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Sahmakum Teang Tnaut Organization · a Cambodian Urban NGO

ENVIRONMENTAL ISSUES AND URBAN POOR COMMUNITIES:

A Comparative Study of
AWARENESS,
PERCEPTION,
SOLUTIONS



ABSTRACT

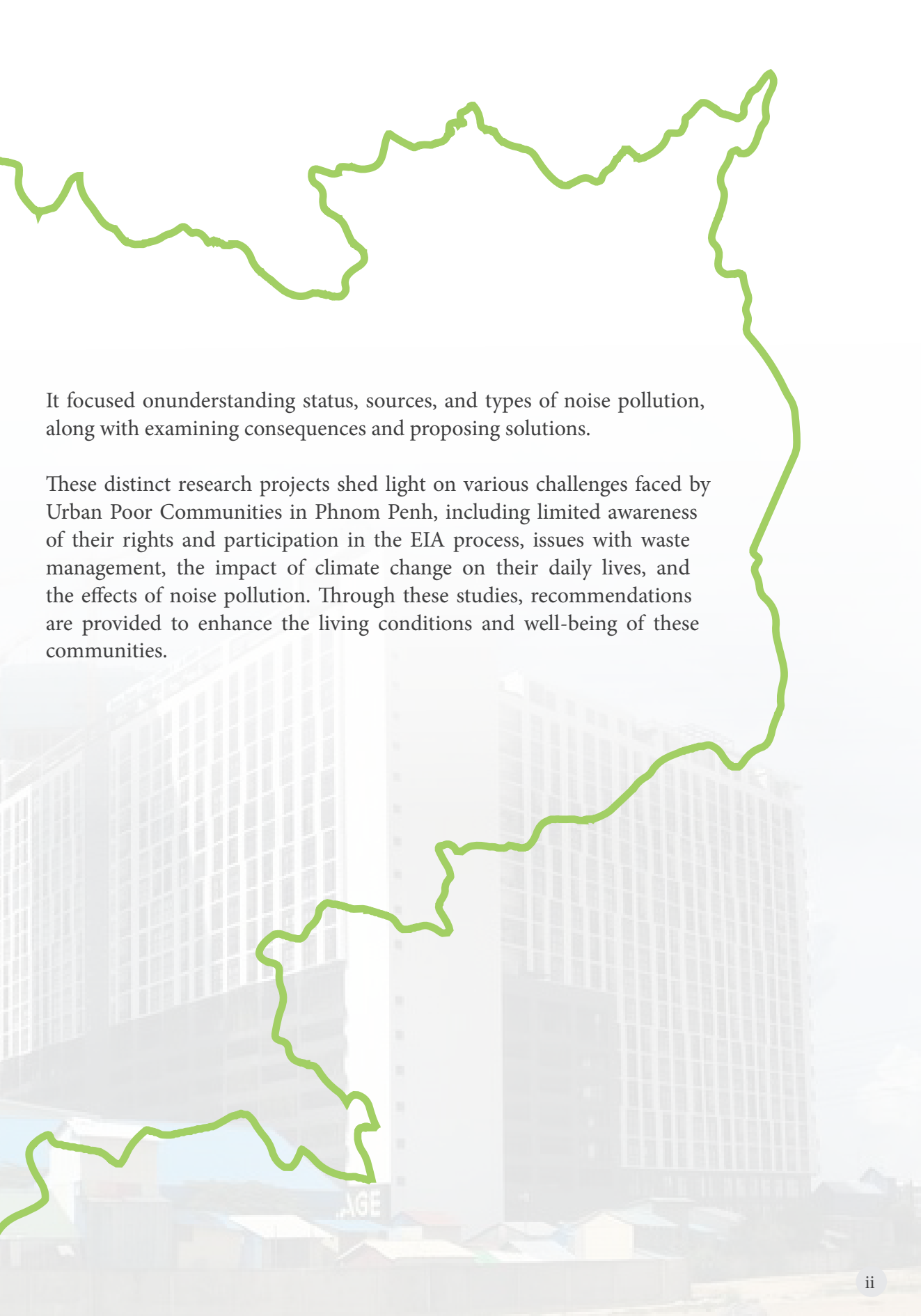
This collection of studies delves into various aspects affecting Urban Poor Communities in Cambodia.

The first study explores the awareness of three Urban Poor Communities in Cambodia regarding their participation rights in the Environmental Impact Assessment (EIA) process. Findings indicate limited awareness, citing barriers like communication gaps and insufficient information. The study recommends improving public participation through heightened awareness, legal framework strengthening, and enhanced transparency.

A second study investigated living conditions and challenges in a poor community in Phnom Penh amid garbage and contaminated water. It seeks to identify the causes of waste, providing valuable insights for addressing this community challenges and similar areas in Phnom Penh.

A third research project investigates the challenges and impacts of climate change on two impoverished communities. It aims to understand communities' adaptation and provide recommendations for viable solutions. Interviews highlight erratic climate conditions, inadequate drainage, business challenges, and increased water and electricity costs.

And the fourth research project investigated noise pollution challenges and effects in two communities Phnom Penh.



It focused on understanding status, sources, and types of noise pollution, along with examining consequences and proposing solutions.

These distinct research projects shed light on various challenges faced by Urban Poor Communities in Phnom Penh, including limited awareness of their rights and participation in the EIA process, issues with waste management, the impact of climate change on their daily lives, and the effects of noise pollution. Through these studies, recommendations are provided to enhance the living conditions and well-being of these communities.



អង្គការសហគមន៍បរិស្ថាន

Sahmakum Teang Tnaut Organization · a Cambodian Urban NGO

Research Report 2023

EXAMINING URBAN POOR COMMUNITIES' AWARENESS

AND PERCEPTION OF PARTICIPATING IN ENVIRONMENTAL IMPACT ASSESSMENT

Table OF Content

	EXECUTIVE SUMMARY	1
	LIST OF ABBRVIATION.....	2
01	INTRODUCTION.....	3
	TARGET COMMUNITIES.....	6
02	2.1 Prek Takong 60m Community.....	6
	2.2 Prek Takong 3 Community.....	7
	2.3 Beoung Trobek Phum 4 Community.....	8
	LITERATURE REVIEW.....	9
03	3.1 The overview of EIA.....	9
	3.2 Cambodia's EIA legal frameworks.....	9
	3.3 Public Participation in the EIA process in Cambodia.....	12
	3.4 Key challenges of public participation in EIA in Cambodia.....	14
	3.5 Public Participation in EIA of Hydro-power Projects in Cambodia.....	14
	3.6 Right to Access Information as a Welfare Right in EIA.....	15
	3.7 The Protect, Respect and Remedy Framework.....	16
	RESEARCH METHODOLOGY.....	17
04	4.1 Sample Selection.....	17
	4.2 Data Collection Methods.....	18
	4.3 Data Analysis Method.....	18
	4.4 Empirical Findings.....	18
	4.5 Ethical Considerations.....	20
	FINDINGS AND DATA ANALYSIS.....	21
05	5.1 Respondents' answers to what is EIA and their rights related to EIA?....	21
	5.2 A Condominium Project in Close Proximity to Prek Takong 60m Community.....	21
	5.3 A Gated Community development project situated near the Prek Takong 3 community.....	22

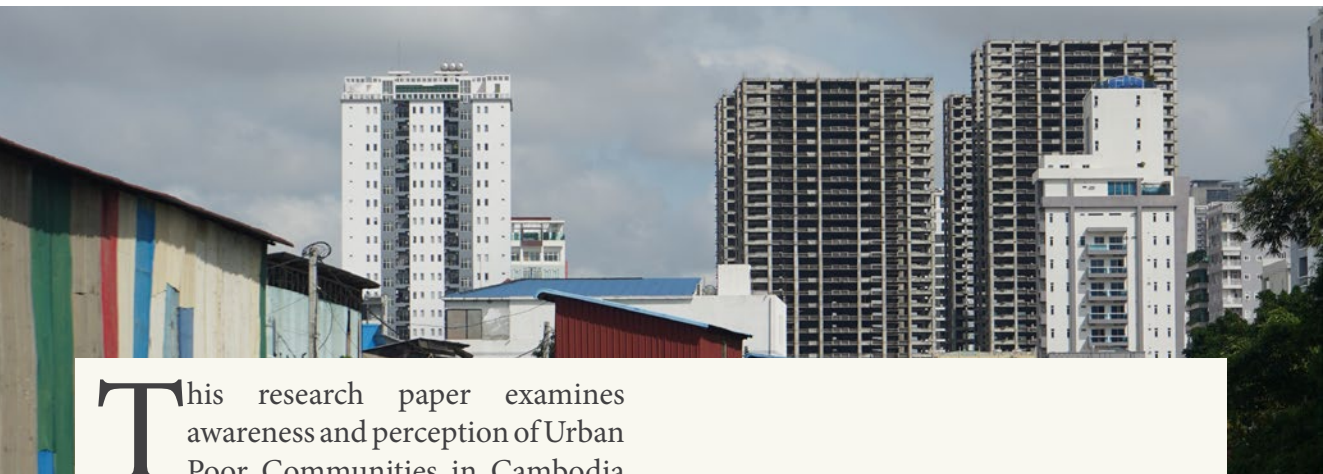
Table OF Content

- 5.4 A Beoung Trabek Reservoir Near Beoung Trabek Phum 4 Commun....23
- 5.5 Comparative Analysis of Awareness, Perception, and Barriers in Participation in.....25
 - 5.5.1 Awareness and Perception.....25
 - 5.5.2 Barriers to Participation.....25
- 5.6 Level of Awareness and Perception of Urban Poor Community of Participating in EIA Process.....26
- 5.7 Barriers Preventing Urban Poor Communities from Participating in EIA Process.....26
 - 5.7.1 Lack of Awareness and Knowledge.....27
 - 5.7.2 Lack of Communication and Information Dissemination.....27
 - 5.7.3 Lack of Information and Invitation to participate in EIA Process.....27
 - 5.7.4 Lack of Willingness to Exercise their Rights.....27

- 06 CONCLUSION.....28

- 07 RECOMMENDATIONS.....29

EXECUTIVE SUMMARY



This research paper examines awareness and perception of Urban Poor Communities in Cambodia regarding their right to participate in the Environmental Impact Assessment (EIA) process. The paper highlights the importance of public participation in achieving sustainable development and identifies the challenges that hinder effective involvement of the public, particularly Urban Poor Communities. The study uses a qualitative research method, including interviews and group discussions, to gather data from three Urban Poor Communities in Cambodia. The findings reveal limited awareness among community members about their right to participate in the EIA process and highlight barriers such as lack of communication, information dissemination, and willingness to exercise their rights. The paper concludes by providing recommendations to enhance public participation in the EIA process, including raising awareness, strengthening legal frameworks, and promoting transparency.

