, a prominent scholar in international relations, has contributed to multiple schools of thought. His work on security studies, associated with the Copenhagen School, views security threats as socially constructed. Buzan's interdisciplinary approach draws from realism, liberalism, and the English School, emphasizing the role of cooperation and institutions in addressing security challenges. According to Buzan (2008), human security focuses on protecting individuals and communities from various threats and insecurities, with an emphasis on well-being, dignity, and empowerment. Buzan's perspective broadens security analysis to include economic, social, environmental, and technological factors, promoting a comprehensive understanding known as comprehensive or non-traditional security. Buzan's influence extends to reshaping the security studies field by advocating for a broader, people-centred approach beyond traditional military and territorial concerns. His perspective underscores the importance of addressing underlying causes of insecurity, encouraging a holistic analysis and the development of comprehensive strategies. In detailing types of human security, the United Nations Development Programme (1994) defines it as safeguarding individuals from chronic threats like hunger, disease, and repression, as well as sudden disruptions in daily

life. The report identifies seven categories of human security: economic, food, health, environmental, personal, community, and political security.

Accordingly, economic security entails meeting consistent needs, guaranteeing basic income, employment, and access to a social safety net. Food security, according to the United Nations (2015), ensures physical and economic access to adequate and nutritious food. Health security encompasses various aspects, including safe water, a secure environment, healthcare access, and disease prevention. Personal security focuses on freedom from violence and threats, while community security preserves traditional practices, languages, and shared values.

This study will concentrate on economic and environmental security in the context of dam development by. To relate economic security to the study area, it is crucial to acknowledge its role in social well-being and its connection to the impacts of the Baleh HEP dam on the Ibans in Ulu Baleh. Economic security involves access to resources and opportunities for a basic standard of living, and the potential impacts of dam development on it are often overlooked. The environmental sector, another dimension of human security, emphasizes ecological issues such as climate change, natural resource depletion, pollution, and ecosystem degradation.

In conclusion, Buzan's perspectives on economic and environmental security provide a valuable framework for understanding the interconnected nature of security challenges. The study focuses on economic and environmental security, recognizing their significance in addressing the complex issues associated with dam development and their impact on local communities. The following discussion will highlight the meaning of environmental and economic security in the context of human security.

2.1.2 Economic Security

Meanwhile, economic security is vital for ensuring individual freedom and dignity. This importance is reflected in the numerous international agreements to which states have committed. Policymakers globally should prioritise security, particularly given current economic and social developments that present new threats. Protecting freedom and dignity hinges on achieving basic economic security. The International Labour Organisation (2021) highlights several fundamental aspects of economic security: freedom from morbidity, freedom from fear, control over one's development, and sustainable self-respect. Freedom from morbidity entails living above survival thresholds, allowing individuals to act freely and responsibly, with a right to avoid catastrophes. A free and secure society ensures that all groups face equal risks of illness, injury, and death. Freedom from fear involves individuals and communities achieving equality in their livelihoods to maintain basic security. Control over one's development means having access to adequate education and the freedom to make informed decisions. Sustainable self-respect involves recognising that those suffering from "poverty of dignity" due to lack of food or income may act violently when denied respect. This last aspect highlights how insecurity can arise when economic rights are not upheld.

“Necessitous men are not free men” (Roosevelt, 1941).

This quote underscores that economic security is fundamental for everyone. Without it, incentives to work, learn, and develop diminish, and confidence falters. People without economic security often feel they lack control over their lives. As one of the seven pillars of human security, economic security is intricately linked with overall human security. According to Roosevelt (1941), economic security entails the ability of individuals, households, and communities to sustainably meet their basic and essential needs, including food, shelter, clothing, healthcare, education, information, livelihoods, and social protection.

Economic insecurity disproportionately affects the vulnerable, marginalised, and disadvantaged globally, making their path to financial and economic stability particularly challenging. Securing economic security requires individuals or communities to have a stable source of income or productive assets, enabling them to maintain a decent standard of living and preserve their dignity and worth.

Economic security is crucial for individuals, households, and communities to address challenges with dignity. Economically secure individuals can make autonomous choices to enhance their well-being and livelihood. The International Labour Organization (2021) emphasises that all humans need a sense of security for belonging, stability, and direction.

Recent economic, social, political, and technological developments have heightened global insecurities. Those lacking basic security in personal, familial, workplace, and community contexts often become socially irresponsible, opportunistic, and immoderate, leading to intolerance, extremism, and societal violence.

Leong (1998) discusses economic security in terms of market institutional security and individual financial security. Market institutional security depends on institutions that ensure the efficient operation of a market economy, with contract and property rights being paramount. Individual financial security pertains to the stability of one's job and income, involving the security of private assets such as human and intellectual capital, and the sanctity of contracts. This research focuses on the intricacies of individual financial security, exploring how employment stability and the level of guaranteed minimum income relative to average income impact overall security.

2.2 The Concept of Development

After discussing the broader security concept, the next section is to explore the concept of development, which is inherently interrelated with security within the nexus framework. Development is not merely an economic process but a multidimensional transformation encompassing social, political, and environmental aspects. By examining various development paradigms—such as sustainable development, inclusive growth, and human-centered development—this study can further contextualize how large-scale projects like the Baleh HEP dam influence both security and community well-being. Understanding development in this holistic manner reinforces the need for governance mechanisms that balance economic progress with social equity and environmental sustainability, ensuring that development initiatives contribute to long-term stability and resilience.

In today's world, development plays an important role in ensuring security at both national and global levels. Development encloses economic, social, and political elements, which form the foundation for security. By addressing the core causes of conflicts in today's world, development is encouraged to be implemented as it can lower poverty and inequality, boost and balance social cohesiveness, for example, human capital, and also increase resistance to external threats or grievances for a particular state effectively. This has been seen that development serves as a basis for security in this endeavour.

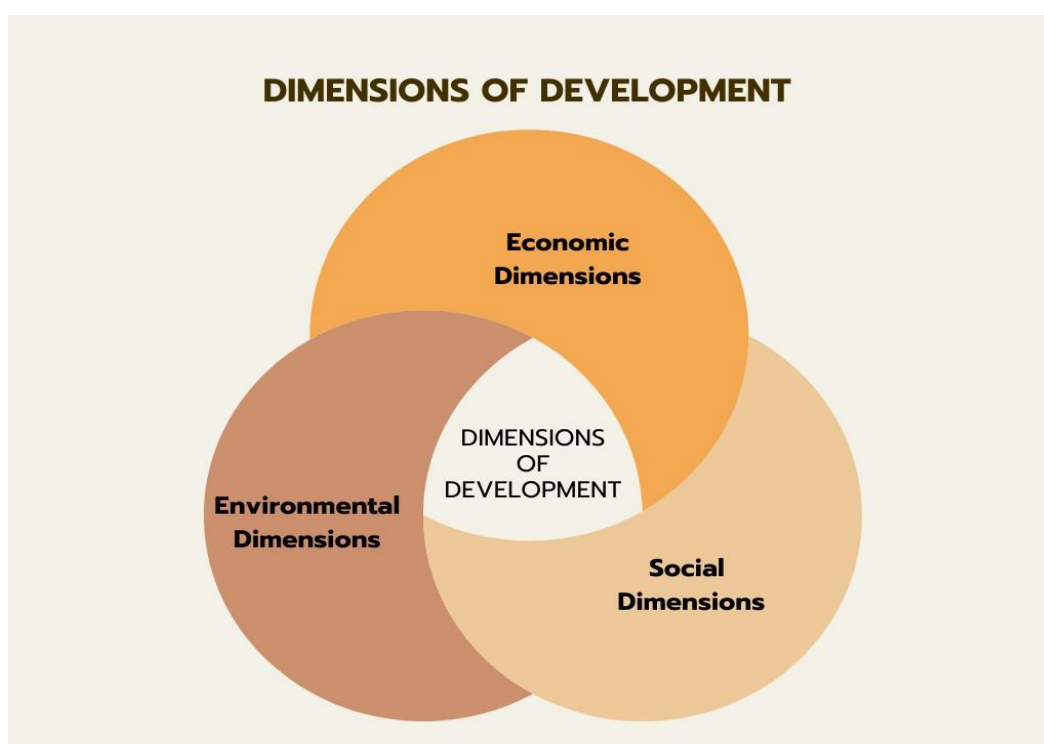


Figure 2.2: Dimensions of Development.

Development is a complex process and underwent many changes immediately following the post-Cold War era. Contemporary development is not only limited to economic elements but encompasses sociological, psychological, and political aspects of society. For example, the concerns on sustainable development for the nation states, social, political, and institutional innovation, and the improvement of people's living conditions (Fukuyama & Marwah, 2000). In other words, the concept of development does not only

cover economic development and it should be considered more broadly. Development is a multidimensional concept that encompasses various aspects of human progress and improvement for society. Figure 2.2 illustrates that the economic, social, and environmental dimensions are the three priority dimensions for development that we should be concerned about in today's world.

According to Figure 2.2, the economic dimension for development focuses on enhancing individuals' and society's economic well-being. The economic dimension entails increasing the production and distribution of products and services, creating job opportunities, and raising general living standards. In the economic dimension, development concerns the utilization of limited resources. It is believed that the state's development requires an economically sustainable system that enables continuous output of goods and services and avoids sectoral inequalities that threaten agriculture and industrial production. Besides, development in economic dimensions attempts to ensure sustainable management of the state's economic growth domestically and internationally (Fukuyama & Marwah, 2000).

Moreover, the development in the social dimension is concerned with enhancing and improving the quality of life for individuals and promoting social well-being. In the social dimension, development for the particular state encompasses its people in accessing education, healthcare, housing, nutrition, and other basic services. Social development also tends to reduce inequalities, promoting social cohesion, social justice and fostering inclusive and equal rights for the people in particular. According to Fukuyama and Marwah (2000), the scholar believes a society with strong social development strives to protect the

vulnerability of the state, empowering its citizens and creating a sense of community and shared identity.

Additionally, development in economic dimensions attempts to ensure sustainable management of the state's economic growth domestically and internationally (Fukuyama & Marwah, 2000). An environmentally sustainable system provides the state with focusing on sustainable practices. The environmental dimension intends to ensure long-term health and prevent exploitation of the renewable resource systems or environmental investment functions, keeping the resource base stable. Fukuyama and Marwah (2000) further argued that in the environmental dimension, the state will develop by advocating and promoting environmentally friendly policies, conserving natural resources, mitigating climate change, and safeguarding biodiversity. Sustainable development is concerned with this dimension and seeks to balance economic and social progress with environmental protection (Fukuyama & Marwah, 2000). This is the effort promoted by the environmental dimensions in ensuring the state and its future generations can achieve their needs and live in a healthy environment while undergoing the state's development.

Nonetheless, the concept of development has been seen as problematic as the security concept. Similarly to the security concept, different schools of thought in development studies and areas do not always agree on how development should be defined. The concept and meaning of development have been usually linked with the economy and industrialization in the 1940s to mean economic growth and social and political modernization. According to Summer and Tribe (2008), development advocated the modernization theory in the 1980s, where the development concept shifted the concerns to economic growth and structural adjustment change. However, the UN later adopted human

and sustainable development in their work against poverty and development. The concept of nation-state development is linked closely to the Millennium Development Goals (MDGs), which comprise eight primary goals with measurement targets and clear guidelines for improving the livelihoods of the world's poorest people (Sachs, 2012). A series of comprehensive approaches to the MDGs, embracing the discourse on climate change as it relates to poverty while incorporating other program areas recognized as prerequisites and mechanisms for MDG achievement. Sachs (2012) further elaborated that the Millennium Declaration and its emphasis on development as a right guided the entire approach, particularly on traditionally marginalized groups such as ethnic minorities, indigenous groups, and women.

In addition, development refers to the processes and strategies nations and states use to improve human well-being in underdeveloped countries. Socio-economic growth, health, education provision, and infrastructure improvements are all examples of development activities. According to Edwards (1989), development is not a simple linear process, and in some developing countries, development is going backward rather than forward. Over the last two decades, there has been a significant shift from national-territorial security to human security to achieve security through sustainable development rather than using weapons.

On the other hand, Ferguson (1994) express a different viewpoint. The development is a pretext to aid underdeveloped countries and strengthen their control over local politics and policymaking. Later, Corbridge (2017) asserted that development studies are based on two fundamental principles: the principle of difference, according to which Third World countries are described as different and which justifies the existence of a separate field of study like development studies; and the principle of similarity, according to which

developing nations are made more like developed nations through the implementation of development policies.

Moreover, the discussion on the development concept also involves the debate on the approaches that different actors have implied. Willis (2021) has focused more on the main approaches to development since the 1980s, as globalization took place worldwide right after the Cold War. Schuurman (1993) highlighted that the chronological approach must be adapted to the development concept. Willis (2021) elaborated more on the modernization and dependencies theories to represent different perspectives on the development concept. However, since there was a range of critiques and approaches to the development concept, yet the development theories have not been translated into practical success, the dilemma is on the actual definition of development and its implementation in today's world. In the post-1980s, the development concept involved many considerations of environmental awareness, gender equity, and grassroots approaches.

Table 2.1: Main Approaches to Development the 1980s to 2000s (Source: Katie Willis, 2021)

Decade	Major Development Approach
1980s	• Neoliberalism: Focus on the market. The involvement of the government should retrieve from the economic activities. • Grassroots approach: Focus on considering the local context and indigenous knowledge. • Sustainable development: Focus on the needs of the new generation regarding the environmental issues of future populations. • Gender and development: Focus on the needs of the gender balance implicated in development.
1990s	• Neoliberalism Post-Development: Focus on the ideas of development from colonialism and Eurocentrism that challenge grassroots actors' involvement. • Sustainable development

	Culture and development: Focus on the awareness of how the development process influences different social and cultural communities.
2000s	• Neoliberalism: Focus on the involvement of actors with concepts of globalization. • Sustainable development • Post-development and postcolonialism • Grassroots approaches • Right-based development.

In Table 2.1, Willis (2021) focuses on the leading development approaches in the context of a focus on neoliberalism, sustainable development, and a human-centered development approach in paying concerns and indicating human rights in the development process.

Hart's (2001) delineation between "big D" and "little d" development highlights the complex and often conflicting goals and interests involved in the development process, which can have significant implications for economic, environmental, and human security.

While modernization theory, as discussed by Willis (2021), presents a linear path to development based on Western models, critics like Escobar and Rahnema argue that this approach imposes a Eurocentric worldview, disregarding the diverse cultural contexts and indigenous knowledge of developing nations. This raises questions about the validity of applying universal development frameworks. For example, this can be seen in the imposition of standardized development projects that fail to address local needs and reduced spending on social welfare programs. Besides, the emphasis on neoliberal policies in the 1980s and 1990s, as outlined in Table 2.1, prioritized market-driven solutions. However, critics argue that this approach often leads to increased inequality and social instability, as the withdrawal of government intervention can leave vulnerable populations without adequate support. Ferguson's (1994) assertion that development can serve as a pretext for external control

raises important questions about the power dynamics inherent in development initiatives. This perspective challenges the notion of development as purely altruistic, suggesting that it can be used to exert influence over local politics and policymaking. These critiques highlight the need for a more nuanced and context-specific approach to development, one that acknowledges the limitations of universal frameworks and the potential for unintended consequences.

Different definitions of and approaches to "development" are linked to particular policy approaches of security. It is much more important to consider the debates on development concepts related to actual state policies which affect millions of people (Willis, 2021). Actors in state development play an initial role with their power distributions depending on the approach adopted in their development plans. It implies the decision-making roles of the actors involved in the state's future development (Garikipati & Olsen, 2008). The examples of actors come from the individual, household, community, government, non-governmental organizations (NGOs), private companies, and multilateral organizations.

At this stage, development generally denotes the processes and strategies by which societies and states endeavour to attain more prosperous and equitable living standards. Development activities have typically been limited to socio-economic advancement, the delivery of health and education services, and enhancements in infrastructure. According to Willis (2021), international development actors are institutions tasked with establishing conducive conditions for development. They encompass specialised departments and agencies of the United Nations (UN), international financial institutions, bilateral and multilateral donors, including regional development banks and international non-governmental organisations (NGOs).

Besides, the concept of development has traditionally focused on economic growth and progress. However, in today's world, it's crucial to consider the importance of sustainable development. This broader approach acknowledges the need for economic prosperity but emphasizes meeting those needs without compromising the environment or the well-being of future generations. Sustainable development encourages innovative solutions that minimize resource depletion, reduce pollution, and promote social equity. It recognizes that a healthy planet and a thriving society are interdependent and essential for long-term success. According to Ogryzek (2023), sustainable development is a leading tool to attain in achieving the most desirable socio-economic development. In other words, sustainable development is a concept of the relationship between humans and the environment. To relate, the concept of sustainable development originated from the idea of eco-development that is most related to the eco-philosophy.

Meanwhile, sustainable development is also interpreted as the social and economic process that brings up the integration of political, economic, and social activities. Sustainable development is a much important and comprehensive approach to maintaining the natural balance and the sustainability of basic natural processes in order to guarantee the possibility of satisfying the basic needs of particular communities either now or in the in the future.

Moreover, Munasinghe (1993) highlighted that the concept of sustainable development can be understood as the opportunity to meet the balance between environmental, social, and economic aspects. People view sustainable development as striking a balance between social, economic, and environmental development. It is a type of socio-economic development, so it is man-made and takes place in the techno-sphere, which must be considered as part of the natural environment (Awang et al., 2015). Throughout sustainable development, the implementation stressed optimal and rational land use, which

is the key to achieving sustainable development and supporting the global Millennium Development Goals agenda.

Furthermore, the United Nations emphasized that sustainable development refers to developments that meet the needs of the present without compromising the ability of future generations to meet their own needs for their livelihood (Sachs, 2012). To promote this ideal, the 2030 Agenda for Sustainable Development was established and adopted by all UN member states in 2015. The agenda provides a shared blueprint for national peace and prosperity, both now and in the future.

Although Sustainable development is promoted by the UN, and other groups, there are critics that point out the difficulty of achieving a balance between economic growth, and environmental protection. There are also criticism that the term itself is oxymoronic, as development usually means growth, and growth usually means increased consumption of resources.

Sustainable development has become critical for the survival of societies in pursuit of a more sustainable world. In order to meet today's world, sustainable development is promoted by the United Nations for more economic growth, social inclusion, and environmental protection (Georgeson & Maslin, 2018). Moreover, sustainable development is so important in real-world terms as the world nations intended to implement sustainable development where development is sustainable and everyone has access to decent work, good quality of health, and education opportunities. The state under sustainable development will leverage natural resources to avoid any environmental degradation, and no one will be left behind due to any possible disadvantages and discrimination.

2.2.1 The Concept of Sustainable Livelihood Framework

In the 1900s and 2000s overseas development assistance has increasingly been directed towards an agenda for poverty reduction, as expressed in the millennium development goals to halve extreme poverty and increase well-being globally by 2015. Towards these ends, development agencies and national governments have generated or adopted a wide range of tools and strategies for designing development interventions, including sustainable livelihood approaches, direct budgetary support, governance, and right-based approaches.

Generally, the concept of livelihood is a multidimensional and interdisciplinary concept that draws from various fields such as economics, sociology, anthropology, and development studies. Many scholars from various disciplines such as Amartya Sen, Robert Chambers, Paul Farmer, Amit Bhaduri, Elinor Ostrom, and Michael Watts have contributed to the delve understanding of livelihood concepts.

The concept of livelihood serves both practical and intangible purposes, such as providing income and encouraging individuals to live more meaningful lives. According to Chambers and Conway (1992), the concept of livelihood comprises the capabilities, and assets which both involved material and social activities that were required for a means of living. There are two major conditions to achieve a sustainable livelihood where it can cope with and recover from stress and shocks from drought, flood, war, etc. Secondly, it can maintain or enhance its capabilities and assets, while not undermining the natural resource base.

Moreover, livelihood is often defined as an engagement in several activities which, at times, neither require a formal agreement nor are limited to a particular trade. Livelihoods may or may not involve money, but it is relevant much on the employment opportunities and

self-directing of an individual. Somehow, the concept of livelihood is based on income derived from jobs and also from assets and entitlements.

In the twenty-first century, livelihoods will likely be required by the current human population. As previously said, a livelihood includes people, their abilities, and their means of subsistence, which include food, income, and possessions. Tangible assets include resources and stores, whereas intangible assets involve claims and access. Furthermore, the livelihood idea refers to being ecologically sustainable when it preserves or improves the local and global assets on which livelihoods rely and has a net positive impact on other livelihoods. A socially sustainable livelihood can withstand and recover from stress and shocks while also providing for future generations.