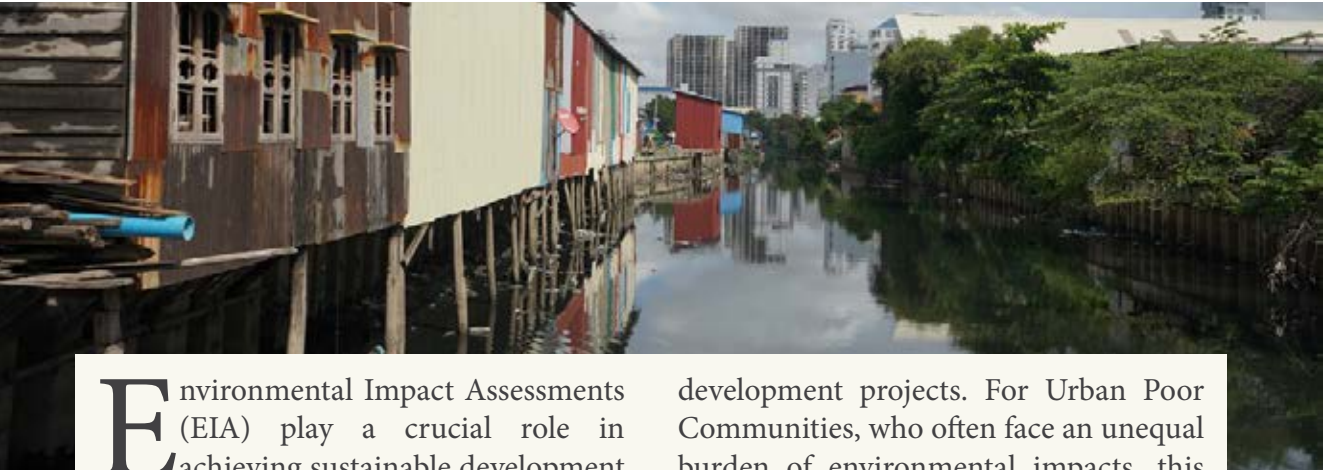
These recommendations aim to ensure that the voices and concerns of Urban Poor Communities are heard and included in the decision-making processes concerning development projects.



LIST OF ABBREVIATION

EIA	<i>Environmental Impact Assessment</i>
EMP	<i>Environmental Management Plan</i>
EPNRM	<i>The Law on Environmental Protection and Natural Resource Management</i>
LNOB	<i>Leave No One Behind</i>
MOE	<i>Ministry of Environment</i>
SDG	<i>Sustainable Development Goal</i>
STT	<i>Sahmakum Teang Tnaut</i>
WCARRD	<i>The World Conference on Agrarian Reform and Rural Development</i>

1. INTRODUCTION



Environmental Impact Assessments (EIA) play a crucial role in achieving sustainable development by evaluating and managing the potential environmental impacts of development projects. In Cambodia, a country that values its abundant natural resources and seeks to balance economic growth with environmental preservation, the implementation of EIA is governed by a series of legal instruments. These include the Law on Environmental Protection and Natural Resources Management, Sub-Decree No. 72 on Environmental Impact Assessment, and Prakas No. 021 on the classification of Environmental Impact Assessment for development projects. These legal frameworks provide the basis for regulating development projects and ensuring that environmental risks are identified, mitigated, and managed effectively¹.

EIA is essential in protecting the rights and well-being of Urban Poor Communities. Firstly, EIA plays a crucial role in identifying and mitigating potential environmental impacts arising from

development projects. For Urban Poor Communities, who often face an unequal burden of environmental impacts, this aspect of EIA is very important. For instance, when conducting an EIA for a new industrial project, potential air pollution issues that could adversely affect nearby Urban Poor Communities may be identified. Equipped with this information, appropriate mitigation measures can be developed, such as installing pollution control equipment or implementing green initiatives like planting trees to purify the air. The health and quality of life of Urban Poor Communities can be better protected if concerns are addressed proactively.

Secondly, EIA ensures that development projects align with the specific needs and interests of Urban Poor Communities, thereby preventing projects that could lead to displacement or harm within these communities.

¹ Principles of EIA. U.S. Agency for International Development. (2023, February 24). <https://www.usaid.gov/environmental-procedures/environmental-compliance-esdm-program-cycle/principles-eia>

When conducting an EIA for a new road project, for instance, potential impacts on the livelihoods of individuals residing and working along the proposed route may be assessed. This information can then be utilized to design a project that minimizes adverse effects, such as providing fair compensation. By integrating the concerns and well-being of Urban Poor Communities into the planning process, EIA helps to create sustainable development projects that genuinely benefit the vulnerable population.

Furthermore, the EIA process fosters trust and cooperation between communities and project developers, ensuring that development initiatives respect the needs of all stakeholders. Through public meetings and consultations facilitated during the EIA process, community members have an opportunity to voice their concerns and provide input on proposed projects. This engagement not only builds trust and understanding between the community and developers. The active involvement of Urban Poor Communities in the Environmental Impact Assessment (EIA) process plays a vital role in ensuring their concerns are addressed.

EIA initiatives significantly influence environmental quality, which directly impacts the health and well-being of communities. Engaging the public in EIA is seen as a means of promoting democracy and enhancing the effectiveness of the assessment process. Nevertheless, certain obstacles hinder public participation, particularly for Urban Poor Communities.

It is crucial to guarantee their access to information and provide them with opportunities to express their opinions throughout the EIA process. By doing so, it can enhance the overall quality, comprehensiveness, and accuracy of EIA, thus ensuring its contribution to sustainable development.

The effectiveness of the Environmental Impact Assessment (EIA) process in Cambodia is dependent upon several factors, including awareness and perception of local communities regarding their right to participate. Public involvement plays a pivotal role in the EIA, enabling the incorporation of concerns and opinions from affected Urban Poor Communities into decision-making processes. However, the extent of local communities' awareness and their perspectives on the EIA process have yet to be substantively examined.

This study aims to analyze the extent of awareness and perception among Urban Poor communities regarding their right to participate in the Environmental Impact Assessment (EIA) process in Cambodia. By understanding the level of awareness and community perspectives, we can



identify any challenges or gaps that may hinder public involvement in the EIA process. Addressing these challenges is crucial to ensure transparency, accountability, and the legitimacy of the EIA process, thereby facilitating sustainable development in Cambodia.

Given the time constraints and limited resources for this research, this paper will utilize a qualitative research approach for various reasons. Qualitative research methods, such as key interviews, group discussions, and observations, allow for a comprehensive understanding of intricate patterns. They offer flexibility by requiring smaller sample sizes and less extensive data analysis. Moreover, qualitative methods prioritize contextual comprehension of the research problem and are less resource intensive. Additionally, they are generally more time-efficient in terms of data collection and analysis. Considering these factors, qualitative methodology is suitable for this research.

Research objectives of this research are: 1) Understand the level of awareness and perception of Urban Poor communities regarding their right to participate in the EIA process; 2) Identify the barriers that hinder Urban Poor communities' participation in EIA process; and 3) Craft recommendations to enhance Urban Poor Communities' right to participate in the EIA process.

The outcomes of this research will enhance the existing understanding of EIA in Cambodia by shedding light

on awareness and perception of Urban Poor Communities. These findings will inform policymakers, project owners, and relevant stakeholders about the efficacy of public involvement in the EIA process. Furthermore, this research will offer insights for enhancing the EIA process and facilitating meaningful engagement of Urban Poor Communities in decision-making processes concerning development projects.

The aforementioned introduction provides a comprehensive overview of the importance of EIA in achieving sustainable development in Cambodia and emphasizes the role of public participation in the EIA process. In order to delve deeper into the awareness and perceptions of Urban Poor Communities regarding their right to participate in EIA, it is essential to examine the existing literature on EIA in Cambodia and the challenges associated with public participation. This literature review aims to synthesize the key findings and insights from relevant studies, legal instruments, and international principles that inform the understanding of EIA and public participation in Cambodia.

By analyzing the existing literature, a better understanding of the current state of public participation in the EIA process can be gained and gaps or areas for improvement can be identified.



2. TARGET COMMUNITIES



Based on Profiles of STT's 2022 Target Communities report, this research is focusing on three vulnerable communities in Phnom Penh that face significant challenges and uncertainties². The Prek Takong 60m Community is at risk of eviction due to ongoing sand filling activities and lacks proper drainage systems. The Prek Takong 3 Community experiences uncertainty regarding land ownership and the development of a satellite city. The Boeung Trabek Phum 4 Community is threatened with displacement due to accusations of illegal occupation on public state land. Despite these difficulties, the communities strive for improved living conditions and the protection of their rights. Additionally, there are construction projects in close proximity to these communities.

2.1 Prek Takong 60m Community

Prek Takong 60m is an urban poor community located near Beoung Tompun Lake. The community is currently facing the threat of eviction due to sand filling activities carried out by AZ Group, ING

Holdings, and the construction of Hun Sen Blvd. One of the key challenges faced by the community is the absence of proper drainage systems, which has led to some houses being surrounded by sewage water. With a population of 238 people, mostly Khmer, the community also lacks land tenure and information about its future.

In terms of access to services, the community has nearby schools, health facilities, and a free healthcare program. However, there are several infrastructure challenges that need to be addressed. These include limited access to water and electricity, inadequate street lighting, narrow roads, deteriorating housing conditions, and a lack of sewage systems. Moreover, the community is concerned about eviction due to ongoing development projects. Residents also face security concerns and pollution issues.

The top priorities for the community are resolving eviction concerns, addressing waste and drug abuse issues, and mitigating fire risks.

² Brief Profiles of STT's Target Communities for 2022: January 2022

The community has expressed a desire to relocate to a new settlement. However, they have not received any response from the local authorities regarding this matter. As a result, the community plans to raise their concerns with the Prime Minister's cabinet in order to find a resolution and secure fair compensation for resettlement.

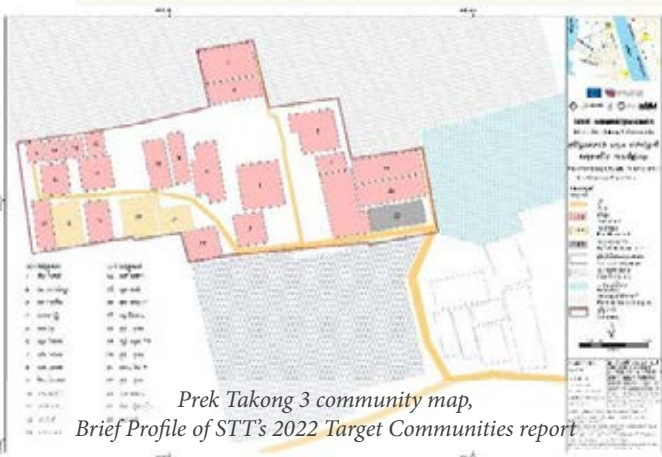
In a separate instance, the Prek Takong 60m community has encountered a different set of challenges as a result of the construction of multiple condominium buildings in close proximity to their settlement. This construction project began around four years ago in 2019 and has had significant negative impacts on the community. Residents have been forced to endure daily noise pollution, accumulation of garbage, improper disposal of water waste from the condos, sand and dust storms, and even incidents of metal debris falling onto their homes. While some affected parties have received limited financial compensation, many others have not received adequate assistance to cope with the adverse consequences of these construction activities.

2.2 Prek Takong 3 Community

Prek Takong 3 Community, an urban settlement in Sangkat Chak Angre Leu, Khan Meanchey, Phnom Penh, comprises 27 families totaling 133 individuals engaged in various occupations, including factory work, construction, and civil service.

However, their future is uncertain due to issues concerning land ownership and the development of a satellite city around Boeung Tompun Lake. Situated between National Road No. 2 and Samdech Hun Sen Blvd, Prek Takong 3 Community was historically surrounded by the lake, which has since been reclaimed, resulting in severe flooding during the wet season. The residents face numerous challenges, such as limited access to education, healthcare, and proper waste management. Despite the hardships, the community demonstrates remarkable resilience and has established itself under the Human Rights Based Spatial Planning Project. They strive to overcome poverty, secure land ownership, improve living conditions, and address other pressing issues.

Considering these challenges, the community also encountered significant consequences due to the construction of a gated community in close proximity. This development, which took place in 2015, had a detrimental impact on the community's sewerage system, leading to the flooding of the Prek Takong 3 area. The destructive outcome can be attributed to insufficient inspection during the evaluation phase and the lack of engagement from the Prek Takong



3 community in the decision-making process related to the construction project.

2.3 Beoung Trabek Phum 4 Community

Boeung Trabek Community, situated in Phnom Penh's Chamkarmorn district, has been enduring the looming threat of displacement since 2009. The Municipality of Phnom Penh has accused the residents of illegally occupying public state land, leaving them uncertain about their future. With approximately 600 houses and families, the community encompasses around 2,400 individuals, predominantly Khmer, engaging in various occupations, from construction workers and vegetable sellers to civil servants and factory workers.

The challenges faced by the Boeung Trabek Community are multifaceted, including housing and land tenure issues that have persisted since 2009. Despite their attempts to register their land through the systematic registration process, relevant authorities have shown limited responses.

While access to some services like schools, healthcare centers, and markets is available, the community faces other problems such as inadequate street lighting, limited sanitation infrastructure, and seasonal flooding.

Moreover, the community grapples with hazards that endanger the health and safety of its residents. Polluted water sources and the proximity to a garbage dump contribute to the overall deteriorating

living conditions. Additionally, crime-related concerns, including drug abuse, domestic violence, and burglary, further burden the community.

As reported by the local residents, the situation for the Boeung Trabek Phum 4 community has taken a turn for the worse. In close proximity to the community, there exists a vast excavated area of considerable scale whose purpose remains unknown. Alarming, these excavations have been conducted dangerously close to certain residential houses, resulting in visible cracks and instilling fears among residents of potential collapses.

Regrettably, the community's earnest attempts to obtain pertinent information from local authorities concerning the hazardous excavated site have been met with apathy and reluctance. Both lower-level and higher-level local authorities have failed to provide any essential details, exacerbating concerns faced by the Boeung Trabek Phum 4 community.



3. LITERATURE REVIEW

3.1 The overview of EIA

Environmental Impact Assessment (EIA) is a tool for assessing the potential environmental impacts of proposed development projects before they can be carried out. The EIA process involves identifying and evaluating every possible environmental impact that comes with those development projects.

The main purpose of the EIA is to inform decision-makers, all relevant stakeholders, and the public about the potential environmental consequences of a project and to ensure that potential adverse effects and consequences are managed and mitigated throughout the process³. In Cambodia, the EIA process is governed by the Law on Environmental Protection and Natural Resources Management in 1996⁴, Sub-Decree No. 72 on Environmental Impact Assessment in 1999⁵, Prakas No. 021 on the classification of environmental impact assessment for

development projects in 1999⁶, and Royal Decree no. 0623/007 on Environmental and Natural Resources Code⁷.

These legal instruments provide the basis for regulating development projects and require projects to undergo EIA. A project owner must conduct an EIA and pre-feasibility study and then submit it to the Ministry of Environment for review and approval. Furthermore, the Leave No One Behind (LNOB) principle in the SDGs recognizes marginalized groups, including Urban Poor Communities, who are disproportionately affected by adverse environmental impacts. EIA is crucial for protecting these communities by identifying risks such as air pollution, water pollution, flooded water, and sound pollution.

3.2 Cambodia's EIA legal frameworks

Environmental Impact Assessment (EIA) is a crucial tool in the implementation of development projects. In Cambodia,

³ Principles of EIA. U.S. Agency for International Development. (2023, February 24).

<https://www.usaid.gov/environmental-procedures/environmental-compliance-esdm-program-cycle/principles-eia>

⁴ The Law on Environmental Protection and Natural Resources Management in 1996

⁵ Sub-Decree No. 72 on Environmental Impact Assessment in 1999

⁶ Prakas No. 021 on the classification of environmental impact assessment for development projects in 1999

⁷ Royal Kram no. 0623/007 on Environmental and Natural Resources Code

several legal instruments at the national and international levels, govern the EIA process. These include the Cambodian Constitution, the Law on Environmental Protection and Natural Resources Management, Sub-Decree No. 72 on Environmental Impact Assessment, Prakas No. 021 on the classification of Environmental Impact Assessment for development projects, Royal Decree no. 0623/007 on Environmental and Natural Resources Code, and the Leave No One Behind (LNOB) principle in the SDGs.

The State shall protect the environment and balance of abundant natural resources and establish a precise plan of management of land, water, air, wind, geology, ecological system, mines, energy, petroleum and gas, rocks and sand, gems, forests and forestry products, wild-life, fish and aquatic resources.⁸

This constitutional provision posits a legal ground for Environmental Impact Assessment (EIA) in Cambodia and highlights the importance of incorporating environmental factors into the development planning processes.

The Law on Environmental Protection and Natural Resources Management (EPNRM), enacted in 1996, dedicates a whole chapter, specifically for Environmental Impact Assessment in Cambodia. Chapter 3 of EPNRM, consisting of two important articles, which are article 6 and 7, focusing on how Environmental Impact Assessment is required for every public or private projects, and needs to be examined and

reviewed by the Ministry of Environment. This law also mentions that the procedure of the implementation of Environmental Impact Assessment will be determined by the subsequent Sub-Decree proposed by the Ministry of Environment, which is the Sub-Decree No. 72.