Livelihood plays its most important role, particularly in the state development process. The sustainable livelihood approach is the crucial framework that will be implied in the development process, especially the state's decision-making for its sustainable development for the future. According to Serrat (2008), defined that the sustainable livelihoods approach improves the mutual understanding of the livelihoods of the people, particularly of the poor. It organizes the factors that constrain or enhance livelihood opportunities and shows how they relate. Besides, the sustainable livelihood approach also helps development activities and assesses the contribution that existing activities have made to sustaining livelihoods.

Sustainable livelihood is interrelated to the development and security concept which need to be mentioned and explained further for their consequences for the future. To relate, sustainable livelihood approaches have evolved from changing perspectives on poverty, participation, and sustainable development (Sen, 1981; Chambers & Conway, 1992).

The sustainable livelihood approach could be defined as the ideas or actions that are intended to deal with a problem or situation starting from a set of hypotheses. This involves the subject or problem that is in hand to support people to make sure their livelihood is sustainable. The initial stages of the sustainable livelihood approach were influenced by Amartya Sen's research regarding the livelihood of people using available assets such as institutions, organizations, and social relations to maintain a sustainable livelihood. Thus, the approach has been expanded and further discussed by Chambers and Conway (1991) to admit that poor people earn a living from a diverse portfolio of activities, which gives them incomes by using the different assets that they possess. The views from Chamber and Conway are much more different, which were based on the assumption of a single activity such as agriculture, livestock, etc. They are much emphasize the dynamic concept of vulnerability and risk as opposed to the static concept of poverty. Later, this sustainable livelihood approach was developed by several researchers and adopted by DFID to increase the nation's livelihood sustainability by promoting education, technology, a cohesive and supportive social environment, better management of natural resources, access to basic infrastructures and financial resources, and also the adoption of equitable institutional policies for better livelihoods.

In 1987, the World Commission on Environment and Development used the term "Sustainable livelihoods" in discussion on resource ownership, basic needs, and rural livelihood security (Conroy & Litvinoff, 1988). The 1992 UN Conference on Environment and Development located sustainable livelihoods as a means of linking socioeconomic and environmental concerns. Both forums were important for moving on people and their livelihood activities, and placing these concerns within policy framework for sustainable development.

Throughout Amartya Sen, he emphasized that a sustainable livelihood approach is important to expand people's freedoms and capabilities to live the lives they are valued. He contributed his works to understanding sustainable livelihoods by emphasizing more to well-being, poverty, and development in the context (Sen, 1981).

Furthermore, the sustainable livelihood approach is adopted based on several major principles (Carney, 2002), such as centered on people, empowering, receptive and participative, sustainable, multilevel and holistic, managed as a partnership between people and their organizations, and between the people and the organization, detached, dynamic, long term and flexible. The principles are applied as the important stem for participative processes both consultative and deliberative, throughout all the activities of intervention, from which they derive legitimacy.

Besides, the right to sustainable livelihood is not recognized literally as such in the human rights framework. However, the Intermon Oxfam (IO) adopted the Right-Based Approach to focus on how right-holders claim their rights and how duty-bearers meet their obligations. The right-based approach has been seen as aligned with the Sustainable livelihood approach that both share the principles of participation and putting people at the center of development.

A sustainable livelihoods approach acts as an operational tool to assist work on poverty reduction (Alterelli & Carloni, 2000) The approaches are underpinned by an "asset-vulnerability approach" to understanding poverty, which seeks to bring together the lessons of best practice in development with a set of guiding principles supported by an analytical framework to analyze issues and target interventions.

2.3 The Security-Development Nexus Framework

This study employs the security-development nexus as its theoretical framework to assess the effects of the Baleh HEP Dam on the environmental and economic security of the Iban community in Nanga Entawau. In addition, the adoption of the security-development nexus aims to establish a foundational framework by elucidating and enhancing the interplay between security and development paradigms. This objective is pursued through an examination of the implications of the Baleh HEP dam construction in Nanga Entawau, with a specific focus on its repercussions on the environmental and economic security of the Iban communities.

2.3.1 The Evolution of Security-Development Nexus

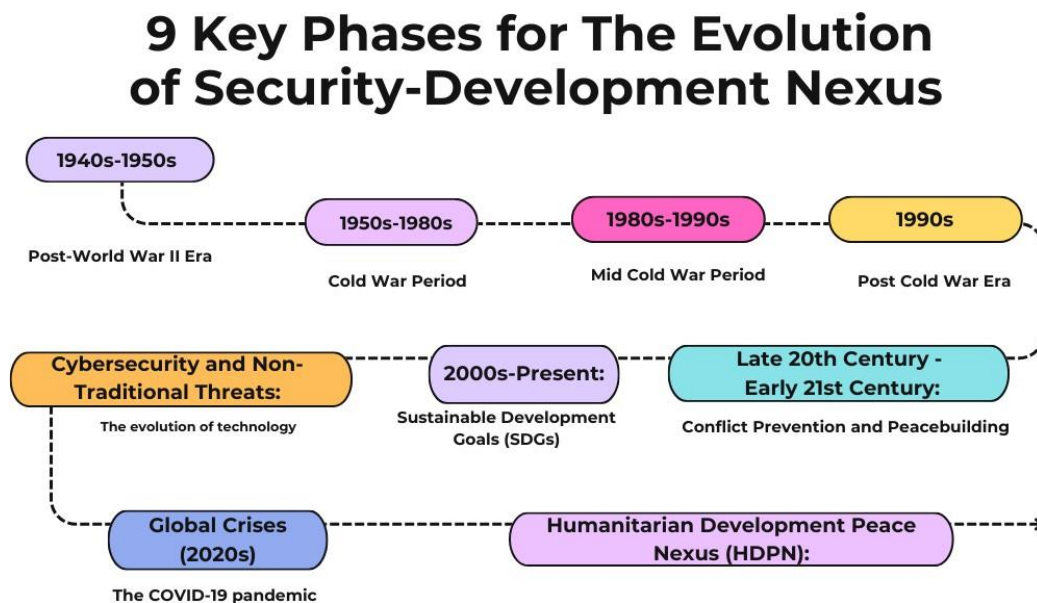


Figure 2.3: The Nine-Phases of the Evolution of Security-Development Nexus

Before discussing this research framework in detail, it is essential to first examine the evolution of the security-development nexus to establish a foundational understanding. In the emergence of a new era in politics, industry, and academia, there appears to be a consensus that "security" and "development" are interconnected. The term "nexus" denotes

the involvement of regional, national, international, and transnational actors in maintaining states' levels of security and development. The concept of the security-development nexus has evolved over time, reflecting changes in global dynamics, academic discourse, and policy priorities. This evolution can be delineated into nine key phases, as depicted in Figure 2.3.

Duffield (2010) contends that there is a necessity to historicize the understanding of the interrelationship between security and development to scrutinize contemporary discourses and actions more effectively. Therefore, this research aims to contextualize the content within the exploitative history, particularly concerning the evolution of the security-development nexus, to elucidate the historical and present relationship between security and development, particularly in the 21st century. Initially, the concept of the security-development nexus was primarily characterized by a narrow interpretation of security, often equating it solely with military concerns during the post-World War II or colonial era (Buzan, 2008). Simultaneously, development efforts predominantly focused on promoting economic growth and addressing poverty.

However, as global dynamics shifted and the limitations of this militarized approach became apparent, a broader understanding of security began to emerge, intertwined with development goals. As previous literature suggests, the early conceptualization of security revolved predominantly around the principle of modern state sovereignty, as outlined by Stern and Ojendal (2010). The traditionalist notion of security, elaborated by the realist school of thought, defined security as ensuring the state's freedom from any objective military threat in an anarchic international system. This concept presupposes security as a means of preserving the state and involves strengthening the state's material base, typically in favor of the bourgeoisie and at the expense of the colonial era (Barrett, 2018). Conversely,

Bjorn and Hauschild (2015) suggests that the concept of development was shaped by economic competition, often conflated with market dynamics, and rationalized through concerns of insecurity regarding "backward" and disparately developed states. During the colonial era, European powers found themselves compelled to finance the considerable economic demands of emerging centralized governmental systems and the imperative for capitalist advancement, thus facilitating industrialization and development within the Westphalian system.

The evolution of the security-development nexus progresses to its second phase, characterized by a growing recognition of the interconnections between security and development beyond purely military and economic considerations. The 1980s marked a shift during the Cold War era as scholars and policymakers acknowledged the interconnectedness of security and development. Three distinct phases in the evolution of the security-development nexus during the Cold War era can be discerned, as illustrated in Figure 2.3. Throughout the Cold War era, from the 1950s to the 1980s, superpowers pursued development strategies to advance their strategic interests and gain influence in different regions, with security assistance often taking precedence over genuine socio-economic development (Barrett, 2018). It was during this period that the nexus became particularly active, reflecting a global rivalry between superpowers over two distinct socio-economic systems, and the links between development and security became more formally perceptible. Transitioning to the mid-Cold War era in the 1980s to 1990s, the concept of human security gained prominence, emphasizing the protection of individuals from various threats, including economic and social insecurity, thereby broadening the understanding of security beyond traditional military concerns. Subsequently, in the post-Cold War era of the 1990s, there was an increasing recognition of the interconnectedness between security and

development, prompting international organizations and governments to adopt more integrated approaches, considering both dimensions in policy formulation and program implementation.

The 1990s witnessed the emergence of the human security paradigm, which emphasized the protection of individuals' well-being and broadened the concept of security beyond traditional military concerns to encompass non-traditional security threats such as human rights violations, health issues, and environmental degradation. The post-Cold War period drew attention to globalization and its impacts on the security-development nexus, prompting nations to implement conflict prevention and peacebuilding measures.

Efforts were made in the early 2000s to institutionalize the security-development nexus in policy frameworks, with international organizations such as the United Nations and the European Union incorporating the nexus into their strategies to emphasize conflict prevention and sustainable development. The United Nations' "An Agenda for Peace" outlined strategies for conflict prevention, moving beyond containment (Nilsson, 2022), and underscored efforts to envision a world without major warfare and poverty eradication. Barrett (2018) noted that the UN's new agenda aimed to legitimize the humanitarian perspective to prioritize the nexus relationship between security and development of nation-states. Within this context, the concept of development expanded to encompass liberal issues such as governance, education, the environment, and human rights (Donadoni, 2018). Furthermore, the United Nations Development Programme's Human Development Report (HDR) of 1994 marked a significant turning point by introducing the concept of human security, which emphasized every individual's freedom from fear and want, thereby shifting the focus of security from the state to the individual and highlighting material realities such as poverty, health issues, environmental degradation, and displacement (Barrett, 2018).

The adoption of the Sustainable Development Goals (SDGs) in 2015 marked a significant milestone in the evolution of the nexus. These goals recognized the interconnectedness of security, development, and sustainability, advocating for a comprehensive and integrated approach to global challenges. The concept of the security-development nexus evolved to focus on resilience and the ability of communities to withstand shocks and adapt to change due to non-traditional security threats. The policies of the United Nations Development Programme (UNDP), epitomized by the concept of "human security," now encompass broader and more ambitious initiatives, including disarmament, democratic reform, capacity-building, economic development, and societal and state reconstruction (Duffield, 2010). The Millennium Development Goals (MDGs) targeted poverty alleviation, education, gender equality, child and maternal health, HIV/AIDS prevention, environmental sustainability, and global partnership (United Nations, 2015), broadening the scope of human security beyond economic growth to encompass critical facets of human well-being.

Today, the security-development nexus continues to evolve in response to contemporary challenges such as climate change, pandemics, and technological disruptions. The nexus has expanded to include non-traditional security issues such as cybersecurity, climate change, and pandemics, recognizing their impact on both security and development (Anthony & Cook, 2013). The emergence of the COVID-19 pandemic highlighted the need for a coordinated and integrated approach to address global challenges. As the international community grapples with the interconnected nature of health, economic, and security issues, the nexus continues to evolve.

In conclusion, the evolution of the security-development nexus has been a dynamic process, reflecting shifting global dynamics, academic discourse, and policy priorities. From

its origins in the Cold War era to its current manifestation in response to contemporary challenges such as climate change and pandemics, the nexus has expanded to encompass a broader array of security and development concerns. Through various phases, including the recognition of human security and the adoption of the Sustainable Development Goals, the nexus has evolved to emphasize the interconnectedness of security, development, and sustainability.

2.3.2 Critiques on Security-Development Nexus

Since the conclusion of the Cold War, numerous scholars and practitioners have acknowledged the influence of conflict and insecurity on development. It is indisputable that individuals in post-conflict nations require a fundamental level of long-term security, including access to resources for sustenance and advancement. However, the correlation between development and security remains largely unexplored within the Malaysian context, particularly in Sarawak.

As mentioned in Chapter 1, the concept of security-development nexus is highly debated by various scholars, particularly on its relationship between security-and development. Firstly, Maria Stern and Joakim Öjendal have indeed emphasized that the security-development nexus is not a monolithic concept but rather a complex and multifaceted one (Stern & Öjendal, 2010). They argue that it is "differently experienced, instilled with meaning, and carried out," which has profound implications for both theory and practice. They mentioned that the security-development nexus is not a universal experience. Its impacts and implications vary significantly depending on the specific context, including the geographical location where the challenges and priorities related to security and development differ greatly between regions and countries; historical context that regarding the legacy of colonialism, conflict, and state-building shapes how the nexus is

understood and addressed in different places; the social and cultural factors that related to cultural norms, social structures, and power dynamics influence how security and development are perceived and pursued within communities and the vulnerability and marginalization where happened of certain groups facing different forms of vulnerability (e.g., based on ethnicity, gender, class) will experience the nexus differently, with some potentially benefiting while others are further marginalized. Besides, Maria Stern and Joakim Öjendal mentioned that both concepts of "security" and "development" are not neutral; they are imbued with values and interpretations (Stern & Öjendal, 2010). There is no single, universally agreed-upon definition of what constitutes "security" or "development." These terms are subject to interpretation and can be used to serve different interests. Moreover, for those in power often can define security and development in ways that benefit them, potentially marginalizing alternative perspectives, where showing the power dynamics matter. The way the nexus of security and development are framed and the stories that are told about it can shape how it is understood and acted upon.

On the other hands, a key critique of the security-development nexus articulated by David Chandler. He argues that the nexus is characterized by a "panoply of theory, policy, and practice," which essentially means there's a huge and often confusing array of ideas, approaches, and actions associated with it (Chandler, 2007). This complexity is further compounded by the "proliferation of development malaises," which refers to the increasing number and types of problems that are labeled as "development" issues. Chandler suggested that the security-development nexus is not built on a solid theoretical foundation. Instead, it draws from a diverse range of often conflicting theories, leading to a lack of conceptual clarity. This theoretical ambiguity translates into a wide variety of policies and practices, which may be inconsistent or even contradictory. Over time, the concept of "development"

has expanded to encompass a wide range of issues, from poverty and inequality to climate change, human rights, and even security concerns. This "proliferation of development malaises" means that virtually any problem can be framed as a development issue, making it difficult to prioritize and address the most pressing challenges effectively. Chandler also argued that this lack of clarity and focus of the security-development nexus, which has several negative consequences that the broad and diffuse nature of the nexus makes it difficult to develop coherent and effective strategies for addressing security and development challenges. The focus on a wide range of "development malaises" can lead to superficial interventions that fail to address the root causes of problems (Chandler, 2007). Chandler suggests that the security-development nexus can be used to justify interventions in developing countries, often serving the interests of Western powers rather than genuinely addressing the needs of local communities. The lack of clear goals and measurable outcomes makes it difficult to hold actors accountable for the results of their interventions.

Besides, Eleanor O'Gorman has critically examined the failure of many "nexus operations" to adequately specify a "referent object" (O'Gorman, E., 2011). This is a crucial point that highlights a fundamental weakness in how the nexus is often put into practice. In security studies, the referent object is what is being secured. Traditionally, this was the state—national security. However, with the rise of human security, the referent object has broadened to include individuals and communities. In the context of the security-development nexus, the referent object should ideally be clear: whose security and whose development are being prioritized? O'Gorman also argued that many interventions and policies that claim to be addressing the security-development nexus fail to clearly define this referent object. This lack of clarity has several problematic consequences. Firstly, O'Gorman questioned that "Whose security is prioritized?" Often, the "security" that is prioritized is

that of the donor state or international actors, rather than the security of the people in the developing country. This can lead to interventions that serve the interests of the powerful, while neglecting the needs of the vulnerable. Secondary, Development for whom? Similarly, "development" can be a vague term. Is it about economic growth at the national level, or is it about improving the lives of individuals and communities? Without a clear referent object, development initiatives may not address the needs of the most marginalized and may even exacerbate inequalities.

Furthermore, Jerpersion (2016)'s work offers a valuable perspective on the security-development nexus, particularly in the context of post-conflict reconstruction. Jerpersion likely critiques the security-development nexus for often being applied in a way that prioritizes security concerns over development needs, even in post-conflict situations. This can lead to a focus on state-building and security sector reform, potentially neglecting crucial aspects of development like addressing root causes of conflict, promoting social justice, and fostering inclusive economic recovery. Jerpersion also argues that a truly effective approach to post-conflict reconstruction requires a more integrated understanding of the security-development nexus. This means moving beyond a sequential approach: security first, then development and instead recognizing the interconnectedness of security and development from the outset. Jerpersion advocated an integrated approach to balance the nexus of security and development. He addressed the need of identified the root causes in tackling the underlying factors that contributed to the conflict, such as poverty, inequality, lack of access to resources, and historical grievances; the need of prioritizes local ownership in insuring that reconstruction efforts are driven by the needs and priorities of local communities, rather than being imposed from the outside; promotes inclusivity to create a reconstruction process that is inclusive of all segments of society, regardless of ethnicity, gender, or social status;

fosters social justice in addressing past injustices and promoting reconciliation between different groups and builds resilience strengthen the capacity of communities to withstand future shocks and crises.

Jerperson (2016)'s argument highlights the importance of the security-development nexus by promoting the long-term stability. Sustainable peace and development in post-conflict settings require more than just security; they depend on addressing the underlying causes of conflict and fostering inclusive development. Besides, the need to prevent relapse into conflict by addressing the root causes of conflict, an integrated approach can help prevent a resurgence of violence. Hence, Jerperson also highlighted by building sustainable peace where sustainable peace requires not just the absence of violence, but also the presence of social justice, economic opportunity, and inclusive governance.

Whereas, Walton and Johnstone (2023), raised their critical questions about the security-development nexus, particularly its relevance and applicability in the context of recent shifts and turbulence in UK policies. Watson and Johnstone questioned whether the traditional security-development nexus framework, which emphasizes the interconnectedness of security and development, remains a useful tool for understanding and addressing contemporary challenges. They probably argue that the framework has become outdated or insufficient in the face of evolving global dynamics. For example, the "turbulence" in UK policies likely refers to a range of changes and uncertainties, such as: Brexit which The UK's departure from the European Union has had significant implications for its foreign policy, development assistance, and international relations. The UK government have shifted its priorities away from traditional development concerns towards other areas, such as national security or economic competitiveness. Recent reductions in UK aid spending may have undermined the country's commitment to development and raised

questions about the future of its development policy. The merger of the Department for International Development (DFID) with the Foreign and Commonwealth Office (FCO) to create the 1 Foreign, Commonwealth and Development Office (FCDO) has raised concerns about the potential subordination of development goals to foreign policy objectives.

Walton and Johnstone (2023) likely argue that these changes in UK policies have challenged the assumptions and principles underlying the security-development nexus framework. They may suggest that the security-development nexus framework no longer reflects UK priorities as the UK's shifting priorities may have rendered the traditional focus on the interconnectedness of security and development less relevant to its current policy agenda. Besides, the UK fails to capture new realities where the security-development framework may not adequately capture the complexities of contemporary challenges, such as climate change, pandemics, and rising inequality, which have significant implications for both security and development. Walton and Johnstone also highlighted the needs to the nexus of security and development to be rethought as the framework may need to be revised or replaced to better reflect the changing global landscape and the UK's evolving role in it. Watson and Johnstone's work likely highlights the need for a critical re-evaluation of the security-development nexus framework in light of recent changes in UK policies and the evolving global landscape. They probably argue that the framework needs to be adapted or replaced to remain relevant and effective in addressing contemporary challenges.