Sub-Decree No. 72 on Environmental Impact Assessment, issued in 1999, provides detailed procedures for the implementation of Environmental Impact Assessment for every public or private development projects in Cambodia. Article 1 of this Sub-Decree mentions its objectives, one of which is the encouragement of the public to participate in the EIA process, and have their concerns heard and addressed. Furthermore, this Sub-Decree outlines the responsibilities of the various government agencies involved in the Environmental Impact Assessment process, including the Ministry of Environment, relevant ministries, project owners, and Environmental Impact Assessment consultants. The Sub-Decree also provides guidelines for the EIA process. Guidelines include project screening and scoping, the development

⁸ The Cambodian Constitution

of the Environmental Management Plan (EMP), the examination and evaluation of the EIA report, the determination of approval or rejection for the EIA report, the subsequent monitoring of the project, compliance, and enforcement measures. In addition, the Sub-Decree provides three articles in Chapter 7, (articles 29/30 and 31,) highlighting the penalties that project owners are subject to if there are any misconducts.

The Sub-Decree refers to articles 20/21/22/23 and 25 of Charter 5 of the Law on Environmental Protection and Natural Resources Management that discuss the details of the penalties. In this Sub-Decree, there is a general encouragement for public involvement, but no specific guidelines for this. Moreover, the Sub-Decree lacks provisions for considering alternatives or disclosing information⁹.

This was addressed further in a relevant Prakas, known as Prakas No. 376 on general guidelines for developing initial and full environmental impact assessment reports¹⁰.



Prakas No. 376 issued in 2009, is titled ***"General Guidelines for Developing Initial and Full Environmental Impact Assessment Reports."***

It provides a detailed public participation process in its Annex, Chapter 5. It states that project owners must disclose information of their development project to local authorities and local communities. Project owners will also receive comments/feedback from Non-governmental Organizations and relevant ministries, and they must consult with local communities as well.

Prakas No. 021 was released by the Ministry of Environment (MOE) in 2020, titled ***"Assessment for Development Project."*** This serves as an additional revision to Sub-Decree No.72. This Prakas provides further guidelines and updates in the process of assessing and evaluating the types of development projects whether they are subject to Full Environmental Impact Assessment or Initial Environmental Impact Assessment.

Prakas No. 021 includes a table of the Classification of Environmental Impact Assessment for Development Projects, which specifically states that every type of building is subject to Initial Environmental Impact Assessment if its area is between 15,000 sqm to 45,000 sqm, subject to the Full Environmental Impact Assessment if its area is larger than 45,000 sqm, and subject to an Environmental Protection Contract only if its area is between 3,000 sqm to 15,000 sqm.

⁹ Contemporary Environmental Law in Cambodia and Future Perspectives, Chapter: Environmental Impact Assessment in Cambodia – Law and Practice, Matthew Baird, March 2020, pp. 43-52.

¹⁰ Prakas No. 376 on general guidelines for developing initial and full environmental impact assessment reports

At international level, the Leave No One Behind (LNOB) principle constitutes an important foundation within the Sustainable Development Goals (SDGs)¹¹. It recognizes the needs of those who are marginalized and vulnerable. This includes people living in Urban Poor Communities, who are often disproportionately affected by environmental impacts. Among these individuals are those residing in Urban Poor Communities who often bear a disproportionate burden due to environmental impacts. To ensure adherence to this principle throughout development projects, Environmental Impact Assessment (EIA) emerges as an important instrument. Its significance further deepens when considering Urban Poor Communities specifically since they encounter heightened vulnerability to environmental impacts. Located on floodplains or in close proximity to industrial areas or contaminated land sites. Urban Poor Communities face heightened exposure to adverse environmental impacts. By conducting an EIA process, Urban Poor Communities can be protected against the environmental impacts coming from development projects. For instance. An EIA may uncover issues associated with air pollution or water contamination. Consequently, adjustments to the project – such as incorporating pollution control equipment – can be made to mitigate these risks.

3.3 Public Participation in the EIA process in Cambodia

The World Conference on Agrarian Reform and Rural Development (WCARRD) held in 1979 concluded that participation of the people in institutions and systems which govern their lives is a basic human right and also essential for realignment of power in favor of disadvantaged groups and for social and economic development¹². Public participation as a key tool for achieving sustainable development is very important. Without taking into account public concerns, even if the development is progressing, it would not promote equity and justice for those who have been negatively affected by it. That is why public participation has become an important aspect of EIA.



¹¹ Unsdg | Leave no one behind. UN Sustainable Development Group. (n.d.). <https://unsdg.un.org/2030-agenda/universal-values/leave-no-one-behind>

¹² INTRODUCTION. Food and Agriculture Organization. (n.d.). <https://www.fao.org/3/T1955E/t1955e02.htm>

Based on Prakas No. 376 on general guidelines for developing initial and full environmental impact assessment reports, public participation refers to participation that encompasses the involvement of various stakeholders involved in the development project, such as ministries, local authorities, relevant departments, project owners, consulting companies, representatives of affected individuals, and Non-Governmental Organizations working in the project area(s).

Furthermore, according to Royal Decree no. 0623/007 on the Environment and Natural Resources Code, the decree specifically mentions the Environmental Impact Assessment (EIA). Based on Book 5, Title 2, Chapter 1, Article 649 on Environmental Impact Assessment, the objective of this particular article is to ensure the effectiveness of the EIA process. It states that public participation must be included in the EIA process to prevent or mitigate adverse impacts on the environment and society caused by public and private investment projects¹³.

The objectives of public participation in the EIA process are also clearly defined in chapter 5, article 127 of the 11th Draft Environment and Natural Resources Code. It states that all affected and relevant persons are entitled to full disclosure of a project's information from project owners.

Furthermore, they are entitled to participate in discussions and activities related to projects and observe the

project's activities. Project owners need to include local authorities, civil society, community representatives, and affected persons to; 1) identify the importance of environmental, economic, and cultural aspects; 2) gather all concerns and act on them; 3) consider alternatives and mechanisms that would mitigate any risks.

Public participation is an essential aspect of the Environmental Impact Assessment. Public participation has the following benefits: 1) improves the quality of decisions: by incorporating local communities, local authorities, affected persons, and all relevant local stakeholders. Project owners and decision makers could get a bigger picture of risks; 2) enhances legitimacy of decision-making. In including all relevant stakeholders, decision makers can be more careful about their decisions. This helps legitimize the decisions as well, since all concerns and opinions of relevant stakeholders are being heard and addressed; 3) improves the process of implementation: with the involvement of all relevant stakeholders, the process of implementation is more likely to run free from disagreements; 4) reduces lawsuits and conflicts: if all concerns are dealt with, the chance of a lawsuit greatly decreases; 5) social learning and education: participating in decision making processes, teaches people how to govern themselves in a democratic society.

¹³ Royal Kram no. 0623/007 on the Environment and Natural Resources Code

3.4 Key challenges of public participation in EIA in Cambodia

The working paper prepared by the Institute for Global Environmental Strategies, on legal frameworks and challenges of EIA in multiple Asian countries states multiple challenges regarding public participation in the EIA process in Cambodia¹⁴.

The paper first highlights two points that are not explicitly stated in the Sub-Decree. These are timing, and the extent to which the public can participate in the EIA process. Timing refers to the specific stages in the EIA process when the public should participate. This can include public consultations, meetings, or receiving public comments. However, the Sub-Decree fails to outline a clear framework for these activities, leaving it open to interpretation and potentially leading to inconsistencies in actual practices. The second point pertains to the degree of public participation in the EIA process. The Sub-Decree fails to provide a clear framework for this as well.

Despite anticipation that the public would receive final EIA reports, this has not been the case. These reports contain crucial information about the potential environmental consequences of projects under consideration.

Lack of transparency and accountability is a key issue. Final reports should be shared to the public, and the draft of EIA should be shared to non-governmental organizations for comments and feedback.

Although there are no clear frameworks for public participation in the Sub-Decree, the Cambodian Ministry of Environment did provide verbal instructions on how public participation could be implemented in project stages: during the project screening, the assessment stage, and after the final assessment, to address potential risks and mitigation measures. However, there are no official written instructions.

3.5 Public Participation in EIA of Hydro-power Projects in Cambodia

According to Han Xia's paper on *The Role and Problems of Environmental Impact Assessment in Governing Hydro-Power Projects in Cambodia*, it is evident that the public participation in hydro-power projects in Cambodia is very limited¹⁵. This is due to several factors highlighted in the paper. One key reason is the lack of an effective means for the public to access project information, including the absence of openly accessible websites for project-related documents such as IEE



¹⁴ Strengthening EIA in Asia, Discussion Paper, Working paper prepared for the Asia EIA Conference 2016 in Nagoya, Japan, Authors: Daisuke SANO, Ikuko MATSUMOTO, Akiko URAGO, Yasuo TAKAHASHI, Naoko GENJIDA, May 2016, Institute for Global Environmental Strategies

¹⁵ Xia, H. (2020, April 9). The role and problems of Environmental Impact Assessment in governing Hydro-power projects in Cambodia. Beijing Law Review. <https://doi.org/10.4236/blr.2020.112031>

or EIA reports. Additionally, officials responsible for providing this information often exhibit reluctance, claiming that the Ministry of Environment (MoE) does not bear the responsibility, and has to go through complex bureaucratic processes to obtain the necessary documents, discouraging public engagement. Furthermore, there is limited awareness among local communities about their right to participate in public consultation processes, and opportunities for meaningful consultations are scarce. Societal biases, such as gender discrimination, further restrict the participation of certain groups like women. The complexity of project-related information, coupled with its limited availability, also hinders public involvement, as individuals find it challenging to understand technical language and complex content. Previous negative experiences, such as the Kamchay Hydro-power Dam project, where public participation was lacking, have contributed to a lack of trust in the EIA process, further diminishing motivation for public engagement. These factors collectively contribute to the overall limited public participation in the EIA process in Cambodia.

3.6 Right to Access Information as a Welfare Right in EIA

According to Kay Mathiesen's paper on Access to Information as a Human Right, the right to access information is not only considered a liberty right but also a welfare right¹⁶. "Welfare" rights encompass the provision of specific goods, services, or support to individuals, ensuring

their overall well-being. By possessing the right to access information, Urban Poor Communities can lawfully obtain information about development projects that are being undertaken around their communities. This empowers them to request information regarding the objectives of the projects, potential impacts, and strategies for mitigating those effects.

This right significantly enhances the effectiveness of Environmental Impact Assessment (EIA) processes in Cambodia by empowering the public, especially Urban Poor Communities, to the fullest extent possible. This empowerment is crucial in ensuring their well-being within the context of Cambodia.



¹⁶ Mathiesen, Kay; Access to Information as a Human Right (September 7, 2008). Available at SSRN: <https://ssrn.com/abstract=1264666> or <http://dx.doi.org/10.2139/ssrn.1264666>

3.7 The Protect, Respect and Remedy Framework

The Protect, Respect and Remedy framework, established in 2008 by John Ruggie, the UN Special Representative on Business and Human Rights, encompasses a set of principles formulated by the United Nations to establish the obligations of both states and businesses in safeguarding human rights within the realm of economic development¹⁷. This framework is founded on three fundamental pillars.

Firstly, the State's duty to protect necessitates that governments uphold human rights by preventing potential abuses by external entities, including businesses. This responsibility encompasses the formulation and enforcement of laws and regulations designed to protect human rights. Secondly, the responsibility of corporations to respect human rights emphasizes the duty of businesses to uphold human rights across their operations. This includes refraining from contributing to human rights abuses and addressing any negative human rights impacts that may arise from their activities.

Lastly, the framework highlights the importance of ensuring that individuals who experience human rights violations by businesses have access to appropriate remedies. This includes both judicial and non-judicial avenues for seeking compensation. It encompasses the right to express grievances to the business involved, the right to seek legal redress, and the right to receive compensatory measures. The Protect, Respect and Remedy framework has received endorsement from the UN Human Rights Council, governments, and businesses globally, serving as an important instrument in protecting human rights within economic contexts.

In Cambodia, this framework has played a crucial role in heightening awareness about the human rights obligations of businesses. Additionally, it has facilitated constructive dialogue between corporations, governmental bodies, and civil society, strengthening collaborative efforts towards enhanced human rights protection.



¹⁷ UNEPFI. (2014, December). The UN Framework and Guiding Principles on Business and Human Rights. UNEP Finance initiative - human rights guidance tool for the financial sector. <https://www.unepfi.org/humanrightstoolkit/framework.php>

4. RESEARCH METHODOLOGY



This study employed a qualitative research approach to explore the level of awareness and perception of the Urban Poor Community regarding their right to participate in the Environmental Impact Assessment (EIA) process.

The research methodology included both primary and secondary data. For the primary data, semi-structured interviews with key persons and focus group discussions were conducted to gain an in-depth understanding of the participants' perspectives and experiences.

For the secondary data, literature reviews were conducted on Cambodian legal frameworks of EIA, challenges of participating in the EIA process, the Right to Access Information, and the Protect, Respect and Remedy framework. This was done to provide a more comprehensive understanding of the topic.

The following subsections outline the sample selection, data collection methods, and data analysis procedures employed in this study.

4.1 Sample Selection

The study included a sample of 45 families from three Urban Poor Communities: Prek Takong 3, Prek Takong 60m, and Boeung Trabek Phum 4. These communities were chosen based on their proximity to ongoing development projects and their representation of populations. The participants were selected through purposive sampling, ensuring a diverse range of individuals from different households within each community.

Among the 45 families, there were a total of 2 male participants, while the remaining participants were female. The inclusion of both male and female participants allows for a comprehensive understanding of the experiences and perspectives of families in these Urban Poor Communities. The participants were selected through purposive sampling, ensuring a diverse range of individuals from different households within each community.

4.2 Data Collection Methods

The primary methods used to collect data for this study involved conducting interviews with key individuals and holding group discussions. Through the interviews, we sought to gain detailed insights into the participants' understanding and perception of their right to participate in the EIA process. Key individuals, such as community leaders, representatives, and those with relevant knowledge or experience, were selected for individual interviews. The group discussions provided a platform for community members to collectively share their perspectives, concerns, and experiences.



4.3 Data Analysis Method

The collected data were analyzed using discourse analysis, which allowed for the identification of key themes, patterns, and barriers. The analysis process involved several steps. Firstly, the interview and discussion answers were written down and verified by participants, ensuring accurate representation of the participants' responses. The transcripts were carefully read multiple times to develop familiarity with the data, recognize emerging patterns, and identify any barriers.

4.4 Empirical Findings

The aim of this study was to explore the level of awareness and perception of the Urban Poor Community regarding their right to participate in the Environmental Impact Assessment (EIA) process, identify the barriers that prevent their participation, and provide recommendations. Qualitative methods were employed, including interviews with key individuals and group discussions. The sample consisted of 45 families from three Urban Poor Communities: Prek Takong 3, Prek Takong 60m, and Boeung Trabek Phum 4.

Prek Takong 3 community revealed that 25 families had limited knowledge about their rights to participate in the EIA process. Their awareness of these rights only emerged when the community was formed five years ago.

The community had experienced the unintended consequences of a nearby gated community's construction that destroyed the sewerage system eight years ago. This destruction was attributed to careless evaluation and the lack of participation from the Prek Takong 3 community. Consequently, the community has been plagued by flooding ever since the sewerage system was destroyed. Despite promises, there was no intervention from the local authorities at that time. As a result, the community had to personally bear the financial burden of pumping the water and they also had to navigate through flooded water every day. Recently, Prek Takong 3 community

received a wooden bridge from STT, and they have also requested a small, paved pathway for easier travel.

In the case of Prek Takong 60m community, five participants took part in a group discussion. It was discovered that multiple condominium buildings had been constructed next to their community, starting four years ago in 2019. The impacts included noise pollution, garbage accumulation, water waste from the condos, sand and dust storms, and even fallen metals hitting their houses' roofs (fortunately, there were no human injuries. There were some financial compensations from Condominiums; however, it was only limited to some victims, not all). Similar to Prek Takong 3, Prek Takong 60m community had limited knowledge about their right to participate in the EIA process, and they only became aware when the construction was nearly completed.

The water waste from the condos caused flooding in Prek Takong 60m community, negatively affecting their living conditions. When community members attempted to pile up soil to prevent the flooding, they were halted by the local authorities, who deemed the action unauthorized.

Furthermore, there was a lack of information provided by the local authorities regarding the construction of the condos, despite requests from the community. The community members expressed their willingness to be informed if the local authorities took the initiative. Additionally, the community noticed strange smoke emanating from

one of the condos, which emitted a foul smell that locals were unable to identify.



In the case of the Boeung Trabek Phum 4 community, 15 respondents participated in the interviews. The majority of respondents had no knowledge about their right to participate in the EIA process and displayed little interest and willingness in acquiring such knowledge. Only three out of the 15 respondents were aware of their right to participate and had taken action by requesting information regarding a giant excavated area located near Boeung Trabek Phum 4 community. Some houses in the community had started to develop cracks due to the excavations conducted too close to their residences, raising concerns about potential collapses. Local authorities were unresponsive to the community's requests for information about the excavated hole, with one authority figure admitting their unwillingness to address the situation. Superior local authorities also failed to provide any information to the Boeung Trabek Phum 4 community.

4.5 Ethical Considerations

Ethical guidelines were followed throughout the research process. Informed consent was obtained from all participants, ensuring their voluntary participation and the confidentiality

of their information. Participants were informed about the purpose of the study, the nature of their involvement, and their rights to withdraw at any stage. Any personal information was hidden during the analysis and reporting stages to maintain confidentiality.



5. FINDINGS AND DATA ANALYSIS



In this section, the raw data collected through interviews and group discussions are analyzed to address the research questions and identify the barriers that prevent the Urban Poor Communities from participating in the Environmental Impact Assessment (EIA) process. The data collection methods used in this study were qualitative, involving interviews with key persons and group discussions. The sample consisted of 45 families from three Urban Poor Communities: Prek Takong 3, Prek Takong 60m, and Boeung Trabek Phum 4.

5.1 Respondents' answers to "what is EIA and their rights related to EIA?"

The Environmental Impact Assessment (EIA) is a tool utilized to evaluate the potential environmental consequences of planned development ventures prior to their implementation, involving the identification and assessment of all conceivable environmental impacts associated with these projects. While some individuals showcased an awareness of EIA and recognized its importance for safeguarding their rights

and the well-being of their communities, others indicated a lack of familiarity with EIA, highlighting a potential gap in their understanding of their rights and the potential negative consequences of development projects. One of the respondents from Prek Takong 3 community said:

"I had no idea what EIA was or what my rights related to it were, until we formed the community, and it was only then that we became aware of it (EIA). Unfortunately, by that time, it was already too late as the sewage had already been damaged by the nearby gated community construction and the water had already flooded our community."

5.2 A Condominium Project in Close Proximity to Prek Takong 60m Community

Prek Takong 60m community is in close proximity to one of the largest development projects in Phnom Penh, which is Urban Village phase 2 condominium project.

The Urban Village phase 2 condominium project, which includes the construction of two 51-storey residential buildings and encompasses an area of 760,000 square meters (sqm)¹⁸, warrants a full Environmental Impact Assessment (EIA) based on the regulations outlined in Prakas No. 021.