Ultimately, Stern and Öjendal's work encourages a more nuanced and critical understanding of the security-development nexus, moving beyond simplistic assumptions and recognizing the complex ways in which it is experienced, interpreted, and put into practice in different contexts. In essence, Chandler's critique highlights the risk of the security-development nexus becoming a catch-all framework that lacks focus and direction.

He argues that the proliferation of theories, policies, and "development malaises" can lead to confusion, ineffective interventions, and the potential for the nexus to be used to serve interests other than those of the people it is intended to benefit. O'Gorman's critique highlights the importance of asking "security for whom?" and "development for whom?" when analyzing interventions related to the security-development nexus. Without a clear understanding of the referent object, it's impossible to ensure that these interventions are truly serving the needs of the most vulnerable and marginalized. In essence, Jerpersion likely argues that the security-development nexus, when applied effectively in post-conflict reconstruction, should not be about prioritizing one over the other, but about recognizing their interconnectedness and pursuing an integrated approach that addresses both security and development needs simultaneously. Hence throughout the critiques of different scholars, important points that can be taken out as the concern where Watson and Johnstone might be arguing for a more nuanced understanding of the nexus in order to understand the relationship between security and development, recognizing that it is not always linear or mutually reinforcing. Both of them emphasis on local ownership and participation in development initiatives, ensuring that they are driven by the needs and priorities of local communities. Watson and Johnstone highlighted that there is a need of a broader perspective on security that goes beyond traditional state-centric concerns and includes human security, environmental security, and other dimensions.

As mentioned in the front part of this chapter, development and security stand as two extensively deliberated concepts, with numerous theories, paradigms, and arguments interwoven into the discourse on development and security. However, post-Cold War, non-traditional security threats have given rise to conflicts and insecurities related to development, particularly concerning its detrimental socio-economic impacts on human

security. Undoubtedly, the security-development nexus assumes heightened importance in elucidating this research, given the evolving nature of threats and the emergence of potent non-state actors. These actors, often flouting the rule of law, pose challenges to human security, necessitating a robust framework to address them.

Besides, security and development are intricately linked concept, particularly in the least developed or underdeveloped countries. Development poses security threats, especially in socio-economic realms, including disputes over natural resources, repercussions of environmental degradation, economic and social disparities, natural calamities, and economic and political migrations (Sullivan, 2014). The interconnection between development and security can be explored and articulated through the lens of human security. The dynamics are complex, with the challenge that lagging development can breed grievances, and conflict can jeopardize development.

In the realm of international studies, security and development have traditionally been discussed as separate topics. Development has conventionally been understood in terms of economic growth and well-being. However, its scope has recently broadened to encompass capacities, opportunities, and choices. Security, within the discourse of international relations, has been delineated in various dimensions, including individual, human, and state security. These policy domains address a range of actors and risks, both internal and external, existential and otherwise. Each type of risk operates on a different time scale: development threats unfold over generations, whereas security threats often loom imminently. The costs of neglecting security concerns during the developmental process frequently manifest as insecurities in development. In this context, Manners (2013) underscores the critical link between security and development, asserting that "No one questions the importance of security for development and the role that development plays in

preventing conflicts, ensuring durable exits from conflicts, and accompanying crisis management through protective, confidence-building, and crisis-alleviating measures. The security-development nexus has been firmly established in the EU's political priorities" (Manners, 2013).

On the other hand, the assessment of the Millennium Development Goals (MDGs) has confirmed that nations severely affected by conflict, instability, and displacement have significantly lagged behind in poverty reduction. Economic disruptions, including those stemming from environmental strains, migration, and fluctuations in food prices, often lead to heightened vulnerability. The concept of a "nexus" offers a viable framework for advancing policies aimed at addressing contemporary multifaceted policy concerns and challenges (Stern & Öjendal, 2010). Moreover, increased economic resources and political commitment are being channelled into the security-development nexus and the associated restructuring of national and global institutions and initiatives to tackle it. Therefore, the significance of 'the nexus' cannot be overstated. For instance, the global campaign against terrorism includes explicit references to development and poverty reduction, while the United Nations Millennium Development Goals directly address growth and poverty alleviation.

In this research, the security-development nexus concept helped to recognise the intricate interconnections between security and development, emphasising that both are mutually reinforcing and should be considered together in the formulation of policies and strategies. Applying this concept to the environmental and economic security of the Iban community in the context of dam development provides several strong justifications. Firstly, the security-development nexus offers a comprehensive framework for understanding security that extends beyond conventional military and political considerations,

encompassing economic, environmental, and societal dimensions. This holistic perspective is crucial when assessing the repercussions of dam development on the Iban community. Additionally, dam projects exhibit a multifaceted impact on communities, ranging from environmental alterations to economic influences. Hence, the security-development nexus concept aids in scrutinising the interconnectedness of these dimensions, elucidating how changes in one domain may reverberate in others. For instance, a dam project can disturb the environment, subsequently affecting the economic security of the Iban community.

2.3.3 Characteristics of Security-Development Nexus

The interrelationship of security and development is growing in significance in today's evolving global political-economic landscape. The security-development nexus is characterized by a set of interconnected elements, such as governance and social justice are crucial for achieving sustainable and equitable outcomes. Highlight back to the quote from Kofi Annan, "We will not enjoy security without development, we will not enjoy development without security, and we will not enjoy either without respect of human rights", which stemming the relationship of security and development need to be balance and identity (Annan, 2000).

The security-development nexus is characterized by a set of interconnected elements, including governance and social justice, which are crucial for achieving sustainable and equitable outcomes. Geneva Centre for Security Sector Governance (2024) emphasized that good security sector governance is based on the respect for human rights, which are fundamental for development and security. Geneva Centre for Security Sector Governance assisted states in improving their security sector governance through inclusive and participatory reforms based on international norm. The introduce of Security Sector Governance (SSG) to the application of good governance principle.

Effective governance within the security-development nexus necessitates transparency, accountability, and participatory decision-making, ensuring that policies and projects are implemented in a manner that respects the rights and needs of all stakeholders (Grävingholt & Kreibaum, 2019).. This is particularly vital in development projects, such as dam construction, where decisions can have profound and lasting impacts on local communities. Firstly, regarding the principle of transparency under good governance, state and involved development parties should establish mechanisms for effective and accountable oversight. Transparency in SSG means information is freely available and accessible to those affected by decisions and their implementation (Dursun-Özkanca, 2021). Specifically, transparent and timely information sharing is needed to mitigate potential security threats and build public confidence. Moreover, accountable decision-making processes are essential to foster clear communication between governments and citizens, especially in development projects. Accountability in SSG means people are held responsible for their actions and duties, guaranteed by the rule of law community participation in security initiatives empowers inclusive security by enhancing resilience and reducing vulnerabilities. Effective community engagement in development plans ensures that diverse stakeholders' needs and concerns are addressed. As participatory decision making, aligning with good governance principles in SSG and ensuring fairer representation and increased legitimacy, leading to more sustainable and equitable security outcomes (Dursun-Özkanca, 2021).

The security-development nexus emphasizes the intertwined relationship between security and development, recognizing that neither can be achieved sustainably without the other. Within this framework, social justice emerges as a critical component. It ensures that development initiatives are not only economically viable but also equitable and inclusive.

Without social justice, inequalities persist, creating fertile ground for social unrest and undermining long-term stability. Thus, addressing the root causes of insecurity requires a commitment to social justice principles, ensuring that all members of society have access to the resources and opportunities necessary for a dignified life.

To effectively operationalize social justice within the security-development nexus, the sustainable livelihoods framework (SLF) serves as a critical analytical tool. This framework examines how individuals and communities' access, utilize, and sustain key assets—natural, physical, human, social, and financial capital—to enhance resilience and reduce vulnerabilities (Chambers & Conway, 1992; Scoones, 1998). Social justice within this framework is not merely about resource distribution but also about ensuring equitable access to opportunities that enable long-term socio-economic stability.

However, the effectiveness of the sustainable livelihood framework is contingent upon good governance, which acts as the mechanism that either facilitates or constrains sustainable development outcomes (Sen, 1999). Transparency in resource allocation, accountability in project implementation, and participatory decision-making are fundamental to ensuring that development interventions do not exacerbate inequalities or marginalize vulnerable groups (World Bank, 2000). When governance structures prioritize inclusive participation, particularly of indigenous and rural communities, development projects are more likely to enhance local livelihood security rather than displace or disadvantage affected populations (Bebbington, 1999).

Moreover, the intersection between social justice and the security-development nexus is particularly evident in contexts where communities depend on natural resources for their economic survival. For example, hydropower dam projects, such as the Baleh HEP Dam, have significant implications for both economic security and environmental justice,

affecting indigenous land rights, displacement, and access to sustainable livelihoods (Bryant & Bailey, 1997). A failure to integrate social justice principles—such as fair compensation, inclusive governance, and environmental sustainability—into development planning may lead to increased human insecurity, community resistance, and long-term socio-political instability (Dryzek, 2005; Li, 2007).

Thus, by embedding the principles of social justice and good governance within the sustainable livelihood framework, development initiatives can better contribute to security and long-term economic stability. This approach ensures that local populations, especially marginalized and indigenous communities, are not only beneficiaries but also active participants in decision-making processes that affect their well-being (Cornwall & Brock, 2005). When implemented effectively, social justice within the security-development nexus fosters a more equitable, stable, and sustainable socio-economic environment.

The connection between sustainable livelihoods and the broader goals of the security-development nexus is profound. Secure and resilient livelihoods reduce poverty and marginalization, which are often drivers of conflict and instability. Conversely, when individuals and communities have the means to support themselves, they are more likely to contribute to economic growth and social cohesion (Ghai, 2001). For example, in the context of dam development, ensuring that affected communities have access to alternative livelihoods, fair compensation, and meaningful participation in project planning is essential. This approach, guided by good governance, including transparent environmental impact assessments, accountable compensation mechanisms, and participatory community consultations, not only addresses social justice concerns but also mitigates potential security risks and promotes sustainable development outcomes by fostering community resilience and reducing grievances.

Simultaneously, stemming to social justice, the Sustainable Livelihood Framework leads as the mechanism to define the ideas or actions that are intended to deal with a problem or situation starting from a set of hypotheses. This involves the subject or problem that is in hand to support people to make sure their livelihood is sustainable. The initial stages of the sustainable livelihood approach were influenced by Amartya Sen's research regarding the livelihood of people using available assets such as institutions, organizations, and social relations to maintain a sustainable livelihood. Thus, the approach has been expanded and further discussed by Chambers and Conway (2024) to admit that poor people earn a living from a diverse portfolio of activities, which gives them incomes by using the different assets that they possess. The views from Chamber and Conway are much more different, which were based on the assumption of a single activity such as agriculture, livestock, etc. They are much emphasize the dynamic concept of vulnerability and risk as opposed to the static concept of poverty. In order to increase the nation's livelihood sustainability, the need of promoting education, technology, a cohesive and supportive social environment, better management of natural resources, access to basic infrastructures and financial resources, and also the adoption of equitable institutional policies for better livelihoods.

Sustainable livelihood is interrelated to the development and security concept which need to be mentioned and explained further for their consequences for the future. To relate, sustainable livelihood framework has evolved from changing perspectives on poverty, participation, and sustainable development (Sen, 1981; Morse & McNamara, 2013; Chambers & Conway, 2024). In 1987, the World Commission on Environment and Development used the term "Sustainable livelihoods" in discussion on resource ownership, basic needs, and rural livelihood security (Conroy & Litvinoff, 1988). The 1992 UN Conference on Environment and Development located sustainable livelihoods as a means of

linking socioeconomic and environmental concerns. Both forums were important for moving on people and their livelihood activities, and placing these concerns within policy framework for sustainable development.

Throughout Amartya Sen, he emphasized that a sustainable livelihood approach is important to expand people's freedoms and capabilities to live the lives they are valued (Sen, 1981). He contributed his works to understanding sustainable livelihoods by emphasizing more to well-being, poverty, and development in the context. Furthermore, the sustainable livelihood approach is adopted based on several major principles (Carney, 2002), such as centered on people, empowering, receptive and participative, sustainable, multilevel and holistic, managed as a partnership between people and their organizations, and between the people and the organization, detached, dynamic, long term and flexible. The principles are applied as the important stem for participative processes both consultative and deliberative, throughout all the activities of intervention, from which they derive legitimacy. So, a sustainable livelihoods approach acts as an operational tool to assist work on poverty reduction (Alterelli & Carloni, 2000). The approaches are underpinned by an "asset-vulnerability approach" to understanding poverty, which seeks to bring together the lessons of best practice in development with a set of guiding principles supported by an analytical framework to analyze issues and target interventions.

In contrast, when governance and social justice are effectively integrated within the security-development nexus, it creates a foundation for sustainable development, where economic progress is achieved without compromising social equity or environmental integrity. Social justice, as operationalized through the sustainable livelihood framework, is not merely an ethical consideration but a practical necessity within the security-development nexus. This necessity is reinforced through the principles of good governance. By

prioritizing equitable access to resources, strengthening community resilience, and promoting participatory decision-making, development initiatives, grounded in transparency, accountability, and participation, can foster social stability and contribute to long-term security. This interconnectedness underscores the importance of adopting a holistic approach that integrates social, economic, security, and governance considerations, ensuring that development benefits all members of society and contributes to a more just and sustainable world. Conversely, neglecting either element can lead to instability, conflict, and the erosion of human security.

2.4 Conclusion

In conclusion, the intricate interplay between security, development, and livelihood concepts forms the cornerstone of understanding multifaceted challenges and opportunities within various socio-political contexts. Through this literature review, we have delved into the nuanced relationships between security and development, recognizing how inseparable they are in fostering sustainable progress and human well-being. The evolving security-development nexus underscores the need for integrated approaches that address both immediate security concerns and long-term development goals, while also acknowledging the importance of livelihoods as a fundamental component of individuals' and communities' resilience and prosperity. As we move forward, it is imperative to continue exploring and refining these concepts to inform more effective policies and interventions that promote peace, stability, and inclusive development for all.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This study employed a qualitative research approach to explore the economic and environmental security implications of the Baleh HEP dam development on the Iban community in Nanga Entawau. A qualitative methodology was deemed appropriate as it allowed for an in-depth understanding of the lived experiences, perceptions, and responses of the affected community members. The research was guided by a constructivist paradigm, which acknowledges that knowledge and reality are socially constructed rather than objectively determined. This perspective enabled the researcher to capture the diverse and sometimes conflicting viewpoints of different stakeholders, including community members, policymakers, and developers.

3.1 Research Paradigm

This study adopts a constructivist research philosophy, which asserts that knowledge and reality are socially constructed rather than objectively predetermined. Constructivism emphasizes that individuals and communities interpret their experiences based on environmental, economic, social, and cultural contexts, leading to diverse perspectives on issues such as human security (Guba & Lincoln, 1994). Given that this research seeks to explore the human and economic security of the Iban community in Nanga Entawau in the wake of the Baleh HEP dam development, a constructivist approach is particularly relevant, as it allows for an understanding of how different stakeholders perceive and construct their realities regarding human and economic well-being and governance.

Constructivism challenges positivist assumptions that economic security can be understood through purely quantitative measurements or objective indicators. Instead, it acknowledges that economic security is an experience shaped by lived realities, social relations, and governance structures (Bebbington, 1999). For instance, the perspectives of the Iban community members—who may experience environmental degradation, changes in livelihood opportunities, and disruptions to traditional economic practices—are likely to differ significantly from those of policymakers or Sarawak Energy Berhad (SEB) officials, who may frame the dam project as a driver of economic development for the state in achieving its Sustainable Development Goals (SDGs) by 2030. Constructivism enables this research to capture these multiple, sometimes conflicting perspectives, highlighting how human and economic security are negotiated, contested, and redefined within the affected community.

By the application of constructivism, this study also aligns with the security-development nexus framework, which suggests that security and development outcomes are shaped by political, social, and economic structures rather than existing as objective realities (Duffield, 2001). In the context of the Baleh HEP dam, economic security is not merely a function of economic compensation or job availability but is deeply embedded in issues of governance, participation, and historical marginalization. Constructivism provides a theoretical lens that allows for the examination of how the Iban community constructs its own meaning of economic security, particularly in relation to governance frameworks and sustainability concerns.

Moreover, constructivism supports the triangulation method, which this study employs to enhance the credibility and reliability of its findings. Since different stakeholders construct different realities, a single-method approach may be insufficient in capturing the

complexity of economic security issues. By incorporating semi-structured interviews, focus group discussions (FGDs), and document analysis, this research ensures that multiple perspectives are systematically analyzed and cross-verified. The integration of constructivism with a qualitative methodology and triangulation approach strengthens the study's ability to provide a nuanced understanding of the economic security implications of the Baleh HEP dam.

Several past studies have applied a constructivist approach to examine the human and economic security, governance, and community responses to large-scale development projects, including hydropower dams. These studies highlight how different stakeholders—such as affected communities, policymakers, and developers—construct their own realities regarding economic well-being, sustainability, and governance effectiveness.

In the context of economic security and hydropower projects, Baird (2011) investigated the social and economic impacts of hydropower dams in Laos, using a constructivist framework to explore how different stakeholders—including villagers, government officials, and developers—constructed different realities regarding displacement, compensation, and long-term economic stability. His study revealed that while government and project developers often framed hydropower as a pathway to economic growth and energy security, affected communities experienced economic uncertainty, loss of livelihoods, and disruptions to traditional economic practices. Similarly, Hirsch and Warren (1998) examined how governance structures and community engagement shaped perceptions of economic benefits and risks in large dam projects across Southeast Asia, highlighting that economic security was deeply intertwined with governance quality, equity in resource distribution, and community participation.

Constructivism has also been widely used in studies on governance and good governance practices. Cleaver (2007) applied a constructivist perspective to analyze local governance and participation in water management projects, demonstrating that different actors—such as policymakers, local leaders, and community members—interpreted governance effectiveness in diverse ways. This underscored the importance of inclusive decision-making processes to ensure that governance frameworks reflected the actual needs and concerns of affected populations. Scott (1998) expanded on this idea by critiquing state-driven economic development projects, arguing that local communities often resisted or adapted to top-down governance structures in ways that were not always captured by conventional policy frameworks. His research highlighted how constructivism could help reveal hidden power dynamics, governance challenges, and resistance strategies within affected communities.

Beyond economic and governance aspects, constructivism has also been applied to environmental security studies, particularly in analyzing how different groups define and respond to environmental changes caused by development projects. Bryan (2012) explored how indigenous communities constructed their own meanings of environmental security in the face of land development and resource extraction projects. His findings indicated that indigenous groups often perceived environmental security not just as access to natural resources but also as the preservation of cultural identity, spiritual connections to the land, and intergenerational sustainability. In the context of sustainable development, Bebbington (1999) applied constructivism to the sustainable livelihoods framework, showing that both economic and environmental security were shaped by social capital, governance structures, and power relations rather than merely by material resources or ecological conditions.

These studies emphasize that environmental security is a socially constructed concept, shaped by historical experiences, governance frameworks, and local knowledge systems. While governments and energy developers may view dam projects as necessary for national energy security and economic development, affected communities may prioritize ecosystem stability, biodiversity conservation, and access to natural resources for sustainable livelihoods. The discrepancies in how different actors define and prioritize environmental security can lead to conflicts, policy challenges, and governance dilemmas.

By drawing on these past studies, this research adopts constructivism to analyze economic and environmental security within the Iban community in Nanga Entawau, particularly in relation to the Baleh HEP dam development. This approach enables a deeper exploration of how different actors construct their own realities regarding governance, sustainable livelihoods, and environmental protection. By integrating insights from economic, environmental, and governance perspectives, this study provides a comprehensive and context-sensitive analysis of the security-development nexus in the affected community.

3.2 Research Population

The study focused on Nanga Entawau, situated in the Baleh region of Kapit, Sarawak, both falling under the administrative jurisdiction of Kapit within Bukit Mabong. Specifically, the research targeted four villages which Rumah Lucas Laso, Rumah Rentap Batang, Rumah Unggam, and Rumah Tajai in Nanga Entawau. These villages were chosen due to their proximity 10km distance, which the nearest villages to the construction site of the Baleh Hydroelectric Power (HEP) Dam. This section provides a comprehensive overview of the demographic characteristics and topographical features of these selected villages in Nanga Entawau.

Table 3.1: The demographic data based on the population of the local community in Nanga Entawau.