A satellite image from Google Earth of Prek Takong 60m and Urban Village phase two condominium project

According to this Prakas, any building project with an area larger than 45,000 square meters (sqm) falls under the purview of a Full Environmental Impact Assessment.

Given that the Urban Village phase 2 development surpasses the specified threshold, it is obligated to conduct a comprehensive EIA to assess the potential environmental impacts of the project. An EIA serves as a crucial tool for evaluating and understanding the potential consequences that large-scale construction projects may have on the surrounding communities.

Considering the significant scale and potential implications of the Urban Village phase 2 condominium project, a full Environmental Impact Assessment is crucial to ensure responsible and

sustainable development that aligns with the regulatory requirements and safeguards the environment and local communities.



A view of Prek Takong 60m and Urban Village phase two condominium project

However, despite the need for a full EIA, there is no publicly available EIA report for Urban Village phase 2, even after its completion. This lack of transparency raises concerns regarding the project's adherence to environmental regulations and the extent to which potential impacts were adequately assessed and mitigated. One of the respondents that took a part in a group discussion said that:



The water waste coming from the condos has caused flooding in our community.

When we tried to pile up soil to help prevent the flooding, we were stopped by the local authorities, who stated that doing so was not authorized.



5.3 A Gated Community development project situated near the Prek Takong 3 community

The Borey Piphuop Reaksmeay gated community, situated near the Prek Takong 3 community, is an area subject to an Initial Environmental Impact

¹⁸ Post Staff. (2019, October 3). Urban village phase 2: Where innovative living comes alive. The Phnom Penh Post. <https://www.phnompenhpost.com/post-focus/urban-village-phase-2-where-innovative-living-comes-alive>

Assessment (EIA) according to the regulations outlined in Prakas No.021. However, despite its classification and the need for an EIA, there is no publicly available EIA report for Borey Piphuop Reaksmey. Based on measurements conducted using Google Earth's distance and area measurement tools, the Borey Piphuop Reaksmey gated community encompasses an area of 17,726 square meters (sqm). According to Prakas No. 021, any building project, including gated community construction, falls under the purview of an Initial Environmental Impact Assessment if the area ranges between 15,000 square meters (sqm) and 45,000 square meters (sqm).



Views of the Prek Takong 3 community and the construction of nearby gated community



The Prek Takong 3 community has already experienced adverse impacts stemming from the development of Borey Piphuop

Reaksmey. Careless actions during the construction process resulted in the destruction of Prek Takong 3's sewage system, leading to flooding within the community. This flooding has significantly impacted the living conditions and quality of life for the residents of Prek Takong 3.

Despite the regulatory requirement for an Initial EIA, there is no publicly available EIA report for the Borey Piphuop Reaksmey gated community. This lack of transparency raises concerns about the project's compliance with environmental regulations and the extent to which potential environmental impacts were assessed and addressed. One of the respondents that took part in the interview said that:

Before the construction, our community was not flooded. It was flooded only when the construction crew carelessly destroyed our sewage system, causing the flooding. We had to walk through the flooding every day; it was very hard because we had to walk through two to three times per day.

5.4 A Beoung Trabek Reservoir Near Beoung Trabek Phum 4 Community

The presence of a large, excavated site near the Boeung Trabek Phum 4 community raises concerns about its environmental impact. However, no local residents in the Boeung Trabek Phum 4 community know what the excavated site is. Despite the community's requests for information, local authorities were unresponsive and failed to provide any details about

the excavated site. Furthermore, the excavation activities conducted in close proximity to residential homes have already resulted in cracks in some houses, raising concerns about potential structural collapses. One authority figure even admitted their unwillingness to provide information. One of the respondents said that:

My house started to crack because the excavated site is getting closer and closer. They mostly work at nighttime. I have tried to request them to keep at least 5 meters from our houses, but I don't know yet if they agreed or not.



A view of the huge, excavated site located behind the Boeung Trabek Phum 4's local resident house

However, the excavated site is tied to Sub-decree no. 221 on

“The Area of Boeung Trabek Reservoir in Phnom Penh as State Public Property”,

approved by former Cambodian Prime Minister Hun Sen in 2020, which sanctions the establishment of Boeung Trabek reservoir—an important infrastructure project addressing pressing needs in Phnom Penh with a size of 14.5627 hectares or 145,627

square meters¹⁹. The significance of this legal endorsement should be noted, as certain types of projects, including water reservoirs, may be exempt from Environmental Impact Assessments (EIA) under local regulations due to their importance. Consequently, the lack of an EIA for the site is potentially explained by these regulations.



Local residents' unawareness of this crucial infrastructure could be explained by two factors. First off, the lack of effective communication channels between the government and grassroots local authorities. Bureaucratic barriers might hinder the smooth flow of information from the upper level of government to the grassroots level. Secondly, local authorities may withhold detailed information about a project to avoid inciting panic or negative sentiment within the Boeung Trabek Phum 4 community. They may believe that limited knowledge about the project will prevent anxiety among local residents. In addition, local residents in the Boeung Trabek Phum 4 community possess an exceptionally low level of awareness of the importance and their rights regarding the EIA process, coupled with an exceptionally low level of willingness to exercise their rights. The authorities' decision to withhold

¹⁹ Sub-decree No. 221 on the area of Boeung Trabek reservoir in Phnom Penh as state public property

information about the excavated site may be motivated by the belief that keeping the residents in the dark is necessary to avoid causing worry or stress.

5.5 Comparative Analysis of Awareness, Perception, and Barriers for Participation in the EIA Process

This part compares the awareness, perception, and barriers related to participation in the Environmental Impact Assessment (EIA) process across three Urban Poor Communities: Prek Takong 3, Prek Takong 60m, and Boeung Trabek Phum 4.

5.5.1 Awareness and Perception

In the Prek Takong 3 community, awareness of the right to participate in the EIA process was relatively recent, emerging only after the formation of the community five years ago. The community's experience with the negative consequences of a nearby gated community's construction fueled this awareness. The destruction of the sewerage system, attributed to careless evaluation and lack of participation, resulted in ongoing flooding issues. Similarly, Prek Takong 60m community's awareness was triggered by the construction of multiple condominium buildings, leading to problems such as noise pollution, garbage accumulation, and flooding. In contrast, the Boeung Trabek Phum 4 community exhibited the lowest level of awareness, with only a minority being informed about their participation rights. The majority demonstrated a lack of interest or motivation to acquire such information, except for a small number

of individuals who actively sought it out due to concerns about potential collapses caused by the nearby excavated site.

5.5.2 Barriers to Participation

Barriers to participation were evident in all three communities. In Prek Takong 3, the lack of intervention from local authorities after the destruction of the sewerage system led to financial burdens on the community. In Prek Takong 60m, the waste water from condos caused flooding, but the community's attempts to prevent flooding were halted by local authorities who deemed their actions unauthorized. Additionally, lack of information sharing by local authorities about condo construction hindered participation.

Boeung Trabek Phum 4 faced challenges such as unresponsiveness from local authorities and limited availability of information. This was exemplified by the lack of willingness of an authority figure to address concerns regarding the excavated site near the community.



5.6 Level of Awareness and Perception of Urban Poor Community for Participating in the EIA Process

The data analysis further reveals the limited awareness and perception of the Urban Poor Community regarding their right to participate in the EIA process. In Prek Takong 3 community, 25 families had limited knowledge about their rights, it is important to note that their awareness of these rights started to emerge only when the community was formed five years ago in 2018. This suggests that the formation of the community itself played an important role in raising awareness among its members. It can be inferred that prior to the formation of the community, there were limited platforms to disseminate information about the EIA process and Urban Poor Community's rights within it.

Similarly, in the case of Prek Takong 60m community, where the majority of community members had limited knowledge about their right to participate in the EIA process, their awareness increased only when nearby condominium buildings were about to be finished. The findings highlight the reactive nature of the community's awareness, as it emerged in response to the direct impacts, they experienced due to the development projects.

This indicates that the Urban Poor Community tends to become aware of their right to participate in the EIA process when confronted with tangible and immediate impacts resulting from nearby development projects.

Moreover, in the case of the Boeung Trabek Phum 4 community, the level of awareness about the right to participate in the EIA process was exceptionally low. Out of the fifteen respondents, only three individuals were aware of their rights and had taken action by requesting information about a huge excavation site near their community. This finding underscores the significant lack of awareness among the community members and their unwillingness to exercise their rights, suggesting an important need for efforts to enhance their understanding of the EIA process and the importance of their rights within it. It also indicates that the community's engagement with the EIA process is largely absent or limited due to their unwillingness, with only a few proactive individuals attempting to seek information.

5.7 Barriers Preventing Urban Poor Communities from Participating in the EIA Process

Several barriers were identified that prevent the Urban Poor Community from participating effectively in the EIA process:



5.7.1 Lack of Awareness and Knowledge

The primary barrier identified is the lack of awareness and knowledge among the Urban Poor Community regarding their right to participate in the EIA process. This hinders their ability to actively engage in decision-making processes that affect their living conditions.

Many community members in all three communities interviewed had limited awareness of their rights until direct and immediate impacts drew their attention.

5.7.2 Lack of Communication and Information Dissemination

The findings indicate that the local authorities fail to provide effective communication and information dissemination to the Urban Poor Communities. Requests for information regarding nearby construction projects, such as the condominiums in Prek Takong 60m community, were ignored or not adequately addressed. This lack of information from the local authorities prevents the community members from being informed and participating effectively in the EIA process.