Names of Villages	No. of Doors (Family Bilek or Apartments)	Total number of populations
Rh Laso, Nanga Entawau, Baleh, Kapit	43	400
Rh Rentap Batang, Nanga Entawau, Baleh, Kapit	19	224
Rh Unggam, Nanga Entawau, Baleh, Kapit	33	287
Rh Tajai, Nanga Entawau, Baleh, Kapit	37	481
TOTAL	132	1,392

Table 3.1 presents the demographic profile of the research area, which includes four villages in Nanga Entawau with a total of 132 bilek (household units) and 1,392 inhabitants. The population distribution among these villages is as follows: Rumah Laso (400 inhabitants), Rumah Rentap (224 inhabitants), Rumah Unggam (287 inhabitants), and Rumah Tajai (481 inhabitants).

While the initial research plan aimed to engage a larger number of participants, several factors affected actual participation during the fieldwork. Availability constraints emerged as a key challenge, as many community members were engaged in employment in the urban centers, or other commitments during the data collection period. Consequently, despite the large overall population, only 30 households were available and willing to participate in the study across the four villages.

This limitation, while reducing the sample size, does not undermine the validity of the study. The triangulation method employed—combining semi-structured interviews, focus group discussions (FGDs), and document analysis—ensured that diverse perspectives were captured. Additionally, the participants represented a cross-section of community

members, allowing for an in-depth qualitative exploration of economic and environmental security concerns.

The topology for longhouses for Nanga Entawau to Baleh HEP Dam, Kapit as below.



Figure 3.1: Location of Nanga Entawau village to Baleh HEP Dam, Kapit

Figure 3.1 depicts the study area for this research, encompassing Nanga Entawau that extending to the vicinity of the Baleh HEP Dam. This illustration was drawn by the researcher during a field trip to both villages located in Ulu Baleh. The research exclusively focused on Nanga Entawau, identified as the closest village to the construction site of the Baleh HEP Dam. Furthermore, these villages bear direct consequences from the dam

construction, significantly impacting the environmental security of the Iban community residing in both locales. The travel distance from both villages to the Baleh HEP Dam is a mere 15 minutes per trip, facilitated by the use of a pickup truck.

3.2.1 Snowball Sampling

This study adopted the snowball sampling method for the recruitment of participants. In the context of Nanga Entawau, the *Tuai Rumah* (village headman) and *Penghulu* (community leader) played a crucial role in facilitating access to potential participants by introducing the researcher to community members. Given the research circumstances and challenges in participant availability, snowball sampling was deemed the most appropriate approach for identifying and engaging individuals willing to participate in the study.

Snowball sampling is particularly useful in research where the target population is difficult to access, either due to geographical remoteness or reluctance to participate in formal studies (Atkinson & Flint, 2001). During the fieldwork in Nanga Entawau, it was observed that many working-age adults were absent, as they had migrated for employment in the urban centers. Consequently, only women, children, and elderly individuals were present in the villages. This limited the pool of available participants, making random or systematic sampling impractical. In this situation, snowball sampling proved useful in locating and identifying suitable participants, as initial interviewees referred the researcher to others who met the study's criteria. The involvement of *Tuai Rumah* further enhanced the recruitment process, ensuring that participants were selected from reliable and knowledgeable sources within the community.

Additionally, snowball sampling offered a cost-effective and time-efficient approach to participant recruitment, particularly in remote fieldwork settings. Since the targeted

participants were identified through trusted social networks, this method reduced logistical challenges while ensuring that the perspectives of those directly affected by the Baleh HEP dam development were captured. Snowball sampling is widely recognized as an effective strategy in qualitative research for gathering in-depth insights from hard-to-reach populations (Naderifar et al., 2017).

Another key advantage of snowball sampling in this study was its effectiveness in addressing participant hesitation and reluctance. Some villagers were initially unwilling to come forward due to concerns about privacy, sensitivity of the topic, or fear of repercussions. By relying on personal referrals and introductions within the community, snowball sampling helped build trust and rapport, increasing participant willingness to engage in interviews and focus group discussions. Trust-building is a crucial component of research involving indigenous and rural communities, where external researchers may be viewed with skepticism (Biernacki & Waldorf, 1981). This was particularly crucial in exploring the human and economic security implications of the Baleh HEP dam, as it allowed the researcher to reach individuals who might have otherwise been difficult to engage through conventional sampling techniques.

Furthermore, this study applied a combination of semi-structured interviews and focus group discussion in ensuring that diverse perspectives were represented. Snowball sampling facilitated the identification of participants who had been directly affected by the dam development, enabling the researcher to engage with individuals who had experienced displacement, livelihood changes, and governance challenges. According to Sadler et al. (2010), snowball sampling is particularly effective when the research topic involves sensitive issues, as respondents are more likely to open up when introduced by someone they trust.

Despite its advantages, the limitations of snowball sampling were acknowledged. Since respondents were recruited based on referrals, there was a possibility of selection bias, where certain voices might have been overrepresented while others remained unheard. To mitigate this issue, the researcher ensured that respondents were drawn from all four villages in Nanga Entawau and represented a range of demographic groups (e.g., age, gender, socioeconomic background). This helped enhance the credibility and reliability of the findings while maintaining the integrity of the research methodology.

In conclusion, the application of snowball sampling was essential for overcoming practical constraints in participant recruitment while ensuring an in-depth exploration of human and economic security concerns within the Iban community of Nanga Entawau. This approach aligned well with the constructivist research philosophy employed in the study, as it allowed for a rich and nuanced understanding of community perspectives, which might not have been accessible through random or systematic sampling methods.

3.2.2 Research Timeline

The research required two to three years, where data collection involved three times of the field visit to Nanga Entawau. The field visits helped the researcher gain an in-depth insight into the situation of Nanga Entawau village with the Baleh Dam project, especially for different period of time.

3.3 Data Collection

Defining the research instruments is crucial in ensuring the effectiveness of data collection. According to Arikunto (2010), research instruments serve as essential tools for gathering data in a study. Ary et al. (2010) highlighted that qualitative research commonly employs observation, interviews, and document analysis as primary research instruments. In

this study, multiple qualitative methods, including semi-structured interviews, focus group discussions (FGDs), document analysis, and non-participant observation, were employed to ensure a comprehensive exploration of the research topic.

It is crucial to define the research instrument in this study. In addition, according to Arikunto (2010), to facilitate the research, research instruments were chosen as tools for collecting the data. Ary et al. (2010) stated that the most common research instruments used in qualitative research are observation, interview, and document analysis. In this study, in- depth interviews and non-participant observation were used for this research to collect the data. The first was the semi-structured interview. which focused on the socio-economics aspect regarding the human security of the local communities that are affected directly by the development project by the state, particularly their acknowledgment of the state's future development policies. The selection of potential participants based on the snowball sampling technique.

Moreover, the focus group discussion was conducted to gather insights and perspectives from the villagers from the four longhouses- Nanga Entawau in Ulu Baleh, Kapit. The use of focus group discussion was deemed appropriate as it allowed for in-depth exploration of the research topic, captured the diverse viewpoints, and facilitated the group dynamics. The focus group discussion was held in Nanga Entawau as it was conducted in a meeting hall to encourage open and honest discussions among the researcher and the villagers.

Throughout this research, the researcher conducted three groups of the focus group discussion which based on the research requirements. That three group had categorized into the JKKK group, Tuai Rumahs, and the villagers from Nanga

Entawau. Every focus group discussion was conducted for 60 minutes and facilitated by the researcher with prepared questions as the main guide to ensure consistency across the focus group and also allowed for flexibility and exploration of emergent themes and questions to answer the research objectives.

Furthermore, the research implemented document analysis, as it was a crucial qualitative research method that involved the systematic examination and assessment of various documents, both physical and digital, to derive significant insights and empirical knowledge. This process went beyond simple reading, required a systematic analysis to reveal profound meanings, patterns, and contextual insights. The researcher employed a diverse range of documents, including official records, reports, and digital content such as websites and social media, to furnish historical context, formulate research questions, augment other data, monitor temporal changes, and validate evidence. The procedure entails formulating explicit research inquiries, choosing pertinent documents, methodically reviewing and categorised them, and subsequently conducting a critical analysis and interpretation of the results within suitable theoretical frameworks.

Besides, the non-participant observation was conducted as the crucial research instrument to identify the target focus for the research. Non-participant observation is a data-gathering technique that entails witnessing and recording individuals' or groups' behavior, actions, and interactions without participating in the observed activity (Laurier, 2016). In the context of this research, the non-participant observation acted as a useful approach to acquire information about the human security impacts of the Baleh Dam development on the Iban people, particularly in Nanga Entawau.

Several steps were implemented in conducting the non-participant observation. Firstly, the researcher planned the observation regarding the target location and the collected data type. For example, the researcher observed the Iban community in Nanga Antawau, which is surrounded by the Baleh Dam, including their homes, workplaces, and social gatherings. The researcher identified specific behaviors and actions that intended to observe, such as changes in livelihood activities or community dynamics, as a result of the development of the dam. While conducting the observation, the researcher remained unobtrusive, did not interfere with their activities, and avoided influencing their behavior.

Next, as the observation is conducted, the researcher recorded the data using data collection tools, such as a research diary, camera, video, and audio recorder with permission. The behavior, actions, and interactions of every individual and group were recorded throughout the recording process, as well as the researcher's observations and reflections noted down throughout the research diary. Most notably, the rationale for choosing the non-participant observation is that it helped the researcher to determine the accessibility of the research focus and also the validity of the data in answering the research objectives. This qualitative observation also enables the researcher to produce an inductive analysis to immerse the changes in the environment and landscape of the research focus and the real-time situation that the Iban communities face due to the Baleh HEP Dam construction in Ulu Baleh, Kapit, as well as to evaluate the accessibility of their livelihood, road, and food. Primary data such as the demography, the biodata of the communities, and the longhouses' location will be collected simultaneously. Nevertheless, the researcher observed throughout the three field trips to Nanga Entawau - the nearest four village to the Baleh HEP and construction site.

The researcher conducted three field trips aimed to assess the feasibility of the research design, evaluate the clarity and relevance of the discussion guide, and identify any potential logistical and methodological challenges for the research. It was important to note that the data collected during the field trips was used to refine the research procedures and ensure the smooth implementation of the focus group discussions. Throughout the field trip, the researcher recognized the assessment of the logistical arrangements, such as the suitability of the venue, audio recording equipment, and time management for the in-depth interviews and focus group discussions. The field trips enhanced the quality and efficiency of the data that were collected through the participants from semi-structured interviews and focus group discussions. Overall, the field trip served as a valuable step, providing insights into the research process, and enabled necessary adjustments to optimize the data collection and analysis procedures for the subsequent in-depth interviews and focus group discussions with the target participants

3.3.1 Semi-Structured Interview

Semi-structured interviews were conducted to examine the socio-economic aspects of human security among the local communities directly affected by the Baleh HEP dam project. These interviews focused on the respondents' awareness of state development policies, perceptions of economic security, and human security concerns. The snowball sampling technique was employed to recruit respondents, wherein Tuai Rumah (longhouse chiefs) and community leaders played a key role in identifying relevant individuals for the study. Snowball sampling was particularly useful in overcoming challenges related to respondent availability and willingness to engage in the research (Naderifar et al., 2017).

The semi-structured interviews allowed flexibility, enabling the researcher to probe deeper into emerging themes while maintaining consistency across respondents. The

interviews were audio-recorded with consent, and additional field notes were taken to capture non-verbal cues and contextual insights. Each interview session lasted between 45 to 60 minutes and was conducted in the Iban language or Malay, depending on the respondents' preferences.

3.3.2 Focus Group Discussion (FGDS)

Focus group discussions were conducted to capture diverse perspectives and encourage interactive dialogue among participants from the four villages in Nanga Entawau (i.e., Rumah Laso, Rumah Rentap, Rumah Unggam, and Rumah Tajai). FGDs are widely recognized for their effectiveness in qualitative research, as they facilitate the exploration of group dynamics and collective meanings (Krueger & Casey, 2014).

The FGDs took place in a neutral and comfortable environment, ensuring that respondents felt encouraged to express their views openly. Three focus groups were formed based on research objectives and participant characteristics:

1. Jawatankuasa Kemajuan dan Keselamatan Kampung (JKKK) members – Village development and security committee members
2. Tuai Rumah (Headman) – Traditional leaders representing community governance
3. Villagers- Individuals affected by livelihood changes due to the dam project

Each FGD session lasted approximately 60 minutes, with a structured discussion guide designed to ensure consistency across the groups while allowing flexibility for emergent themes. The discussions were moderated by the researcher, and responses were audio-recorded with consent for subsequent transcription and thematic analysis.

3.3.3 Document Analysis

In addition to interviews and FGDs, document analysis was conducted as a supplementary research method to validate and contextualize the primary data. Document analysis is a critical qualitative approach that involves the systematic examination of physical and digital records to derive meaningful insights (Bowen, 2009).

Various official reports, government policy documents, environmental impact assessments, and news articles were reviewed to understand the broader socio-economic and environmental implications of the Baleh HEP dam project. Digital sources, including Sarawak Energy Berhad (SEB) reports, government sustainability initiatives, and media coverage, were also analyzed to assess the state's developmental narrative versus the local community's lived experiences. The document analysis process involved selecting relevant documents such as reports, policies, and public statements related to the Baleh HEP project. Systematically categorizing key themes for governance, economic security, environmental impact, and community responses; critically analyzing content by identifying discrepancies, power dynamics, and socio-political influences in shaping community experiences. This method enabled the research to triangulate findings, strengthening the validity of the data by cross-referencing community narratives with official documentation.

3.3.4 Field Trips

The researcher conducted three field trips to Nanga Entawau on the following dates: 10 December 2022, 15 April 2023, and 11 November 2024. To ensure the feasibility of the research design and refine data collection procedures, three field trips to Nanga Entawau were conducted. These field visits played a crucial role in preparing for the interviews and focus group discussions (FGDs) by addressing logistical, methodological, and contextual challenges that could arise during the research process.

One of the primary objectives of the field trips was to assess logistical arrangements. This involved evaluating the suitability of venues for FGDs and interviews, ensuring that the selected locations provided a comfortable and neutral setting to facilitate open discussions. Additionally, travel feasibility was examined, considering the accessibility of the villages, road conditions, and transportation availability. The researcher also tested technical equipment, including audio recorders and cameras, to ensure that data collection could proceed smoothly without disruptions.

The field trips also served as an opportunity to pre-test research instruments. The clarity and effectiveness of interview and FGD questions were assessed to determine whether participants could easily understand them and provide meaningful responses. This process allowed the researcher to refine question structures and modify wording to align with the cultural and linguistic context of the Iban community in Nanga Entawau. By conducting preliminary discussions with community members, the researcher ensured that the research instruments were relevant and capable of capturing the necessary data.

Moreover, the field visits were instrumental in identifying potential methodological challenges. Participant availability emerged as a key issue, as many working-age individuals were absent from the villages during the researcher's visit, leaving mostly women, elderly individuals, and children as available respondents. Language barriers and cultural sensitivities were also carefully considered, ensuring that communication was respectful and that questions were framed appropriately to encourage participation. These insights allowed for adjustments in recruitment strategies, including the application of snowball sampling to identify suitable respondents.

During the field trips, essential demographic data, respondent biodata, and geographic information on longhouse settlements were documented to provide context for

the research findings. By integrating these preliminary observations into the study, the researcher was able to refine the research procedures, enhance the quality of data collection, and ensure the smooth implementation of interviews and FGDs. Ultimately, the field trips played a vital role in strengthening the reliability and validity of the research, contributing to a more comprehensive understanding of the human and economic security of the Iban community in the wake of the Baleh HEP dam development.

3.4 Data Analysis

To enhance the credibility and validity of the findings, this research employed the triangulation analysis, which combined multiple data sources and methods, especially for the data analysis process. According to Patton (1999), triangulation has been defined as the strategy that uses multiple methods or data sources, especially for qualitative research to develop a comprehensive understanding of the phenomenon. Triangulation has also been regarded as a qualitative research strategy that evaluates validity by combining information from various sources. Denzin (1978) and Patton (1999) identified four types of triangulation, such as method triangulation, investigator triangulation, theory triangulation, and data triangulation. Hence, the researcher employed only method and data triangulation to obtain the data for the research.

Method triangulation involves employing diverse research approaches to examine a single phenomenon, thereby mitigating the inherent limitations of any individual method and providing a more comprehensive understanding. For example, this research employed semi-structured interview, focus group discussion, and desktop analysis to obtain data. Complementarily, data triangulation utilizes multiple data sources, such as varying periods or demographic groups, to ensure that conclusions are not reliant on potentially biased information, thus creating a richer, more nuanced picture. Essentially, while method and data

triangulation are highly valued for their tangible benefits, the overarching goal of triangulation is to achieve a more complete and reliable understanding through the integration of diverse perspectives.

The concern that adopted the triangulation methods as the triangulation democratized the whole research process and helped to avoid biases and limitations for this research, especially in the data collection process. The triangulation helped increase the data reliability as opposed to using just one single reference which added strength to the data. According to Denzin (1978:297), the triangulation method meant “approaching data with multiple perspectives and hypotheses in mind which involved the usage of various theoretical points of views could be placed side by side to assess their utility and power. Denzin’s central concept for triangulation constituted the use of different subscales, for example using questionnaires to obtain high-reliable data for qualitative research. So, triangulation portrayed a methodological triangulation that involved a complex process of playing each method off against the other to maximize the validity of field efforts’ (Denzin, 1978:304)

Besides, thematic analysis also utilised throughout the data analysis process. All the data that obtained from primary data from interviews and secondary sources such as printed books, online journals, online articles, etc involved to thematic analysis to discuss the problems or issues using specific themes. Besides, the thematic analysis was selected for its reliability and validity which followed Caulfield’s (2019) six-step process: familiarization, coding, generating, reviewing, defining, naming, and writing up.

The six-step method was applied to ensure the validity and reliability of the data by avoiding confirmation bias when formulating the data analysis for the research. The researcher indicated the data from the observation process throughout the fieldtrips to Nanga Entawau.

3.5 Conclusion

This chapter outlined the methodological framework employed in this study, detailing the research design, sampling strategy, data collection methods, and analytical approach. A qualitative research design was adopted to capture the nuanced experiences and perspectives of the Iban community in Nanga Entawau regarding the human and economic security implications of the Baleh HEP dam development. Snowball sampling was utilized to recruit respondents, given the challenges of accessibility and participant availability in the research area. The study employed multiple data collection methods, including semi-structured interviews, focus group discussions (FGDs), document analysis, and non-participant observation, ensuring a comprehensive and triangulated approach to data collection.

The semi-structured interviews provided in-depth insights into the lived experiences of community members, allowing the researcher to explore their perceptions of human

and economic security. FGDs facilitated interactive discussions, capturing diverse viewpoints and community dynamics, while document analysis supplemented primary data by providing historical and policy-related context. Non-participant observation further enriched the study by enabling the researcher to document real-time interactions, behaviors, and environmental changes without directly influencing the respondents.

Field trips to Nanga Entawau played a crucial role in refining the research process. These visits allowed the researcher to assess logistical arrangements, pre-test research instruments, and address methodological challenges such as participant availability and cultural sensitivities. The insights gained from the field trips ensured that the data collection process was well-structured, culturally appropriate, and methodologically sound.

Overall, the methodological approach adopted in this study was designed to ensure rigor, reliability, and depth in data collection and analysis. By employing multiple qualitative methods and a constructivist research philosophy, this study effectively captured the complex realities of the Iban community's experiences with the Baleh HEP dam development. The chosen methodology also aligned with the security-development nexus framework, allowing for a holistic examination of governance, sustainability, and human security concerns. The following chapter presents the research findings, analyzing the data collected to provide a deeper understanding of the human and economic security dynamics in Nanga Entawau.

CHAPTER 4

THE HUMAN SECURITY CHALLENGES FACED BY THE IBAN COMMUNITY DUE TO THE BALEH HEP DAM DEVELOPMENT IN NANGA ENTAWAU, SARAWAK

4.0 Introduction

This study examines the specifics of the Baleh HEP Dam project, emphasizing the need to assess its potential impact on the human security of the Iban communities in Ulu Baleh, particularly in the villages of Nanga Entawau. These villages are the closest to the dam construction site, situated within a 10 km radius. The study employed semi-structured interviews and focus group discussions to gather data for analysis. All the data collected were presenting the findings related to research objective 1, specifically addressing the human security challenges encountered by the Iban community due to the development of the Baleh HEP Dam project in Nanga Entawau, Kapit, Sarawak since 2016.