5.7.3 Lack of Information and Invitation to participate in the EIA Process

The Urban Poor Communities highlighted the lack of information and invitation from the local authorities to participate in the EIA process. The case of Boeung

Trabek Phum 4 community demonstrates that community members were unaware of the existence of the EIA process and did not receive any invitation to join. The absence of an inclusive and proactive approach from the local authorities hinders the Urban Poor Communities from engaging in decision-making processes related to environmental impacts that directly impact them.

5.7.4 Lack of Willingness to Exercise their Rights

Another finding was the reluctance of certain community members to exercise their rights, despite being invited to file complaints by the community's representative. This was particularly evident in the Boeung Trabek Phum 4 community. Many participants showed limited interest and awareness, indicating a lack of motivation to engage in decision-making processes regarding environmental impacts. Actual reasons were not disclosed; however, some possible reasons include complexity of the process and diminished trust in local authorities. Understanding these factors is important for developing strategies to encourage participation.



6. CONCLUSION



This research has shed light on the awareness and perception of Urban Poor Communities regarding their right to participate in the Environmental Impact Assessment process in Cambodia. The findings show that public participation is really important for making the EIA process transparent, accountable, and fair.

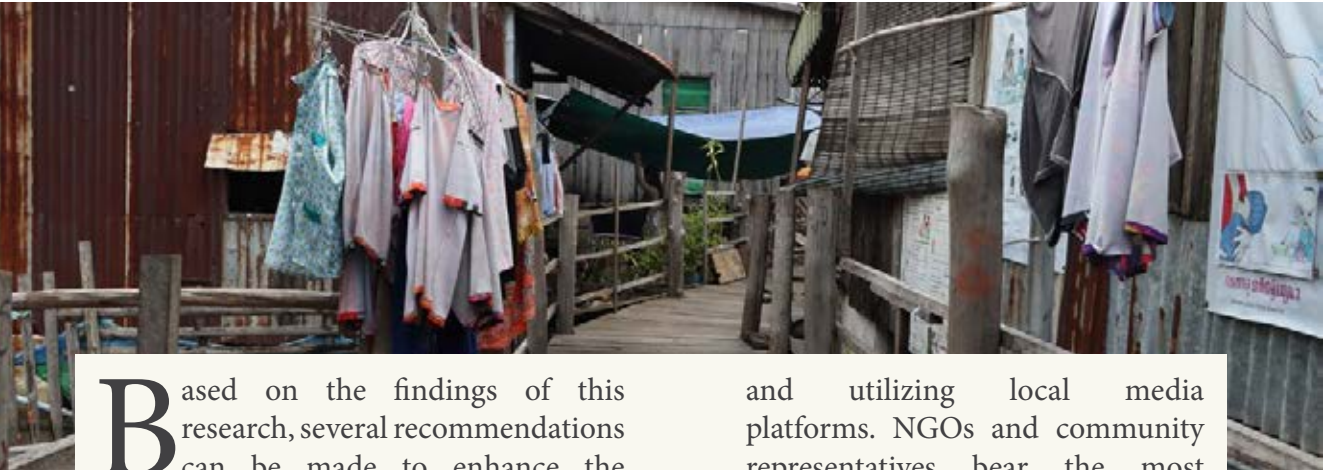
The report revealed that there are challenges and gaps in the current implementation of public participation in the EIA process, including limited awareness among Urban Poor Communities and a lack of clear guidelines. However, there are feasible recommendations that can be implemented to address these issues and strengthen the effectiveness of public participation in the EIA process.

By raising awareness, strengthening legal frameworks, promoting transparency, and engaging NGOs, the EIA process can become more inclusive and participatory. These measures will empower Urban Poor Communities to actively contribute to decision-making processes, ensuring that their concerns are heard.

Overall, this research shows that involving the public is really important for sustainable development in Cambodia. The recommendations aim to bridge the gap between what the rules state and what really happens in practice. By including the public in the EIA process, it makes development fair and inclusive, respecting the rights and opinions of all people, especially Urban Poor Communities.



7. RECOMMENDATIONS



Based on the findings of this research, several recommendations can be made to enhance the effectiveness of public participation in the Environmental Impact Assessment (EIA) process in Cambodia based on each stakeholder.

a) Non-Governmental Organizations (NGOs)

» NGOs and community representatives should take the lead in organizing and implementing educational initiatives, workshops, community meetings, and awareness campaigns, specifically focusing on Urban Poor Communities. These educational initiatives should cover the basics of EIA, including its purpose, benefits, and the rights to participate. They should actively engage with these communities and disseminate information about the EIA process and its benefits. Various approaches should be considered, such as community gatherings, distributing informational flyers, conducting training sessions,

and utilizing local media platforms. NGOs and community representatives bear the most responsibility because firstly, they have expertise and experiences in community engagement, advocacy, and environmental issues. Secondly, they have grassroots connections. NGOs often have close connections with Urban Poor Communities; thus, they have better understandings of their specific needs and conditions.

» NGOs should conduct assessments of the EIA reports and provide their opinions and feedback to project owners. They should proactively engage with the reports, review them thoroughly, and raise any concerns or suggestions for improvement.

b) Minister of Environment (MoE) and Relevant governmental agencies

» The Ministry of Environment and relevant governmental agencies should provide support, resources, and guidance to NGOs and community representatives. They

should collaborate in organizing training sessions, facilitating access to information, and ensuring the accuracy and effectiveness of the educational materials. While NGOs bear the most responsibility in enhancing awareness, collaboration with relevant government agencies, such as the Ministry of Environment, is crucial to ensure the alignment of educational initiatives with legal requirements and to provide necessary support and resources.

- » The Ministry of Environment (MoE), legal experts, and relevant governmental agencies should bear the most responsibility in addressing the legal gaps, relating to the level of extent and timing of the public participation. A review of the existing Sub-Decree and related guidelines, relating to the vaguely defined level of extent and timing of the public participation should be initiated immediately for improvement. A review should also be completed within a specific timeframe to get the frameworks revised as soon as possible. As the regulatory body overseeing environmental impact assessments (EIA) and public participation, the MoE is responsible for ensuring clear frameworks for public involvement in any stages of EIA process. It should provide explicit guidelines on the timing and level of extent of public participation, ensuring transparency and practicality of EIA. During the process of reviewing, consultations, and public hearings to gather feedback on the

proposed revisions from all relevant stakeholders are also needed.

- » The Ministry of Environment and relevant governmental agencies, overseeing the EIA process should enforce the requirement for project owners to share the final EIA reports. They should establish clear guidelines and monitoring mechanisms to ensure compliance. Government agencies should also facilitate the dissemination of draft reports to NGOs and ensure their opinions and comments are included.

c) The Public

- » While the public plays a role in decision-making processes, they bear the least responsibility. The lack of clear frameworks and access to final EIA reports are barriers for the public to engage. However, despite these barriers, it is essential for the public to be proactive in exercising their rights and engaging with other stakeholders. When the public takes an active role in the EIA process, it brings diverse perspectives, knowledge, and interests to the table. This will enhance the effectiveness of the decision-making process by including a wider range of opinions and concerns, leading to better outcomes. By actively participating in the EIA process, the public can play an important role in protecting their communities. Their input can help identify potential risks and propose alternatives that better align with community needs. Furthermore, their engagement can hold decision-

makers accountable and ensure that projects are conducted responsibly and with consideration for social and environmental impacts.

- » Once the law on the Right to Access Information is ratified, Urban Poor Communities will be able to request information more effectively about development projects that affect them. This information can help them to identify potential impacts and take steps to mitigate those impacts. This proactive involvement ensures the safeguarding of their welfare rights, as outlined within the framework.

d) Project owners

- » Project owners bear the most responsibility for sharing the final EIA reports with the public before any construction decision is made. They should ensure that the reports are complete, including all relevant data and findings. They should also provide draft reports to relevant NGOs at least 30 days prior to public release, allowing a reasonable timeframe for review and feedback. Project owners also need to establish an online platform where they can upload and publish the final EIA reports. This would ensure easy access to the platform for the public and NGOs.

e) Cambodian Government

- » The Cambodian government holds the most responsibility in speeding the progress towards a

more effective EIA framework. One important step is the ratification of the Right to Access Information. As indicated in Kay Mathiesen's paper on *Access to Information as a Human Right*, the right to access information is also a welfare right.

- » By ratifying the Right to Access Information, the Cambodian government can empower citizens, particularly Urban Poor Communities, to legally access information about development projects within their surroundings. This empowerment enables the public, particularly Urban Poor Communities, to seek information about project intentions, potential impacts, and strategies for mitigation. Thus, Cambodian Government should speed up the process of ratifying the Right to Access Information as soon as possible.
- » In aligning with the Protect, Respect and Remedy framework, the government's endorsement of this right would align with the principles of corporate responsibility to respect human rights and state duty to protect, contributing to a more comprehensive EIA process.



RESEARCH REPORT BY: MEL SOPHEA VATEY

WASTE MANAGEMENT

in Boeung Chhouk Meanchey Thmey II Community

SOURCES OF WASTE, AND SOLUTIONS





01	INTRODUCTION.....	1
02	OBJECTIVE.....	6
03	RESEARCH QUESTIONS.....	3
04	OVERVIEW OF WASTE MANAGEMENT IN PHNOM PENH.....	4
05	RESEARCH METHODOLOGY.....	5
06	RESEARCH FINDINGS.....	6
	6.1. Information of Boeng Chhouk Meanchey Thmey II Community.....	6
	6.2. Main sources of waste Boeung Chhouk Meanchey Thmey II Community.....	8
	6.3. Impacts and concerns of waste issues.....	11
	6.4. Methods to get rid of waste from the community.....	12
07	CONCLUSIONS.....	14
08	RECOMMENDATIONS.....	15

1. INTRODUCTION



This study was conducted with the aim of exploring challenges facing the people living in poor communities and dwelling on garbage piles mixed with dirty water without knowing the exact waste source. Research on waste problems in Boeung Chhouk Meanchey Thmey II community conducted in previous years did not explore where garbage comes from, so the present research focuses on the source of waste and the challenges facing the community. The aim of this study is to uncover the causes of waste in the community, which will be valuable in addressing the challenges faced by the Boeung Chhouk Meanchey Thmey II community and similar communities in the capital city of Phnom Penh.