A total of 30 individuals were involved in the semi-structured interviews. Additionally, three focus group discussions, each consisting of 5 individuals, were conducted with the *Tuai Rumahs*, members of the *Jawatankuasa Kemajuan dan Keselamatan Kampung (JKKK)*, and villagers of Nanga Entawau.

4.1 The Development Policies involved in Baleh HEP Dam

The findings of this research highlight the multifaceted dimensions of hydropower development, specifically within the Baleh HEP Dam project and its impact on communities such as Nanga Entawau. Stemming back to Chapter 2, Sarawak actively pursuing its green economy policy in order to meet the United Nations Sustainable Development Goals (SDGs). Various development policies have been implemented by the Sarawak state government and

its subsidiaries, with a strong emphasis on economic diversification beyond traditional resource extraction. The Sarawak Corridor of Renewable Energy (SCORE) has played a crucial role in fostering strategic partnerships with Chinese companies, particularly in hydropower development. These collaborations have significantly contributed to infrastructure enhancement, including the construction of roads, bridges, and ports, aimed at improving connectivity and stimulating economic growth. Furthermore, Sarawak's focus on renewable energy expansion, particularly hydropower, has attracted substantial Chinese investment, reinforcing the state's commitment to sustainable development goals. However, while these collaborations present economic advantages, it is essential to carefully assess their socioeconomic and human security implications to ensure that development remains inclusive and sustainable.

The hydropower development and partnership policy in Sarawak is structured to facilitate balanced collaboration between local and international stakeholders, promoting sustainability, economic progress, and community welfare. The government has established a regulatory framework mandating compliance with national laws, environmental impact assessments (EIA), sustainability guidelines, and Indigenous community engagement policies. These measures are designed to mitigate ecological disturbances and ensure that hydropower projects benefit local communities, particularly through compensation, resettlement programs, and long-term socio-economic growth initiatives. To implement these policies effectively, Sarawak relies on Public-Private Partnerships (PPP), with Sarawak Energy Berhad (SEB) collaborating with international firms such as China Gezhouba Group Company (CGGC), Yellow River Engineering Consulting Company, GE Renewable Malaysia, and Sinohydro Bureau Corporation. These partnerships provide not only financial investment but also risk-sharing mechanisms, technological expertise, and

capacity-building programs, further strengthening Sarawak's hydropower infrastructure (Koh, 2023). Additionally, the government has introduced policies requiring foreign firms to engage local contractors such as Perbena Emas and Untang Jaya, fostering domestic industry participation, job creation, and skills development.

Sustainability remains a central focus of Sarawak's hydropower development strategy, aligning with global green energy commitments and the Sustainable Development Goals (SDGs). Companies involved in these projects are required to adopt best practices in environmental conservation, climate resilience, and corporate social responsibility (CSR). CSR initiatives are integrated into hydropower projects, emphasizing education, infrastructure development, and community livelihood improvement. Moreover, technology transfer programs between international and local companies play a crucial role in building domestic expertise, and ensuring long-term growth in Sarawak's renewable energy sector.

Further reinforcing its commitment to sustainability, SEB has formed partnerships with international organizations such as the Hydropower Sustainability Alliance (HSA) and the I-REC Standard Foundation to ensure its projects adhere to global sustainability standards (Sarawak Energy Berhad, 2024). These collaborations facilitate the issuance of Renewable Energy Certificates (RECs), promoting transparency in renewable energy trading and supporting Malaysia's transition to a low-carbon economy. Additionally, SEB follows the Hydropower Sustainability Assessment Protocol (HSAP), developed by the International Hydropower Association (IHA), to evaluate and enhance the environmental, social, and governance (ESG) performance of its hydropower projects (Sarawak Energy Berhad, 2024). To further align operations with international standards, SEB has trained in-house assessors to continuously monitor and improve sustainability performance.

Through these policies and initiatives, Sarawak's hydropower development framework aims to maintain a strategic balance between economic progress, environmental stewardship, and social well-being. By strengthening partnerships, enforcing sustainability measures, and promoting inclusive economic growth, the state seeks to position hydropower as a cornerstone of its renewable energy future, ensuring that the benefits of development are equitably distributed among all stakeholders. However, while these advancements contribute to economic expansion and modernization, it remains crucial to address potential challenges, particularly regarding environmental impact and community displacement, to ensure that hydropower development remains truly sustainable and beneficial to all. According to Michael Cernea, highlighted that all the dam projects around the world, especially in developing countries, have not brought significant socio-economic progress to the affected communities. Where seeing Sarawak still focuses on dam development as its state development policies are very much influenced and also pressured by the global development agenda- United Nations Sustainable Development Goals whose orientation based on the modern capitalist chimera. The global development agenda shape the national development policies, which impacts on the powerless among the stakeholders of development.

The impact of global policies on national development policies and, ultimately, on the economic security of local communities in Sarawak, particularly within the Baleh HEP Dam project, is significant. Global frameworks such as the Paris Agreement on Climate Change, the United Nations Sustainable Development Goals (SDGs), and the Belt and Road Initiative (BRI) have directly influenced Malaysia's national energy and economic policies, shaping Sarawak's hydropower development strategy. These global policies promote renewable energy expansion, foreign investment, and sustainability compliance, yet they

also create challenges related to economic dependency, resource control, and local community security.

In Figure 4.1 showed a picture took during the site visit to Baleh HEP Dam. The researcher acknowledged there a long banner regarding a Chinese slogan on China's Participation in the Baleh HEP Dam construction. This shown the emerge of the China in Sarawak's development.



Figure 4.1: Slogan that shows China's Participation in the Development Agenda

China has significantly contributed to Sarawak's development initiatives, especially in renewable energy and infrastructure. This is linked to Sarawak's development strategy, which emphasises the construction of hydropower dams. This development strategy emphasises the construction of hydropower dams by utilising Sarawak's riverine topography. The surplus energy produced would enable the state government to establish appealing tariffs to attract energy-intensive industries to Sarawak, thereby stimulating manufacturing activities that would yield benefits for local enterprises and create value-added employment opportunities for Sarawakians. China's emergence as a significant development partner in the state coincided with the Sarawak government's transition to assume a more prominent role in the state's development relative to the federal government. The state government sought the engagement of Chinese hydropower corporations from 2007 to 2010 to rejuvenate

the federally-led Bakun Dam hydropower project. This extensive project has been postponed multiple times since construction commenced in 1986, owing to financial limitations and pressures from both local and international communities regarding its detrimental environmental and social effects, which previously prompted the withdrawal of its original Australian partners.

China, internationally recognised for its engineering proficiency and prominent involvement in constructing hydropower dams, was strategically equipped to fulfil Sarawak's requirements for hydropower and physical infrastructure. A significant aspect of China's overseas development assistance packages was the provision of financing devoid of social or environmental governance stipulations. Bakun, the largest-capacity dam in the state, was finalised in 2011 following the takeover by China's state-owned enterprise Sinohydro in a joint venture with the federal SOE Sime Darby, utilising loans from China's EXIM Bank. Sarawak has subsequently depended on collaborations with Chinese state-owned enterprises to develop additional significant hydropower facilities, including Murum and Baleh. Chinese companies have significantly contributed to the development of supporting infrastructure, including power stations, major roads, bridges, and port enhancements. Constraints on Chinese Participation in Development Numerous factors, however, have constrained China's financial engagement as a development partner in the state following Bakun. Chinese investment in Sarawak's strategic development projects is relatively modest compared to its involvement in other significant initiatives throughout Malaysia, including the East Coast Rail Link (ECRL) and the Trans-Sabah Gas Pipeline projects. A contributing factor is structural, as public and private funding under SCORE is divided by sector. Infrastructure projects are funded by the federal and Sarawak governments, consequently restricting foreign and private investments. Nonetheless, China's contribution to foreign direct

investment (FDI) in Sarawak's development initiatives has been limited, as the state government progressively assumes responsibility for financing these projects. This restricted financial engagement has positioned Chinese companies as technical partners instead of investors in development initiatives.

There are some close-view pictures taken by the researcher to show some actual progress of the dam construction of the Baleh HEP Dam. This can be referred to in Figures 4.2, 4.3, and 4.4.



Figure 4.2: The tunnel system for the Baleh HEP Dam



Figure 4.3: The Situation of the Baleh River (A concrete barrier built to block the river)



Figure 4.4: The Situation of the Baleh River

Since the 1950s, the global experience pertaining to dam construction has rendered dam development a significantly contentious matter within the realm of sustainable development, as elucidated by the World Commission on Dams in 2000. This contention is exemplified by instances such as the construction of the Bakun, Bengoh, and Batang Ai dams in Sarawak. These cases underscore that the costs associated with the manifold benefits of damming are predominantly shouldered by displaced communities residing upstream and

downstream, whose livelihood strategies have been intricately intertwined with the natural dynamics of river flood regimes and resources in their immediate environs.

With the introduction of Sarawak's Green Economy Policy, the state has reinforced its commitment to achieving its sustainable development goals through the Sarawak Sustainability Vision 2030. This initiative envisions Sarawak as a prosperous society by ensuring economic prosperity, social inclusivity, and environmental sustainability. By 2030, Sarawak aims to become a renewable energy powerhouse in the region, leveraging the Sarawak Corridor of Renewable Energy (SCORE) to drive large-scale investment and development. A notable shift in this expansion plan is its increased focus on rural areas, bringing infrastructure and economic opportunities to previously underserved communities.

However, when examined through the security-development nexus framework, concerns arise regarding the principle of good governance in these projects. Given the involvement of multiple stakeholders, the effectiveness of participation, accountability, and transparency in Sarawak's development policies is a critical issue. As Ngidang (1995) argued, political policies do not always align with the actual needs and aspirations of rural communities. One key reason for this disconnect is the lack of political influence among rural populations, which limits their ability to shape policy decisions that directly affect their livelihoods. For rural development to be truly inclusive and beneficial, decision-making processes must incorporate bottom-up approaches, ensuring that local communities have a meaningful voice in shaping development initiatives. Ideally, government agencies and policymakers should actively support the priorities of rural populations, ensuring that government interventions reflect genuine grassroots demands rather than top-down political agendas.

4.2 Discussion

This study adds to the ongoing dialogue concerning Sarawak development, particularly construction of the Baleh HEP Dam, raising concerns regarding its human security challenges and the insecurity it poses to the livelihoods of the Ibans in Nanga Entawau. As discussed previously in Chapter 2, dam construction has been a contentious topic worldwide in the context of sustainable development. In Sarawak, numerous dam projects have been planned and executed to foster state and societal development, aligning with the objectives of the Sustainable Development Goals (SDGs) set for 2030. Despite the notable benefits dams bring to human development, the magnitude of their social, economic, and environmental repercussions remains substantial. This presents a contemporary challenge to the livelihoods of local communities, who traditionally and still rely on river ecosystems for their sustenance.

As discussed in Chapter 2, Sarawak's hydropower development plays a crucial role in its green economy. However, in this chapter, we further explore its long-term implications on its sustainability towards the human security of the involve communities. Sarawak's Green Economy Policy is centered on the development of renewable energy, with hydropower playing a crucial role in achieving economic sustainability and environmental stewardship. The state has vast hydropower potential, with major operational dams like Bakun (2,400 MW), Murum, and Batang Ai, while the Baleh Dam (1,285 MW) is expected to be completed by 2026. This development aligns with Sarawak's ambition to become a leading green energy producer in Southeast Asia, supplying power not only to local industries but also to neighbouring regions such as Kalimantan, Indonesia. Furthermore, Sarawak is investing in green hydrogen production, using hydropower as a primary energy

source to export clean hydrogen to countries like Japan and South Korea, which are working towards net-zero emissions.

Sarawak Energy Berhad (SEB) plays a central role in driving Sarawak's hydropower mission as the state's primary energy developer and utility provider. The company is responsible for generating, transmitting, and distributing electricity across Sarawak, with hydropower being a key component of its renewable energy strategy. SEB has been instrumental in developing major hydropower projects, such as the Bakun, Murum, and Batang Ai dams, and is currently leading the construction of the Baleh Hydroelectric Project (HEP), set to be completed by 2028. These projects align with Sarawak's goal of becoming a regional renewable energy hub and ensuring long-term energy security.

Beyond power generation, SEB is also actively involved in the Sarawak Corridor of Renewable Energy (SCORE) initiative, which aims to attract energy-intensive industries by providing stable and affordable electricity. The company has positioned hydropower as a driver for economic growth, supporting industries such as aluminum smelting, petrochemicals, and data centers. Additionally, SEB is expanding its energy exports to neighboring regions, such as Kalimantan, Indonesia, through cross-border power agreements, reinforcing Sarawak's role as a green energy leader in Southeast Asia.

In addition to hydropower, SEB is diversifying its renewable energy portfolio by investing in solar energy and green hydrogen production. The company has launched pilot projects in hydrogen fuel technology, aiming to export clean hydrogen to international markets such as Japan and South Korea. This reflects SEB's broader commitment to transitioning Sarawak towards a low-carbon economy, in line with Malaysia's national climate goals. As Sarawak Energy continues to expand its hydropower capacity, its ability

to balance economic growth, environmental conservation, and social responsibility will be crucial in shaping the state's energy future.

Sarawak Energy Berhad (SEB) has positioned hydropower as the backbone of Sarawak's green economy, emphasizing its role in renewable energy expansion and economic development. The company views hydropower as a low-carbon, sustainable energy source that aligns with Sarawak's long-term vision of becoming a regional leader in renewable energy. SEB has taken steps to mitigate environmental and social impacts by implementing sustainability measures, such as conducting Social and Environmental Impact Assessments (SEIA), adhering to international dam safety standards, and engaging with affected communities. Additionally, the company has collaborated with the Forest Department of Sarawak through the Baleh Watershed Wildlife Connectivity Project, a research initiative focused on biodiversity conservation and the protection of hydropower catchment areas (Sarawak Energy, 2019).

Despite these commitments, Sarawak's hydropower expansion has been met with significant criticism from environmental organizations, indigenous rights groups, and researchers. Activists, including the World Rainforest Movement and Save Rivers, argue that large-scale hydropower projects contribute to environmental degradation, biodiversity loss, and the displacement of Indigenous communities (Shirley & Word, 2018). The World Commission on Dams (2000) has also highlighted broader global concerns, noting that large dams have displaced between 40 to 80 million people worldwide, disproportionately impacting vulnerable communities who bear the social and environmental costs while receiving minimal economic benefits.

Locally, Indigenous leaders such as Willie Kajan, a Tering elder and activist, have voiced concerns about the lack of consultation between SEB and affected communities. He

argues that hydropower projects often proceed without proper engagement with those who depend on the forests and rivers for their livelihoods. Kajan has observed dramatic changes in water currents due to previous hydropower developments, leading to disruptions in traditional fish and shrimp farming and flooding of longhouses along the rivers (Mongabay, 2024).

While SEB has outlined its commitment to environmental stewardship, the ongoing criticisms suggest that more comprehensive engagement and mitigation efforts are necessary. The tension between hydropower expansion and Indigenous rights highlights a critical challenge in Sarawak's renewable energy strategy—one that requires balancing economic development with social and environmental responsibility. These concerns will be further explored through interview data, providing firsthand insights from stakeholders, Indigenous communities, and policymakers on how SEB's hydropower policies align with both development goals and sustainability commitments.

4.2.1 Human Security Concerns towards the Baleh HEP Dam in Nanga Entawau

Hydropower projects, while considered a renewable energy source, often raise significant human security concerns that affect water quality, biodiversity, and climate resilience. The Baleh HEP, as one of Sarawak's largest hydropower projects, presents key challenges that must be addressed to ensure sustainable and environmentally responsible energy development. While policy documents and official reports outline the sustainability commitments of Sarawak Energy and the government especially in achieving its sustainable development goals 2030, it is crucial to examine how these policies translate into real-world experiences. To gain deeper insights into the environmental security concerns surrounding Baleh HEP, interviews and focus group discussions were conducted

with the Nanga Entawau communities. These voices provide firsthand perspectives on the dam's impact on local ecosystems, community livelihoods, and Sarawak's broader green economy policy.

Based on the total of 30 respondents being interviewed from Nanga Entawau, the researcher gained several respondents to share their experiences and challenges related to accessing a clean and safe environment before and after the construction of the Baleh HEP Dam.

From the interview data, a female respondent, aged 25-30, lamented,

"Before the dam construction, the village was thriving, and people lived happily. However, after the construction began, natural resources became polluted, leading to villagers leaving their homes for the town."

(Respondent BW, Nanga Entawau)

In light of this, it becomes evident that the impacts of dam construction are multifaceted, directly affecting human security and thereby the personal safety of the local community. Within this research framework, livelihood assumes paramount significance, especially within the context of state development.

The respondents also lamented during the focus group discussion:

"SEB did a lot courses, promises, but all of these are not bringing long-term benefits to the communities in Nanga Entawau especially after the completion of the Baleh Dam soon." (Respondents, Nanga Entawau).

The case study of the Baleh HEP dam exemplifies the adverse human security issues that experienced by the Ibans in Nanga Entawau, which intricately linked to the

Sarawak's development paradigm elucidated earlier. As we explore the development approach within this scenario, it primarily entails strategies aimed at enhancing human well-being in underdeveloped regions or communities. These endeavours encompass various facets including socio-economic advancement, healthcare, educational provisions, and infrastructural enhancements.

However, the World Commission on Dam (WCD) highlights the dams often neglecting the privileges and security of the particular communities, as they have less power to be involved in any decisions making within the development process. Throughout the Baleh HEP Dam construction, the development approach seems suboptimal to concern regarding human security, particularly pertaining to the human security of the Iban communities in Nanga Entawau. Hence the need to dissect and correlate the development approach adopted by the Sarawak government concerning the environmental security of the communities in Nanga Entawau, by highlighting the good governance to involve the communities in adequate decision-making in any development plan for the state. Communities residing in Nanga Entawau have found themselves at the forefront of the environmental impacts stemming from the construction of the Baleh Hydroelectric Power (HEP) Dam in Sarawak. Located within a mere 10 kilometers of the construction site, the Ibans of Nanga Entawau are grappling with profound environmental challenges, a stark departure from their traditional reliance on resources sourced from the Baleh River.

A respondent highlighted to the researcher during the interview that,

“There are not much villagers in our longhouse. They have moved away from Nanga Entawau for better future opportunities outside our village. Now only left few people here, the children, the unemployed and the elders.”

(Respondent RN, Nanga Entawau)

Upon interviews data, it becomes evident that a significant portion of the local populace has opted to relocate from the longhouses of Nanga Entawau. From the 30 respondents got for the interviews, they have cited concerns regarding their human security, which directly compromises their personal and economic security, in the wake of the dam's construction as the primary impetus for their migration to urban centres. Migration of the majority communities due to human security caused by the dam's construction, coupled with apprehensions regarding personal safety amidst poor water pipe system, inadequate infrastructure, polluted air, and limited access to healthcare and education, has compounded the discomfort faced by these villagers, responded throughout the interviews.

Sustainable development, intended to secure resources for future generations without prejudice, appears to have been overshadowed by the adverse impacts of the Baleh Dam on the Iban communities. This contradiction runs counter to the principles of sustainable development championed by the Sarawak government in its pursuit of the Sustainable Development Goals (SDGs) by 2060.

Sarawak Energy's official website highlights its commitment to environmental sustainability, outlining key initiatives such as the Baleh Watershed Wildlife Connectivity Project, Environmental and Social Impact Assessments (ESIA), and sustainable catchment management strategies aimed at minimizing the ecological footprint of hydropower projects. A Sarawak Energy Berhad (SEB) official emphasized the importance of the Baleh Hydroelectric Project (HEP) in supporting the state's energy security and economic growth, stating:

“The Baleh HEP is essential for Sarawak's energy security and economic growth. We have taken steps to minimize environmental impact, including

biodiversity conservation efforts under the Baleh Watershed Wildlife Connectivity Project.” (Sarawak Energy Berhad, 2024).

Beyond conservation efforts, SEB has also emphasized compliance with international dam safety standards and environmental impact assessments (EIA). However, the company acknowledges that community engagement remains an area for improvement, raising questions about good governance and social justice in large-scale infrastructure projects. Good governance, a key principle of the security-development nexus, requires transparency, accountability, and meaningful participation from affected communities. While SEB asserts that it has engaged in stakeholder consultation, some community members have contested the adequacy of these efforts. A respondent from Nanga Entawau expressed frustration, stating:

“SEB came to our village and told us the Baleh Dam project. They conducted many fieldtrip to our village and consult us for just our agreement towards the dam project. No any acknowledgement on the potential impacts or benefits of the dam to us. Yet we are agreed towards the words promised by SEB for our any influenced livelihood after the dam project, but the promises do not ever happen back to us after the dam started.” (Respondent MW, Nanga Entawau).

This lack of prior and clear consultation reflects broader concerns about social justice, particularly the rights of Indigenous communities to free, prior, and informed consent (FPIC) in development projects. This caused the potential migration of communities to the town, loss of traditional livelihoods, and changes to the environment highlight structural inequalities in of the good governance principle for decision-making processes towards development. The tension between SEB’s policies and community perspectives underscores

the security-development nexus, where human security need to be balanced while involving development progress.

Good governance in hydropower development should not only ensure energy security and economic benefits but also guarantee that marginalized communities are not disproportionately affected. Moving forward, enhancing transparency, participatory decision-making mechanisms will be critical in aligning Sarawak's hydropower expansion with the principle of social justice to be adapt to ensure sustainable development.

Throughout the fieldtrip to Nanga Entawau, there were few situations happened that the researcher took to discuss the causes of human security challenges of local communities in Nanga Entawau due to the Baleh Dam project in the following section as below:

A. Water Contamination

Water contamination in Nanga Entawau has become a pressing to human security challenges, disproportionately affecting the Iban communities who rely on natural water sources for daily survival. The deterioration of water quality has led to severe disruptions in their livelihood, as evidenced by fieldwork findings indicating that four villages are struggling with contamination. Despite government-installed water pumps intended to mitigate the issue, their ineffectiveness has forced villagers to rely on bottled water (Figure 4.5), leading to increased household expenses and further economic strain. This situation exemplifies the broader issue of environmental injustice, where marginalized communities bear the brunt of development projects with inadequate compensatory measures.



Figure 4.5: A few stacks of bottled water in one of the villager's homes

The security-development nexus framework underscores that environmental security is intrinsically linked to governance structures and social justice. In this case, the governance mechanisms surrounding the Baleh HEP Dam project appear to be lacking in transparency and community engagement. As the respondents have pointed out, while Sarawak Energy Berhad (SEB) has conducted training courses and made promises, these efforts have not translated into sustainable, long-term benefits for the affected communities. The lack of adequate consultation and participatory decision-making exacerbates the vulnerability of these communities, leaving them without meaningful solutions to their water security concerns.

A key principle in indigenous rights and environmental justice, Free, Prior, and Informed Consent (FPIC), appears to have been inadequately upheld in the case of Nanga Entawau. The inadequate efforts did to obtain genuine FPIC means that local communities were likely excluded from critical discussions on water management and mitigation strategies before the project's implementation. This exclusion not only raises ethical concerns but also contributes to the social and environmental insecurity of the region. The lack of meaningful participation has resulted in inefficient mitigation measures, leaving affected villagers without access to a sustainable and safe water supply.

Beyond access to clean water, the community's traditional fishing practices have been severely affected. Community members recounted difficulties in sourcing fish, with one male respondent (aged 45-50) explained:

“After the dam was built, we have to go all the way to Kapit town to buy fish. The Baleh River is no longer safe for fishing.” (Respondent B, Nanga Entawau).

This shift from self-sufficiency to dependence on external food sources represents a fundamental disruption to the economic and food security of the Iban community in Nanga Entawau. Additionally, fish populations, including species like ikan Semah and Empurau, have dwindled, making it increasingly difficult for villagers to sustain their traditional way of life.

A 30-year-old female respondent further corroborated these concerns:

“Before the dam, we could catch enough fish in a few hours. Now, it takes more than a week to catch the same amount.” (Respondent C, Nanga Entawau).

Throughout the fieldwork, the researcher identified that development activities, such as timber extraction, had been conducted around the village since the early stages. While concerns over human security existed even before the dam's construction— particularly due to timber activities that may have contributed to water contamination—the development of the Baleh Dam has further exacerbated these challenges. Both projects, though distinct in nature, have significantly impacted the Iban community in Nanga Entawau, disrupting their access to clean water, food sources, and traditional livelihoods.

These testimonies highlight the broader socio-economic consequences of large-scale hydropower development, reinforcing concerns about environmental justice and sustainability. While hydropower contributes to Sarawak's green economy strategy, the lack of robust community engagement and mitigation efforts threatens the long-term well-being of affected populations.

Moreover, while the community from Nanga Entawau have voiced significant concerns regarding the safety of consuming water from the Baleh River, scientific assessments suggest a contrasting perspective. According to a doctor from Nanga Entawau clinic, regular water quality tests are conducted monthly, and the results consistently indicate that the water is safe for consumption. As the doctor explained:

“Based on our water quality tests conducted every month, all results have shown that the river water is safe for consumption.”

This statement highlights a scientific validation of water safety, contrasting with local perceptions and experiences. However, despite official test results, many villagers remain apprehensive about drinking the river water, citing visible turbidity, past experiences of waterborne illnesses, and changes in water currents due to dam construction.

A possible explanation for this discrepancy could be the gap between technical assessments and local lived experiences. While scientific studies focus on quantifiable parameters such as pH levels, bacterial contamination, and heavy metals, community concerns may be shaped by visual changes in water clarity, previous experiences of contamination, and mistrust in formal institutions.

Furthermore, one respondent also emphasized:

“Even if they say the water is safe, we don’t trust it. We have seen the changes ourselves, and we don’t want to take the risk.” (Respondent A, Nanga Entawau).

This contradiction raises an important question: Are official scientific assessments alone enough to address environmental security concerns, or must community perceptions and traditional knowledge be integrated into policy decisions? Addressing this gap will require enhanced trust-building efforts between authorities either Sarawak Energy Berhad or Sarawak government and local communities, ensuring that water management policies align with both scientific evidence and public confidence.

Further observations during fieldwork underscored the inadequacy of water pumps provided to the villages. These pumps, intended to improve access to clean water, were found to be malfunctioning. The inefficiency of the pump filtration system in purifying the polluted water from the Baleh river rendered it unfit for consumption. Consequently, the villagers are compelled to reserve this water solely for cleaning and washing purposes. Their dependence on bottled water sourced from town outlets was emphasised, a dependency that substantially inflates their daily expenses,

During fieldwork in Nanga Entawau, I encountered a modest dwelling housing the village's water filtration system. Within, I observed two individuals engaged in repairing the system. Upon conversing with them, they disclosed that the filtration system was not operating optimally (Figure 4.6). They elucidated that the river water entering the system exhibited high turbidity, rendering the filtration process ineffective in eliminating impurities. Furthermore, they voiced apprehensions regarding the elevated levels of chemicals in the

river water, potentially leading to health ailments, particularly gastrointestinal issues, among the villagers.



Figure 4.6: The Incomplete Water Pump found in Nanga Entawau

Despite the efforts of contractors and government authorities in providing and installing water pump systems across both villages, uncertainties remain regarding the safety of the extracted water. Concerns over pollution have intensified following the construction of the dam, surpassing even the environmental impact of previous timber activities. This predicament places the Iban community in a precarious position, with the verification of water quality posing an urgent concern. Consequently, the situation in Nanga Entawau presents a paradoxical conundrum for the Iban community, arising from an incomplete water pump system and the compromised water quality within their environments, precipitating a cascade of unforeseen challenges that ironically undermine rather than fortify their essential livelihoods.

Additionally, a male respondent, aged 45-50, highlighted the emergence of water pollution following dam construction, compelling villagers to seek fish resources from Kapit town and resort to bottled water due to contamination of the Baleh River. This significant alteration in daily routines signifies a marked departure from the traditional lifestyle of the Iban community, historically reliant on the bountiful resources provided by their local rivers.

The affected communities are compelled to rely on external sources from towns such as Kapit or Sibu, underscoring the profound ramifications of deteriorating water quality in Nanga Entawau.

Although these challenges, Sarawak Energy Berhad (SEB) maintains that it has taken active steps to minimize environmental impact, with initiatives such as the Baleh Watershed Wildlife Connectivity Project and adherence to environmental impact assessments (EIA). However, the effectiveness of these initiatives remains in question, particularly when weighed against community grievances regarding water security, biodiversity loss, and economic displacement.

Moving forward, a more inclusive governance model is crucial to ensuring that hydropower development aligns with both energy security and social justice principles. Addressing water quality issues in Nanga Entawau will require to enhance water treatment solutions beyond basic pump systems. Besides, a greater transparency and community involvement in policy implementation in order to provide a stronger environmental monitoring mechanisms to assess the long-term impact of dam operations.

B. Soil Erosion

The intricate network of challenges expands as the deteriorating water quality becomes intricately linked to soil erosion within the village, a consequence directly attributable to the ongoing construction of the Baleh HEP dam in Nanga Entawau. Soil erosion poses a significant environmental concern, depleting nutrient-rich soils, increasing natural sedimentation levels in rivers, and precipitating flash floods in construction zones. The construction of the dam has wide-ranging repercussions, exacerbating soil erosion in

surrounding areas. Progressive erosion along the riverbank has led to structural instability and subsequent collapse of longhouses situated nearby. In the context of the Baleh HEP Dam construction in Nanga Entawau, soil erosion has contaminated the water, rendering it unsuitable for daily consumption due to elevated levels of suspended solids. Interview participants noted the necessity to purchase bottled water from Kapit or Sibu towns for cooking and drinking purposes, as the polluted water is only deemed suitable for washing.

Meanwhile, the soil erosion issues have decimated fruit and vegetable orchards in both villages, depriving villagers of essential food resources. The livelihoods of Iban communities in Nanga Entawau have historically relied on subsistence production, including paddy and pepper cultivation, as well as fruit and vegetable plantation, forest, and marine products since the 16th to 17th century. During interviews, participants candidly discussed the challenges they face, expressing the unfortunate need to procure essential food resources from towns due to the increasing inviability of agricultural practices in their local environment. The dam's disruption has not only compromised land integrity but also intensified erosion, worsening the environmental impact on water sources vital to the Iban community's livelihoods.

During the field trip to Nanga Entawau, the researcher encountered severe issues of house collapse, particularly in Rumah Tajai. Based on the interviews, the villagers from Rumah Tajai, they informed that a newly furnished house had collapsed due to soil erosion in their village. Fortunately, the family residing in the house was absent during the incident, but they were compelled to relocate as a result. Additionally, the researcher observed too regarding several houses undergoing extension due to soil erosion, especially those near the riverbank. Figures 4.7, Figure 4.8 and Figure 4.9 depicted this extension of longhouses in Rumah Tajai, beside

the sub-river of Baleh River. Furthermore, the *Tuai Rumah* informed that they must relocate their longhouse to higher ground to ensure their safety. This relocation will impose an additional financial burden on the longhouse communities, whose lives have already been adversely affected, particularly for those who lack the means to do so.

This serious condition of soil erosion is evident in the longhouse at Rumah Tajai, as depicted in Figure 4.9, which I visited. The image reveals hollowing out of the soil beneath the longhouses, causing structural changes. This highlights the severity of landslides that frequently occur in Nanga Entawau. Consequently, Iban communities in these regions grapple with the added complication of landslide issues. The alteration of natural watercourses and increased soil instability, both attributed to dam construction, significantly heightens landslide risk.

This triad of challenges underscores the urgent need for comprehensive mitigation strategies, as communities face a compounding series of environmental and infrastructural issues that jeopardised their safety and well-being in Nanga Entawau. This is evident in the detrimental impact of environmental factors caused by the construction of the dam on local infrastructures



Figure 4.7: Pictures shows the Extension of the Longhouses in Rumah Tajai, Nanga Entawau.



Figure 4.8: The picture on the land sliding situation on the longhouses in Nanga Entawau nearby the Baleh River



Figure 4.9: The landslides happened in one of the longhouses in Nanga Entawau

Despite the challenges happened, acknowledged that Sarawak Energy and the Sarawak state government have implemented several mitigation measures and policies to address soil erosion caused by the Baleh Hydroelectric Project (HEP). Some of these include the Hydropower Sustainability Standards & Stakeholder Engagement Sarawak Energy has committed to international best practices in hydropower development, aligning with the Hydropower Sustainability Assessment Protocol (HSAP) and the International Finance Corporation (IFC) guidelines. The Sarawak Energy Berhad regularly engage with affected communities, government officials, and local leaders to address concerns related to environmental impact, including soil erosion. These engagements help in developing strategies to minimize environmental degradation. Besides, Health, Safety, Security, and Environmental (HSSE) Standards towards Baleh HEP follows strict environmental and safety regulations to minimize land degradation, including soil erosion control measures. Sarawak Energy has emphasized compliance with best practices to prevent incidents and ensure that erosion and land stability risks are managed effectively. Sarawak Energy also

collaborates with agencies such as the Sarawak Rivers Board and the Forest Department Sarawak to monitor and mitigate soil erosion impacts. Continuous monitoring ensures that sedimentation levels in rivers are controlled and erosion-prone areas are identified for preventive action

Community members expressed deep concerns about the environmental consequences of the Baleh HEP, particularly in relation to soil erosion, river sedimentation, and land stability. Farmers, fishermen and the local communities who rely on the land for agriculture and fishing reported disruptions in their traditional livelihood practices. Many noted that increasing sedimentation in rivers has affected fish populations, and soil fertile. Additionally, the participants also pointed out that deforestation in the dam's surrounding areas has contributed to loss of biodiversity and altered local climate patterns throughout the interviews and focus group discussion. These issues directly impact the environmental security of the region, raising questions about the sustainability of local livelihoods in the face of hydropower expansion.

From the perspective of the Sustainable Livelihood Framework, these environmental disruptions impact key livelihood assets, including natural and social capital. The reduction in access to fertile land and clean water diminishes community resilience, forcing some residents to seek alternative employment outside their traditional sectors in Nanga Entawau. Women and local populations, in particular, expressed concerns over reduced land access for subsistence farming, highlighting the intersection of environmental security and social justice in this realm.

4.3 Conclusion



Figure 4.10: A mural stated a quote on “The Beauty of The World is in the Diversity of Its People” adorns one corner of a classroom in *Sekolah Kebangsaan Temenggung Koh*

In conclusion, the mural's inscription in Figure 4.16, observed during my field trip, deeply resonates with the challenges confronting the communities of Nanga Entawau amidst the ongoing dam development project. "The Beauty of The World is in the Diversity of Its People" serves as a poignant reminder of the human dimension intertwined with concerns for environmental security. The concept of the security-development nexus underscores that sustainable development hinges upon ensuring the security and well-being of affected populations. In the case of Nanga Entawau, it is imperative to acknowledge and address the diverse needs and vulnerabilities of communities impacted by the dam construction.

Numerous cases and issues could echo the concerns of the communities in Nanga Entawau, drawing parallels between identified compensation issues in various dam development projects globally and the ongoing apprehensions surrounding the Baleh HEP dam project. Recognizing the broader implications, particularly regarding environmental and livelihood issues, which will be discussed in the subsequent chapter, is essential.

In the case of the Baleh HEP dam, potential environmental security by the development plan, such as water quality degradation and soil erosion were compounded by observed deficiencies in compensation practices, further imperil the economic security towards the livelihoods of affected communities, a topic that will be elaborated upon in Chapter 5.

These global instances serve as cautionary tales, underscoring the need for a comprehensive and environmentally conscious approach that prioritises both ecological sustainability and the well-being of local livelihoods in tackling the multifaceted challenges posed by the Baleh HEP dam project. The negative impacts of the Baleh HEP Dam on the Nanga Entawau villagers have exacerbated economic insecurity within the local communities. The primary concern highlighted through data collection is the villagers' persistent worries regarding employment opportunities in the village. Previously employed by a timber company, they now face increased daily expenses due to environmental degradation, resulting in the loss of natural food resources from the forest and river upon which they traditionally relied. Furthermore, they seek solutions to address crucial infrastructure needs, particularly in healthcare for the elderly and education for their children. These challenges stem from the significant life changes brought about by the construction of the dam.

Despite the objectives of dam constructions to provide essential benefits to local populations in Sarawak, mounting concerns persist regarding the sustainability of such ventures and their potential adverse effects on local communities and the environment. The construction of the Baleh Dam in Ulu Baleh has precipitated various environmental degradations, including water pollution, soil erosion and landslides, significantly impacting the Iban community in Nanga Entawau. Analysis of acquired data reveals substantial shifts

in the livelihoods of the local community before and after the dam's construction near their villages, indicating a compromise on the rights of the local community to access a clean and safe environment owing to the state's dam development plan.

Furthermore, this chapter underscores Sarawak's overarching sustainable development agenda, which seeks to cultivate peaceful communities, uphold effective rule of law, and promote good governance for the nation's advancement. However, the top-down approach characterising Sarawak's development mechanism appears to disregard human security, as evidenced by the construction bias of the dam, resulting in violations of human rights, particularly within the Iban community of Nanga Entawau, specifically concerning environmental security. Rectifying this bias is paramount to maintaining a balanced approach to the state's development and ensuring societal human security. Consequently, other notable impacts on the economic security of the villagers in Nanga Entawau will be further expounded upon in the subsequent chapter, as they are intertwined with the topics addressed herein.

Good governance is crucial for ensuring that large-scale projects like the Baleh HEP consider and address community concerns effectively. Interviews with local leaders and SEB representatives revealed efforts to engage with communities through consultations, stakeholder meetings, and environmental assessments. SEB has committed to international best practices such as the Hydropower Sustainability Assessment Protocol (HSAP) and the International Finance Corporation (IFC) guidelines to improve governance and environmental responsibility. However, community members voiced concerns about the inclusivity and transparency of these engagements. While some acknowledged SEB's efforts to provide updates on environmental mitigation measures, others felt that their input was not adequately reflected in decision-making processes.

Moreover, challenges in communication and accessibility were identified. Some remote communities reported difficulty in attending consultation meetings due to logistical barriers, while others felt that technical jargon used in discussions prevented them from fully understanding project implications. These findings highlight the need for more inclusive governance approaches that prioritize accessibility, clear communication, and genuine community participation. A transparent, two-way engagement mechanism can enhance trust and cooperation between SEB and local communities, reducing tensions and ensuring that governance aligns with the principles of good governance.

The principle of social justice demands that development projects equitably distribute both benefits and risks among affected populations. Findings from focus group discussions revealed disparities in how different community groups experience the impact of the Baleh HEP. While some villagers welcomed the infrastructure development and economic opportunities generated by the project, others—particularly those from indigenous backgrounds—expressed concerns about land displacement and loss of cultural heritage.

Additionally, respondents questioned whether economic benefits were reaching all affected populations. Some community members reported limited employment opportunities despite promises of job creation. Those who did secure work on the project noted that most positions available were temporary and did not provide long-term financial security. The Sarawak Green Economy Policy, aimed at promoting sustainability, was also a focal point of discussion, with some community leaders questioning whether the policy adequately addresses the socio-economic needs of rural populations.

Addressing these concerns requires a more targeted approach to social justice in hydropower development. Policies should prioritize fair compensation for displaced individuals, ensure equitable access to project benefits, and integrate traditional knowledge

into environmental management plans. Without such considerations, the project risks exacerbating existing inequalities rather than fostering sustainable development.

The Baleh HEP embodies the intricate relationship between security and development. On one hand, the project promises to enhance energy security, drive economic growth, and support Sarawak's long-term sustainability goals. On the other hand, it poses risks to environmental security, livelihoods, and social cohesion. Through the lens of the security-development nexus, it is evident that hydropower projects must balance development ambitions with risk mitigation strategies to avoid long-term socio-environmental instability.

From a security standpoint, land degradation, deforestation, and erosion could contribute to broader ecological vulnerabilities, affecting water availability and agricultural productivity. These risks can, in turn, lead to economic insecurity, potentially triggering displacement or conflict over diminishing resources. However, when managed effectively, the project can also provide opportunities for community resilience-building. Investments in reforestation, soil conservation, and sustainable agricultural initiatives can counteract environmental degradation while providing alternative livelihoods.

CHAPTER 5

THE ECONOMIC SECURITY OF THE IBAN COMMUNITY IN ULU BALEH KAPIT, SARAWAK AS A RESULT OF THE BALEH HEP DAM DEVELOPMENT PROJECT

5.0 Introduction

Recently, Sarawak has emerged as an exemplary state, embracing a vision of sustainable progress. It stands as a beacon in pioneering efforts towards state development that align with the Sarawak Green Economy Policy and its initiatives outlined in the Sustainable Development Goals to be achieved for the state to becoming the model for environmentally responsible development, balancing economic growth with ecological preservation and social well-being. As reported in RECODA's recent media coverage of the Malaysia Sustainable Development Goals (SDG) Summit 2023, Sarawak has taken a proactive step by initiating the development of the Sustainable Sarawak Blueprint. This blueprint serves as a comprehensive roadmap that guides all sectors and communities towards achieving sustainability goals. As in previous chapter 4, highlighted that the Premier of Sarawak, Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari Tun Datuk Abang Haji Openg, highlighted Sarawak's commitment to sustainability through the implementation of innovative solutions, pioneering green initiatives, and catalysing community-driven projects (RECODA, 2023). Sarawak is actively harnessing the potential of dams to illuminate a path towards both economic growth and environmental responsibility.

Sarawak is actively involved in significant infrastructure initiatives, notably the 1,285 MW Baleh Hydroelectric Power (HEP) project in Kapit. These initiatives align with the state's commitment to sustainable development and are guided by the Sustainable

Sarawak Blueprint. This paper aims to elucidate the intricate interplay between security and development concepts by examining and discussing the nexus between hydroelectric development and the security implications for the well-being of the livelihoods of indigenous populations in Sarawak.

However, as this chapter delves into the specifics of the Baleh HEP Dam project, it becomes imperative to scrutinize its potential impact on the livelihoods of the Iban communities in Ulu Baleh, with a particular focus on the villages in Nanga Entawau. The four longhouses that involved in the research are the closest village to the dam construction site, situated within a 10 km radius. The study employed semi-structured interviews and focus group discussions to gather data for analysis.

Prior to delving into the ramifications of the construction of the Baleh dam on the Iban community in Nanga Entawau, the construction of the Baleh HEP Dam in Ulu Baleh has dealt a double blow to the Ibans. Chapter 4 shed light on the dam's environmental security of the communities faced, revealing alterations in water contamination and soil erosion have both becoming the prior concerns of the local communities towards the development agenda of the Baleh Dam in Nanga Entawau. Although many mitigations, courses, and efforts done by the Sarawak Energy Berhad which outlined Sarawak's initiatives of the state's rural development aims, but caused dilemma of the local communities' human security concerns of their sustainable livelihood in the realm of state's development.

The human security challenges outlined in Chapter 4 intersect directly with the economic security discussed in this chapter. The construction of the Baleh HEP Dam has not only degraded the local environment but has also significantly affected the economic security of the Iban community.

Contrary to certain assumptions, local communities do not oppose economic growth; rather, they seek development that aligns with their land tenure systems and respects their collective rights. Economic growth and human rights are not mutually exclusive. To ensure both sustainability and inclusivity in development, it is imperative to consider the perspectives and input of the local population. This becomes particularly pertinent in the aftermath of the controversial Baleh Dam project in Sarawak, where indigenous villagers were compelled to relocate.

Beyond the financial losses incurred, massive infrastructure projects, especially mega-dams, pose a threat to the profound cultural ties that Indigenous groups hold with their land. This jeopardizes ancient customs and identities. The lack of, or insufficient attention to, concerns related to resettlement, compensation, and reparations in the development agenda by governments or stakeholders demonstrates a tardy and poorly planned approach. Consequently, the security and rights of local communities in exercising their freedom, economy, and rights are severely curtailed.

Hence, this chapter will delve into the economic security challenges faced by the Iban community, highlighting the tangible impacts of the dam project, such as loss of livelihoods, and unequal distribution of economic benefits and moving of the community to town for better job opportunities. This convergence of environmental degradation and economic insecurity underscores the pressing need for holistic, sustainable development approaches that protect the livelihood of the Ibans in Nanga Entawau.

5.1 The Economic Security of the Iban Community during Pre- and Post- Dam Development

Economic security is not only a matter of individual freedom and dignity but also crucial for state interests. It involves securing incentives for work, learning, and development,

which, in turn, contribute to overall societal well-being. With the evolving economic and social landscape, economic security should be prioritized as a policy matter globally.

Ultimately, economic security extends beyond individual livelihoods; it involves creating a social environment where everyone feels they belong to communities and has fair opportunities for a decent life in dynamic societies and economic development (International Labour Organisation, 2005). As a fundamental aspect of basic security, economic security encompasses freedom from morbidity, freedom from fear, control over one's development, and sustainable self-respect.

Expanding upon the economic security challenges outlined in the preceding section, a pivotal aspect of the Iban community's resilience and adaptability lies in the intricate weave of their livelihoods. Examining these livelihoods provides an indispensable lens through which we can better grasp the nuanced impact of the Baleh HEP Dam project on the daily lives, occupations, and sustainable practices of the Iban communities in Nanga Entawau.

This research reveals that economic security is intricately intertwined with the diverse and dynamic livelihood strategies embraced by these communities. By delving into the specifics of their daily pursuits, this study gains deeper insight into how the broader economic landscape, shaped by the Baleh HEP Dam project, permeates the very fabric of Iban existence. Let this study now explore the intricacies of their livelihoods, elucidating how these communities navigate the evolving socio-economic terrain while preserving their cultural identity.

As delineated in the comprehensive definition of livelihood in Chapter 2, the diversified strategies employed by the Iban communities in Nanga Entawau resonate with the theoretical underpinnings previously discussed, underscoring the intricate interplay between capabilities, assets, and a spectrum of activities essential for securing life's necessities.

Relate back to Chapter 2, livelihood encompasses the capabilities and assets, including stores, resources, claims, access, and activities involved in sustaining oneself. The concept of livelihood also emphasises the entitlement of individuals or communities to secure life's essentials such as food, water, shelter, medicine, and clothing. For the Iban communities in Nanga Entawau, livelihoods are diversified into agricultural activities, farming, waged and salaried employments, remittances, hunting, and fishing. Additionally, the Ibans of Nanga Entawau traditionally rely on forest and river resources for their daily sustenance, being prominent hunting and fishing communities in the region. Consequently, the livelihood of the Ibans in Nanga Entawau can be categorised into several themes, as detailed in the subsequent sections.

However, Sarawak's top-down approach to development planning raises concerns regarding people's rights and human security. The involvement of the Nanga Entawau community is crucial as they demand that their voices be heard by the government. Within the context of the state development agenda, it is imperative to avoid causing any human insecurity that could affect their traditional livelihoods in their longhouses.

Building on the discussion from Chapter 4, it is acknowledged that the Iban from Nanga Entawau, have been settled in the Baleh region since the 18th century. The Iban community in Nanga Entawau are descendants of Temenggong Koh. These communities have traditionally depended on the forest and river for their livelihood, utilising these resources for food, shelter, and cultural practices. To understand the socio-economic background of these communities, it is noted that there are a total of 132 doors (bilek), housing for 1,392 individuals in Nanga Entawau, as mentioned in previous chapter.

As mentioned in Chapter 2, livelihoods may or may not involve money, but it is

relevant much on the employment opportunities and self-directing of an individual. Somehow, the concept of livelihood is based on income derived from jobs and also from assets and entitlements. The people living along the Baleh catchment heavily rely on the health of natural resources and the environment for their livelihoods and socio-economic well-being. The communities in Nanga Entawau base their subsistence production on paddy cultivation, short-term crops, and local vegetables to supplement their diets. In the Baleh region, these communities also cultivate various cash crops, such as pepper and rubber, which are crucial for their household economies. Prior to the dam development, some of the men were also working in the timber camps as heavy machine operators and felling trees.

The communities in Nanga Entawau also rely heavily on hunting, gathering forest products, and fishing. These socio-economic activities are essential for obtaining food, building materials, household necessities, and cash. These resources have become a “safety net” for sustaining their village livelihood. In Iban communities, particularly in Nanga Entawau, gender roles significantly influence economic activities. The *bilek*, the fundamental economic and social unit of Iban society, relies on the customary distribution of labour among its members. As young, able-bodied males leave the longhouse, women and older men assume responsibility for agricultural tasks.

Absentee men often return to the longhouse between June and September for demanding tasks such as jungle clearing, fishing, and planting new crops. During the harvest, men assist in transporting the new rice crop to the longhouse. However, urbanisation disrupts the traditional gender equality within longhouse settings, disadvantaging women. Iban women who migrate to urban areas face unequal economic and political opportunities compared to men. In cities, men secure jobs ranging from physical labour to semi-skilled work, while women's skill sets diminish, leaving them dependent on their husbands' incomes.

Women without education are particularly vulnerable in this situation. All of the data gained can be proved by the statistics in Figure 5.1 and Figure 5.2 which retrieved from the Social and Environmental Impact Assessment (SEIA) of Sarawak Energy Berhad.

The fieldwork carried out in Nanga Entawau revealed a multitude of impacts stemming from the construction of the Baleh HEP Dam on the Iban communities, notably affecting the economic security of the villagers. The data (Figure 5.1) on employment history in Nanga Entawau reveals that the villagers have been reliant on natural resources from the forest and river. These resources provided sustenance for their farming and fishing activities, which in turn supported their livelihoods by providing food and income to raise their families. The fieldwork data proven that the Iban in Nanga Entawau, has been adversely affected, as their economy relies on pristine water sources and undisturbed hunting grounds.

The development of dams in Sarawak, particularly the Baleh HEP Dam, has intricately intertwined with the livelihoods and cultures of the Iban community. These dams serve as catalysts, triggering significant impacts on the community. Kapit, situated in Sarawak and referred to as the "Heart of Borneo," holds a special place for the Iban community, with 80 percent of its population residing there. Located 144 kilometres from Sibu and 155 kilometres from Belaga, Kapit serves as the gateway to Belaga and Putai, where the construction of the Baleh Dam, about 100 kilometres up the Baleh River, is underway.

To reiterate from Chapter 1 and Chapter 4, the Iban community, deeply rooted in Sarawak, has traditionally relied on the rivers and natural resources of their ancestral lands for sustenance and cultural identity. In Kapit, the majority of the Iban community resides in longhouses along the riverbanks of the Rejang River. Sandin (2006) underscores the significance of the 16th and 17th-century Iban migration from the Kapuas River in western

Borneo to Sarawak in relation to Iban beliefs and practices. This migration led to the establishment of Iban villages along the Batang Lupar River, significantly impacting the region's social and political dynamics. Sandin's research also highlights the effects of British colonization on Iban society, including the introduction of Christianity, formal schooling, and wage labour. It documents the Iban's resistance and adaptation to these changes, illustrating the complexities of indigenous responses to colonization. Overall, Sandin's research sheds light on the history of the Iban people in Sarawak, emphasizing the role of migration and colonialism in shaping their social organization and cultural practices. In Sarawak, the Iban are referred to as "native" rather than indigenous, a distinction differing from the classification in Africa (Julius, 2019).

Additionally, Jawan (2005) notes that the Ibans are predominantly concentrated in the interior regions of the state, particularly along the Rejang River and its tributaries. The Ibans in Sarawak have a rich and complex history closely tied to their traditional land-based livelihoods. Historically, they were skilled hunters, fishermen, and farmers who lived in longhouses. Although headhunting was central to the Ibans' culture and belief system in the past, it is no longer practiced in modern times.

In the research study, acknowledged that the Iban communities of Nanga Entawau, settled in the Baleh region in the early 20th century. They primarily depend on the Baleh River for transportation and economic sustenance. These areas are predominantly populated by elderly individuals, housewives, and children. Many residents have relocated to Kapit and Sibu towns in pursuit of job opportunities. Those who stay often work as security guards or in dam construction projects, lacking the education needed for better prospects. Their earnings are insufficient to meet their families' basic needs. As for Nanga Entawau, I conducted interviews regarding employment status with individuals currently residing in their longhouses.

Although the data may not be exhaustive, it appears that most villagers from the four targeted longhouses – Rumah Unggam, Rumah Laso, Rumah Rentap, and Rumah Tajai – have move to urban areas, such as Sibu, Kapit, Kuching and Bintulu in pursuit of new livelihoods. During the interviews and focus group discussions, respondents emphasised the diverse social impacts on their longhouse livelihoods since dam construction commenced in 2016.

Before the construction of the Baleh Dam, the Iban community in Nanga Entawau thrived economically by living in harmony with their natural surroundings. They practiced sustainable agriculture, engaged in traditional crafts, and depended on river-based activities that had supported their livelihoods for generations. Insights gathered from interviews and focus group discussions reveal that fishing was a primary economic activity, alongside working as boatmen for villagers and selling fish at the Kapit market, all of which contributed significantly to their self-sufficiency.

The community was particularly reliant on fish resources, especially highly prized and rare species such as Ikan Semah and Empurau from the Baleh River, renowned for their unique taste. The market value of these fish ranged from RM100 or over per kilogram, depending on demand and availability. These fish not only provided a crucial source of income but also held cultural significance within the community.

Moreover, the women of Rumah Tajai, primarily housewives, engage in traditional crafts such as Tenunan Pua (Figure 5.1) as a means of supporting their families in the village. They revealed that a fully completed Tenunan Pua can fetch between RM 800 and RM 1,000 per piece, providing a significant source of income for their families in the village.



Figure 5.1: The traditional machine to make string for the *Tenunan Pua* and the finished product of *Tenunan Pua*

As development plans for the dam took shape, economic activities in Nanga Entawau began to shift. Some villagers—particularly men—secured jobs with timber companies, primarily as lorry drivers. This marked the beginning of a transition from traditional subsistence-based livelihoods to wage employment, introducing both new economic opportunities and uncertainties about long-term sustainability. The conversations with the villagers disclosed throughout interviews and focus group discussion that the majority of men from Nanga Entawau previously who worked for timber companies before the construction of the dam were highly skilled in operating machinery. However, due to the lack of formal certification to validate their expertise, many were retrenched. Despite their extensive experience, the absence of documented evidence of their skills prevented their employment by the Chinese company responsible for building the dam. Consequently, most of these positions were filled by foreign workers.

However, despite efforts by Sarawak Energy Berhad (SEB) to introduce skill-building initiatives, these programs have not translated into meaningful economic benefits for the community. As respondents explained, SEB provided various training courses, including handicraft-making *manik* (beadwork) and agricultural skills such as chili and ginger farming. While these programs were intended to support alternative livelihoods, they fell short of creating sustainable economic opportunities. Many villagers found that the training lacked a commercial focus and did not equip them with the necessary knowledge to

market their products effectively. Without access to proper distribution channels or guidance on how to sell their goods, the newly acquired skills remained largely unutilized, leaving the community uncertain about their long-term economic prospects.

5.2 Discussion

To reiterate from Chapter 2, the development of dams in Sarawak, particularly in Bakun, Murum, Bengoh and Baleh, have intricately intertwined with the livelihoods and cultures of the Iban community. These dams serve as catalysts, triggering significant impacts on the community. Kapit, situated in Sarawak and referred to as the "Heart of Borneo," holds a special place for the Iban community, with 80 percent of its population residing there. Located 144 kilometers from Sibu and 155 kilometers from Belaga, Kapit serves as the gateway to Belaga and Putai, where the construction of the Baleh Dam, about 100 kilometers up the Baleh River, is underway.

The Iban community, deeply rooted in Sarawak, has traditionally relied on the rivers and natural resources of their ancestral lands for sustenance and cultural identity. In Kapit, the majority of the Iban community resides in longhouses along the riverbanks of the Rejang River. Sandin (2006) underscores the significance of the 16th and 17th-century Iban migration from the Kapuas River in western Borneo to Sarawak in relation to Iban beliefs and practices. This migration led to the establishment of Iban villages along the Batang Lupar River, significantly impacting the region's social and political dynamics. Sandin's research also highlights the effects of British colonization on Iban society, including the introduction of Christianity, formal schooling, and wage labor. It documents the Iban's resistance and adaptation to these changes, illustrating the complexities of indigenous responses to colonization. Overall, Sandin's research sheds light on the history of the Iban people in Sarawak, emphasizing the role of migration and colonialism in shaping their social

organization and cultural practices. In Sarawak, the Iban are referred to as "native"¹ rather than indigenous, a distinction differing from the classification in Africa (Julius, 2019).

Additionally, Jawan (2005) notes that the Ibans are predominantly concentrated in the interior regions of the state, particularly along the Rejang River and its tributaries. The Ibans in Sarawak have a rich and complex history closely tied to their traditional land-based livelihoods. Historically, they were skilled hunters, fishermen, and farmers who lived in longhouses. Although headhunting was central to the Ibans' culture and belief system in the past, it is no longer practiced in modern times.

Large-scale dam development, as highlighted by the World Commission on Dams (2000), has affected 40-80 million people over the past six decades, causing the loss of their land. The construction of dams has significantly impacted the rights of the Iban community, affecting their access to clean water, food, and other natural resources. This has resulted in economic, cultural, and psychological devastation. The Baleh Dam in Sarawak exemplifies the catastrophic consequences of large-scale dam development for local communities. The project is set to relocate numerous populations, notably the indigenous Iban people, who rely on the surrounding land and rivers for their livelihoods and cultural identity. Once completed, an estimated 1,345 square kilometers of land will be inundated (Tham, 2022). This impending displacement mirrors a broader global issue outlined by the World Commission on Dams (2000), highlighting the profound impact of dam construction on local communities

¹ *The New Sarawak Tribune* (2019) highlighted a remark by Julius Enchana, the secretary general of the Parti Bansa Dayak Sarawak Baru (PBDSB), on the change of the word "Dayak" in the Interpretation Ordinance 2004. He mentioned the status of the Dayak had been recognized and classified into two categories: "Sea Dayak" became Iban, and "Land Dayak" became the Bidayuh.

as they lose land and face challenges in accessing essential resources such as clean water and food sources.

In response to the Baleh HEP Dam in Sarawak, it is imperative to delve further into the economic security issues raised by the dam, considering their implications for the human rights and livelihoods of the Iban community. The state's development plan should strike a balance between development and human security.

5.2.1 Analyzing the Security-Development Nexus of the Economic Security Implication of Baleh HEP Dam to Nanga Entawau

The Baleh Hydroelectric Project (HEP) embodies the intricate relationship between development and security, where economic progress must be weighed against the potential social and human security consequences. While the project aligns with Sarawak's green economy policies and promises economic benefits through energy generation and regional infrastructure expansion, its impact on local communities raises concerns about economic security that affected the traditional livelihood of the communities in Nanga Entawau. The extent to which these risks are mitigated depends heavily on governance—particularly in ensuring that affected communities experience not just economic growth but inclusive and sustainable security.

Public concerns have emerged regarding the economic security of the Iban, underscoring the need to balance development with the preservation of traditional livelihoods in the longhouses. The dam's construction has ripple effects that extend far beyond its physical boundaries, disrupting cultural practices and sustainable living. A human-centric approach requires that the Iban community's rights to participation and perspectives be central to the state's development strategies.

As in Chapter 2 outlined that economic security is vital for ensuring individual freedom and dignity, allowing individuals to be free from poverty and fear, to control their development, and to maintain sustainable self-respect. Within this context, sustainable livelihoods involve securing the fundamental rights of individuals in Nanga Entawau, enabling their participation in evolving discussions on poverty, inclusion, and sustainable development. This participation should positively impact the community's livelihoods, rather than exacerbating human security issues such as economic insecurity.

A, Employment Opportunities

The migration of people in search of employment opportunities has been significantly influenced by the construction of the Baleh Dam, which began in 2016. The reservoir created by the dam has inundated the area, moving of the residents to towns and destroying the fishing and hunting grounds of the Iban community in Nanga Entawau. Consequently, many villagers have moving to Kapit and Sibu in pursuit of jobs, leaving behind the elderly, housewives, and children.

Interviews and focus group discussions revealed that some villagers have found employment as security guards and construction workers at the dam site, despite their lack of higher education, which hinders access to better job opportunities. Further insights from interviews and discussions highlight a systemic issue: the majority of villagers are not recruited by construction companies due to their lack of formal qualifications, despite having experience working in the timber industry. This experience, however, is unaccompanied by the necessary certifications demanded by the construction firms, particularly the Chinese companies operating locally.



Figure 5.2: The Foreigner Workers in the Dam Construction

During a site visit to the dam construction area, it was observed that a significant portion of the workforce comprises foreigners, predominantly from Bangladesh (Figure 5.2). The stringent recruitment criteria imposed by the construction companies often do not align with the educational profiles of the local villagers. Consequently, these companies resort to hiring outsiders, who have basic educational backgrounds and accept lower wages. This has led to a trend of villagers migrating to urban areas in search of alternative employment to support their families.

The Baleh HEP Dam construction exemplifies the top-down approach of Sarawak's development agenda, marginalising local community involvement in decision-making. This exclusion has instilled a fear of economic insecurity among the Nanga Entawau villagers, jeopardising their livelihood and forcing them to resettle. As discussed in Chapter 2, similar findings from other hydropower developments in Sarawak, such as Murum, Bakun, and Batang Ai, highlight the adverse economic impacts on local communities. This pattern is consistent with Awang et al. (2015), who found that the Batang Ai HEP dam resettlement

scheme did not significantly benefit those resettled, as they lacked firm resettlement contracts and received only verbal assurances from the government.

The government's failure to implement promised sustainable development efforts has exacerbated concerns regarding economic security, particularly employment opportunities for local communities. The presence of foreign workers at the dam construction sites has further reduced job prospects for locals. Interviews with villagers indicate significant barriers to employment with Chinese construction companies.

True development requires individuals' active participation in the economy and the maintenance of dignified livelihoods. The government must implement measures to enable Sarawak to achieve its Sustainable Development Plans by 2030. This includes providing proper training for local communities to enhance their skills, thereby enabling them to sustain their incomes independently. Such efforts are crucial for reducing poverty in rural areas and fostering local economic participation.

B. Disruption of Financial Resources

In Sarawak, the utilization of forest and wildlife resources has long been integral to the household economy of the Iban community for generations. These resources serve multiple functions, including sustenance through daily food sources, construction of dwellings, tools, and cultural artefacts. However, their accessibility and abundance have gradually declined due to environmental degradation, as discussed in Chapter 4, which resulted in habitat loss and contributed to diminishing wildlife populations in the Baleh region. Additionally, logging and land development activities have significantly reduced the available area suitable for resource harvesting. Furthermore, a shift in economic focus towards cash-generating activities, predominantly located in urban centres, has relegated

resource exploitation to a secondary income source. This economic shift, combined with the out-migration of younger generations, has further diminished the available labour force for traditional practices such as harvesting and hunting, thus imperilling the longstanding economic and cultural foundation of these interior communities.

The construction of the Baleh HEP Dam, commencing in 2016, has particularly affected the Merirai-Entawau Ibans, whose fishing and hunting grounds in Nanga Entawau have been obliterated due to changes in river flows, water quality, and aquatic ecosystems. This has significantly impacted the livelihoods of villagers reliant on catches of Ikan Semah and Empurau, whose populations have sharply declined. These fish species require a pristine habitat to thrive, prompting their migration upstream as a consequence of altered conditions. Notably sought after for their scarcity and consequent high market value, discussions with TR Laso and local fishermen underscore the drastic reduction in catch and income associated with these prized catches.

The Baleh HEP Dam has led to river diversion and heightened sediment accumulation, rendering the riverbed unsuitable for the aforementioned fish species. Soil sedimentation from construction activities directly alters the fishes' habitat, necessitating fishermen to venture further upstream for successful catches, significantly reducing catch yields. Furthermore, fishermen lament the substantial decline in earnings, attributing it to diminished catch volumes and the loss of traditional fishing grounds. The encroachment of wild animals into the interior regions, triggered by habitat destruction and the noise pollution emanating from the dam construction, further compounds their challenges.

During the field trip in Nanga Entawau, the researcher encountered a villager whose livelihood depended entirely on fishing. The respondent explained that since dam

construction began, the lower stream has fewer fish, forcing them to travel further upstream for better fishing grounds. The strong currents released from the dam make these journeys dangerous and hinder fishing activities. Additionally, the water current and pollution have significantly reduced populations of important fish species like *Ikan Semah* and Empurau. Traditionally reliant on fishing, the villagers now face journeys of over two weeks upstream to secure enough catch to sustain their income. This situation demonstrates how the dam construction has altered the villagers' traditional livelihoods, impacting both their daily consumption and economic security.

Consequently, due to severe water pollution in the Baleh river, villagers from Nanga Entawau are compelled to spend extra on purchasing food sources such as fish, vegetables, and bottled water from Kapit town, incurring substantial costs. For instance, Empurau and Ikan Semah, priced at over RM 20 per kilogram, and one box of bottled water costs RM 15 from Kapit town. This indicates that daily living expenses are escalating, causing burdens and stress for the communities of Nanga Entawau in supporting their families. From interviews and focus group discussions with locals, it was reported that their monthly expenses in the village exceed RM 1,000 for their livelihood. As the communities from Nanga Entawau traditionally depend heavily on their land and rivers for sustenance, the Ibans in Nanga Entawau have been compelled to seek food resources from Kapit or Sibut town due to heavy river pollution following dam construction, making it difficult to obtain clean food from the river.

Figure 5.3 and Figure 5.4 depict the villagers transporting boats to fishing areas for their activities. These villagers from Nanga Entawau travel to the upper stream of the Baleh river to acquire more fisheries catchments. During my field trip to the Baleh HEP Dam construction site, I encountered a group of villagers preparing to travel to another fishing

area with their equipment and containers. They expressed their inability to fish much from the lower stream of the Baleh river due to decreasing fish populations such as Ikan Semah and Empurau migrating to the upper stream following the Baleh HEP Dam construction.



Figure 5.3: In Nanga Entawau, villagers utilized a pick-up truck to haul their boat, allowing them to travel to farther fishing grounds.



Figure 5.4: The group of villagers met were about to travel to another fishing area with their fishing equipment and containers for keeping fish

C. Destruction of Ancestral Burial Grounds and Fertile Agricultural Land

The erection of the Baleh HEP Dam in Ulu Baleh has precipitated substantial land acquisition in the vicinity of the construction site by governmental and affiliated corporate entities. This acquisition has particularly impacted the residents of Nanga Entawau, resulting in the forfeiture of their ancestral burial grounds and fertile agricultural lands. These lands held immense potential for cultivating cash crops, such as palm oil, which could have provided economic sustenance to the villagers upon the completion of road infrastructure to their settlements. However, the inundation caused by the dam's development has submerged these fertile terrains, thus depriving the local populace of the prospective economic benefits they could have reaped.

The Iban communities inhabiting this area predominantly rely on subsistence farming as their primary means of livelihood. Notably, fruit orchards, such as those located in Pulau Galau and Temuda, serve as the principal sources of food production within the Merirai-Entawau region, encompassing an area exceeding 1,000 hectares, as delineated in the SEIA report. These orchards nurture a diverse assortment of commercially significant fruits, including durian, rambutan, dabai, and mata kucing, which generate substantial income for local households during the respective fruiting seasons.

Furthermore, the construction of the Baleh HEP dam has precipitated the displacement of burial grounds integral to the cultural practices of the Nanga Entawau communities. This erosion of cultural heritage transcends mere economic repercussions, striking at the core of their identity, heritage, and customary rituals.

Moreover, the compulsory acquisition of land mandated by the dam's construction has significantly reduced the available acreage for fruit cultivation. This loss of arable land poses a dire threat to the economic sustainability of the Nanga Entawau communities.

5.2.2 Community Responses to Baleh HEP Dam Development

This section recalls the stance of the former Deputy Chief Minister of Sarawak, who was a strong advocate for dam development as a means to enhance infrastructure and drive economic progress in rural areas. His statement, “No Dam, No Road,” reflects the state's developmental strategy, where large-scale hydroelectric projects are positioned as a prerequisite for infrastructure improvements, particularly road networks in remote areas like Baleh. While improved roads and economic opportunities were presented as key benefits of the dam, the trade-offs faced by the Iban community in Nanga Entawau underscore the risks of conditional development—where basic infrastructure is provided only at the cost of significant environmental and socio-economic consequences. As discussed in Chapter 4, the environmental impact is substantial, but beyond that, the economic security of the affected communities has also been deeply compromised.

The construction of the Baleh Hydroelectric Project (HEP) has significantly altered the natural environment surrounding Nanga Entawau, impacting both the economic and social stability of the Iban community. While large-scale development projects are often justified by their long-term economic benefits, the community's response to these changes highlights the critical role of participation, accountability, and transparency in the governance of development projects.

A fundamental aspect of good governance in development projects is ensuring that local communities have a say in decisions that impact their livelihoods. According to

villagers interviewed, SEB held several consultation sessions before the dam's construction to inform them about the project. However, many community members expressed frustration, stating that these sessions were largely one-sided. As one villager shared,

“They came to tell us what was going to happen, but they didn't ask what we needed.” (Respondent C, Nanga Entawau)

This sentiment reflects a lack of meaningful participation, where engagement was more about information dissemination rather than active involvement in decision-making. Additionally, while SEB introduced alternative livelihood programs such as handicraft-making and small-scale agriculture (e.g., chili and ginger farming), these programs were not designed in collaboration with the community. Many villagers reported that they were trained in skills that were unfamiliar to them and were not consulted on what economic activities would best suit their needs. Both focus group discussion with the respondents echoed the same voices on:

“Yes, SEB did give us a lot training courses especially to the youngers, women and men in the villagers, but these activities were not commercially benefits for us to raised our daily expenses in the longhouses.”

Consequently, the training provided did not effectively empower them to build new, sustainable income sources. This highlights the importance of inclusive participation—where communities are not just informed but actively involved in shaping the decisions that affect their future. The major flaws as Sarawak or Sarawak Energy Berhad implied the of a top-down approach as its inadequate to incorporate localized knowledge and adaptive strategies into development planning. Governance mechanisms in the Baleh HEP project

have largely focused on state-led interventions, assuming that economic compensation and training programs alone can secure livelihoods. However, this approach disregards the deeply embedded economic practices of the Iban community in Nanga Entawau, which historically relied on subsistence farming, communal land use, and river-based economies. The transition from these traditional practices to a market-driven economy has been abrupt, leaving many villagers economically vulnerable.

Employment opportunities were another area where villagers felt SEB's commitments fell short. While some men found temporary work in construction and timber-related industries, these jobs were neither stable nor long-term. Once the construction phase is completed, many fear they will be left without viable alternatives. SEB's failure to provide clear long-term employment plans raises concerns about the company's accountability in ensuring lasting economic security for the affected population.

A major worry also voiced by villagers during interviews was the lack of clear employment opportunities once the dam construction is completed. While the project has temporarily provided jobs in construction and timber-related industries, these are not permanent roles. As one villager put it,

“Once the dam is finished, what happens to us? Where will we work?”

(Respondent F, Nanga Entawau)

This uncertainty adds to the broader issue of economic security, as many villagers lack alternative income sources that can sustain them in the long run. Despite SEB's introduction of skill-training programs, such as handicrafts and small-scale farming, these initiatives have not translated into stable job prospects. Many villagers pointed out that they were not given guidance on how to turn their new skills into sustainable businesses or access

external markets. Without proper market connections or financial support, their ability to generate income remains uncertain.

This concern underscores a gap in long-term development planning. While the dam is expected to contribute to Sarawak's economy, there is little indication of how local communities will be economically integrated into the post-construction phase. Meaningful participation in planning could have helped align economic initiatives with the actual needs of the villagers, ensuring that development fosters security rather than displacement of the community involved.

To prevent long-term economic instability, there is a pressing need for clear employment transition strategies. This could include priority hiring within SEB's operational workforce, partnerships with local businesses to create sustainable job opportunities, and targeted skills development linked to real market demands. Without such measures, the promise of development risks being overshadowed by economic insecurity for the very people it was meant to benefit.

Furthermore, accountability measures within a top-down governance framework are often weak, as decision-making power is concentrated at higher administrative levels. While SEB and government agencies oversee project implementation, there is no clear mechanism for affected communities to hold these institutions accountable for long-term economic and social disruptions. Villagers expressed frustration that while they were invited to consultation meetings, these engagements were often symbolic rather than substantive, with decisions already predetermined before discussions took place. This stemmed back to the focus group data quote from the respondent:

"Before the Baleh Dam construction began, SEB visited our longhouse and informed us about the project. They made verbal promises that we would be employed in the dam project and that each household in the affected villages would receive financial assistance of RM1,500. However, none of these promises have been fulfilled." (Respondent R, Nanga Entawau)

According to the quote, linked to the principle of accountability of governance, requiring companies and authorities to take responsibility for the impact of their actions on local populations. SEB made several commitments to mitigate the effects of the dam, including financial compensation, employment opportunities, and livelihood programs. However, interviews and focus group discussions revealed widespread dissatisfaction regarding the actual fulfilment of these promises. According to the news by Borneo Post (2017), the legal advisor of *Pertubuhan Kebajikan Nanga Entawau Kapit* (PKNAK) reported that they faced problems where majority of the landowners had refused to sign the offer of RM 10,000 per hectare as their compensation. The situation reported as the amount requested by the villagers to the government and Sarawak Energy Berhad (SEB) for Rm 70,000 per hectare based on the market value. As from here, since 2017, the villagers are rejecting the compensation as they knew that they were going to sacrifice their land and their orchards, farming grounds, burial grounds and also their fishing grounds will be forever gone to give way for the Baleh HEP Dam. Jeffery Kumbong, the president of PKNAK, said to the press that the villagers from Nanga Entawau are willing and support the state's development, but they hope that their voices should be heard by the government as they need a win-win situation. The villagers of Nanga Entawau had to consider their livelihood, their future, the children's education and also the socio-economic wellbeing. Besides, the affected landowners requested for a all-inclusive form of compensation, not just land compensation.

Furthermore, transparency in decision-making is essential for fostering trust between developers and local communities. One of the major grievances expressed by villagers was the lack of clear and accessible information regarding the dam's long-term impact on their livelihoods. Although SEB provided general information about the project, many villagers stated that they were not given detailed explanations about how the dam would affect fishing, water quality, or land use. One respondent in a focus group discussion shared,

“They told us it was for development, but they didn’t explain what it would mean for us in 10 or 20 years.” (Respondent G, Nanga Entawau)

This lack of transparency has fueled uncertainty and anxiety among the community, as they are left unsure about how to plan for the future. Additionally, villagers mentioned that when they sought further clarification on compensation and resettlement policies, they often encountered bureaucratic delays and vague responses.

The Iban community in Nanga Entawau has expressed a mix of concerns and expectations regarding the dam's impact. While some villagers acknowledge that development is necessary progress for Sarawak's development, they also emphasize that development should not come at the cost of their security and well-being. Their main concerns include the loss of traditional livelihoods which the depletion of fish stocks and limited access to fertile land have made it difficult for villagers to maintain their traditional economic activities. Stemming back Chapter 4, happened of environmental degradation where increased deforestation, changes in river flow, and the potential for flooding have disrupted their way of life. Hence, the lack of long-term security being a major concern for the communities in Nanga Entawau where the shift from self-sustaining practices to market-dependent employment has introduced new vulnerabilities towards their livelihood.

5.3 Conclusion

Sarawak has witnessed significant economic expansion, driven by state-led development initiatives and alignment with the Sustainable Development Goals (SDGs) for 2030. A key aspect of this economic strategy is the development of large-scale hydropower projects, including the Baleh HEP Dam, which is expected to be completed by 2026. These projects aim to generate renewable energy to support heavy industries, thereby contributing to economic growth, social development, and long-term sustainability.

However, the rapid expansion of hydropower infrastructure has also resulted in the displacement of local communities, raising critical concerns about human security—particularly regarding access to a safe and sustainable environment. The socio-economic disruptions caused by such projects highlight the need for more inclusive and adaptive policy responses from Sarawak’s decision-makers. A proactive approach is essential to address these challenges, ensuring that potential risks to livelihoods and well-being are mitigated before they escalate.

While dam construction plays a crucial role in national infrastructure development, energy security, and economic progress, it also introduces non-traditional security risks that require careful governance. To achieve truly sustainable development, Sarawak’s policies must integrate a sustainable livelihood approach that prioritizes community resilience, environmental protection, and equitable resource distribution. Only through a balanced and inclusive strategy can hydropower projects contribute to both economic prosperity and long-term social well-being.

CHAPTER 6

CONCLUSION

The construction of the Baleh HEP Dam has significantly altered the socioeconomic and human security challenges of the Iban community in Nanga Entawau. This study has demonstrated that while large-scale infrastructure projects contribute to Sarawak's green economy policy, they often come at the expense of local livelihoods, cultural heritage, and economic security. The loss of ancestral burial grounds, fertile agricultural land, and traditional hunting and fishing areas has forced many villagers to migrate in search of employment, leading to social fragmentation and economic uncertainty.

The findings highlight systemic challenges faced by the local community, particularly in securing sustainable employment. Despite their experience in the timber industry, many villagers remain excluded from dam-related job opportunities due to stringent recruitment criteria and the preference for foreign labor. This exclusion, coupled with the absence of comprehensive resettlement support, has intensified economic insecurity and deepened concerns over fair governance and social justice.

Applying the security-development nexus, this study underscores the critical role of good governance, transparency, and inclusive participation in mitigating the negative impacts of hydropower development. The lack of meaningful engagement with affected communities has resulted in a top-down development approach that marginalizes local voices. To achieve truly sustainable development, policies must prioritize local capacity-building, equitable resource distribution, and long-term economic stability for displaced communities.

Moving forward, it is imperative for policymakers, Sarawak Energy Berhad (SEB), and relevant stakeholders to implement more inclusive development strategies. Providing skills training, ensuring fair employment opportunities, and strengthening participatory decision-making processes will be crucial in fostering both economic security and environmental sustainability. Only through a balanced approach that integrates economic growth with social justice can Sarawak's development agenda align with the principles of sustainability and equitable progress.

This research has also shed light on the concerning disconnect between security and development in Nanga Entawau, emphasizing how the Baleh HEP Dam project has environmentally and economically impacted the Iban community. As highlighted throughout this study, the Ibans have resided in the region since the 18th century, deeply connected to their land, rivers, and forests. While the project aims to propel Sarawak towards economic prosperity, it has also severely disrupted the traditional way of life, leading to economic instability, food insecurity, and cultural displacement.

The human security consequences of dam construction have further exacerbated these challenges. Water contamination has not only affected the community's access to clean water but has also disrupted the delicate riverine ecosystem essential for their fishing practices. Soil erosion has degraded agricultural land, reducing food production and economic self-sufficiency. Biodiversity loss has also impacted traditional medicine practices and cultural values tied to the natural environment.

Additionally, the anticipated economic benefits of the dam have not materialized for the affected community. Instead, rising living costs, unemployment, and forced migration have placed further strain on the livelihoods of Nanga Entawau residents. Many villagers lack the certifications required for employment at the dam construction site, despite their

skills and experience in the timber industry. The state must address this issue by providing targeted vocational training programs that equip the local workforce with necessary qualifications to secure stable employment.

The Security-Development Nexus and Policy Implications

This study emphasizes the need for a security-development framework that prioritizes community involvement, responsible resource management, and comprehensive environmental and social impact assessments. Just as traditional security frameworks focus on identifying and mitigating risks, development strategies must integrate human security concerns to ensure long-term well-being for all stakeholders.

The Baleh HEP Dam should serve as a lesson for future development projects in Sarawak. Economic progress should not come at the expense of human security. To achieve meaningful and sustainable development, Sarawak must adopt a more human-centric approach, prioritizing participatory governance and community engagement in decision-making processes. Public outreach and awareness campaigns should be conducted at multiple levels—federal, state, and local—to ensure affected communities are informed, consulted, and adequately supported before, during, and after project implementation.

Furthermore, risk reduction strategies must be implemented to mitigate the adverse effects of hydropower projects on indigenous communities. While it may not be possible to eliminate all challenges associated with displacement and environmental degradation, effective governance and comprehensive mitigation plans can prevent further neglect and marginalization of affected populations.

For the Iban community—not only in Nanga Entawau but across Sarawak—the protection of their cultural heritage, livelihoods, and ancestral lands must remain a priority.

Human rights and freedoms should be safeguarded throughout the dam development process. As Sarawak moves toward a sustainable development model, it must recognize that economic growth and human security are not mutually exclusive but rather interdependent.

Hence, this study highlights the urgent need to integrate the security-development nexus into all future development policies and hydropower projects. The Baleh HEP Dam case serves as a stark reminder that even projects aimed at promoting clean energy can have destructive consequences for human security if they are not planned and executed responsibly.

Future research should continue to explore the broader implications of large-scale dam projects on human security within Sarawak and beyond. Governments and policymakers must move beyond a top-down approach and actively listen to the voices of affected communities. A human-centric development approach—one that balances economic growth with social equity and environmental stewardship—is essential for achieving truly inclusive and sustainable progress.

Ultimately, the key question remains: Can development truly be considered progress if it undermines the safety and well-being of the very communities it is meant to serve? The case of the Baleh HEP Dam underscores the need for a fundamental shift in how development is conceptualized and implemented—placing human security, environmental sustainability, and social justice at the core of Sarawak’s future growth strategies.

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