Solid waste and liquid waste pose significant challenges for city residents, particularly for the urban poor community of Boeung Chhouk Meanchey Thmey II. This community, located in Sangkat Niroth, Khan Chbar Ampov, Phnom Penh, behind Chbar Ampov High School, is home to thirty-three households that are constantly grappling with waste-

related issues. Extensive research on waste management and governance in Boeung Chhouk Meanchey Thmey II has revealed that the community has been plagued by waste disposal problems for the past three decades. Unfortunately, the exact sources of waste remain unclear, making the task of collecting and cleaning rubbish impossible. Furthermore, the absence of a proper drainage system exacerbates the issue, as the water under the community's houses also contains unidentified waste. Considering these challenges, this research aims to identify the root cause of the waste problem in this community.

For many years, the residents of Boeung Chhouk Meanchey Thmey II have been living amidst mountains of garbage and contaminated water, searching for a solution to this ongoing waste predicament. Previous studies conducted in the area have highlighted the lack of a specified waste source as a critical factor that needs to be addressed. Moreover, the community's geographical location in a low-lying area makes it susceptible to garbage accumulation every time it rains.

2. OBJECTIVE



THIS RESEARCH WAS CONDUCTED WITH THE OBJECTIVES TO:

- Find out the source of waste and factors that cause waste in the community
- Impact of waste on communities
- Solution for collecting and clearing waste from the community

3. RESEARCH QUESTIONS

**THE RESEARCH TOPIC
DESCRIBED ABOVE WAS
CHOSEN TO ANSWER THREE
MAIN QUESTIONS:**

1. Where does the waste in the community come from?
2. What impact does waste have on the community?
3. What solutions do local authorities and community members have for preventing waste-related issues?



4. OVERVIEW OF WASTE MANAGEMENT IN PHNOM PENH



Waste management remains a challenge for urban poor communities in Phnom Penh and other cities in Cambodia, and about 35.7% of urban poor communities in Phnom Penh still do not have access to adequate waste management services¹. In Cambodia, about 2 million metric tons/year (2019) of urban solid waste is collected and has a growth rate of about 15% per year². The increase of waste in local waterways can cause flooding during the rainy season³.

In the case of the black canal, Samaki Rongroeng community has a total population of 297. Their homes are situated on a body of water combined with abundant white plastic waste, while thick piles of Styrofoam waste are also present. During the rainy season, their households are partially submerged under the water along with a substantial amount of garbage⁴.

According to the findings of a research conducted in 2022, Boeung Chhouk Meanchey Thmey II community has been strewn with waste at every corner with foul odors due to decomposed trash in the water under houses. These are piles of old rubbish mixed with piles of new rubbish⁵. The community does not have a drainage system or any system to discharge water, raising the water level nearly high enough to reach the houses' floors when it rains.

According to the survey conducted on the community's situation, there is a significant amount of waste present underneath the houses of individuals who are unaware of its origin. Every time after the rain stops the waste is built up in a large quantity under this⁶.

¹ STT, 2015. 'Facts and Figures #26 "Solid Waste Collection and Management"'

² Urban Solid Waste Management Policy 2020-2030: <https://www.moe.gov.kh/wp-content/uploads/2021/02/160221.pdf>

³ Booklet on Waste Management for Urban Poor Communities: https://teangtnaut.org/wp-content/uploads/2019/08/STT-Waste-Management-Community-Booklet-Kh-Final_.pdf

⁴ City Governance: Waste Management in Phnom Penh: https://teangtnaut.org/wp-content/uploads/2019/01/20190129_STT_Final_Report_Urban_Governance_Wast_Management_PP_Khmer-compressed.pdf

⁵ STT, 2022. 'GOOD ENVIRONMENTAL GOVERNANCE IN VULNERABLE URBAN POOR COMMUNITIES'

5. RESEARCH METHODOLOGY



The research was conducted by interviewing individuals from 33 households within the community. Prior permission was obtained from the local authority, specifically the village chief, before conducting the interviews in the homes of the community members. This research took place in the Boeung Chhouk Meanchey Thmey II community of Sangkat Niroth, Khan Chbar Ampov, Phnom Penh.

The data collection occurred on three occasions. The first collection took place on May 9, 2023, where all questionnaires were tested. The subsequent data collections occurred on May 11 and 18, 2023. Each interview lasted between 30 and 45 minutes and followed a qualitative approach, comprising individual interviews with a total of 26 participants. Among these participants, there were 24 community members from the 33 households, consisting of 18 women and 6 men. Additionally, one local authority member and one employee from the CINTRI waste collection company were interviewed. In the Boeung Chhouk Meanchey Thmey II community, all data collection was conducted using three

questionnaires. The first questionnaire was used for interviews with the community members, the second questionnaire for interviews with the local authority, and the third questionnaire for interviews with the waste collection company. The content of these questionnaires revolved around general information about the community, identifying sources of garbage, determining factors contributing to waste, assessing the impact of waste on the community, and exploring potential solutions for waste collection.

All data was recorded, prepared, entered, and analyzed using Excel sheets. The analyzed data was then utilized for report writing. To ensure an impartial and ethical research process, the interviewees' backgrounds were kept confidential, and all documents and data were securely stored. There was no unauthorized access to the data.

It is important to note that participation in the interviews was voluntary, and the community members were provided with clear explanations and information regarding the purpose of the research before the interviews commenced.

6. RESEARCH FINDINGS



6.1. Information of Boeung Chhouk Meanchey Thmey II Community

Boeung Chhouk Meanchey Thmey II Community is located behind Chbar Ampov High School with an access path through a small road on the National Road No. 1. The community's address is in Boeung Chhouk village, Sangkat Niroth, Khan Chbar Ampov. The community has a total population of 256 from 48 families and 33 households. It is 75 meters wide and 45 meters long, taking up a total surface area of 3,375 square meters. The community is bordered on one side by the fence of Chbar Ampov high school and on the other side, there is the canal. If we look at the access path to the community, we find a small road on which only motorbikes or tuk-tuks or motor-trailers can go in and out.

By questioning the local community about the history of the area, it was revealed that when they began constructing houses there, they discovered that the community was situated in a flooded area with debris scattered all around.

They speculated that the location may have once been a lake, canal, or stream. However, two community members contradicted this notion by stating that the community was originally a dry land area under the jurisdiction of a so-called Solidarity Group, where people cultivated rice and other crops.



Access path to Boeng Chhouk Meanchey Thmey II community

The management of Chbar Ampov High School requested a portion of the community land to cultivate corn, bananas, pumpkins, and other crops

They explained that the community was not continuously submerged in water like it is now; rather, it only experiences flooding for three months when the river

water rises, specifically in July, August, and September, bringing additional garbage along with it. However, as the river begins to recede, the water level in the community also decreases, whisking away all the trash through the canal known as Prek Baraing, which serves as the sole drainage system for the community.



After three months, the community can resume farming. A community member said that in the past, their community was a pit because of a soil excavation business. The business dug up land for sale, making their house area the deepest in the community. He added that the community has always been inundated, but it is no longer like that. In the past ten years, since 2012, there has been development on Borey Peng Huoth. This has made water flow into the community, and as a result, a great deal of garbage. The area where Borey Peng Huoth constructed houses used to be a big lake, and the community is in a low area. This causes all waterways to flow into the community, bringing extra debris that causes blockages. The waste can't flow through the canal and causes it to flood. When it floods, the community and all nearby areas are affected.

According to community members' comments, there are no water movements or garbage flowing from any stream or canal into the community. The amount of garbage remains the same. Each time it rains, the community experiences a high level of water, depending on the amount of rainwater that accumulates without any outflow. Upon inquiry, the village chief, a local authority member, stated that the community was established in 1992 with only 14 houses. During that time, as the community had plenty of vacant land and a small number of houses, the Director of Chbar Ampov High School requested a portion of land measuring 400 square meters for students to engage in manual labor, specifically planting corn on community land. However, the corn was cultivated for a short period of time, and the school seized that portion of land for commercial purposes. When such actions occurred within the community, the residents voiced their anger with the school and staged protests regarding the issue. The soil excavated from the land was most likely sold, with approximately 20-30 trucks used, resulting in land in that specific area being the lowest and plunging to a depth of approximately 2 meters. All discarded waste was gathered and dumped at the base of the bridge.

Despite the catastrophic floods in 2000, the water stagnated for nine days and then carried away a significant amount of rubbish from the community due to the presence of waterways into the lakes

The situation worsened when floods mixed with waste began inundating the community in 2012, coinciding with the commencement of Borey Peng Huoth's construction projects in the area. Since then, the area has frequently experienced flooding, and the entire community and roads have been submerged in water for three years.

This is a result of sand dredging and landfills that bring in all the water, as well as the garbage and waste from water used by construction workers. Currently, water and garbage do not flow in and out.

Instead, it remains stagnant due to landfills by house owners and the presence of concrete fences near the canal bank, which used to be the primary outflow pathway for water from the community. The front passage for water flow is partially obstructed, leaving only a small portion of the water stream system available for outflow. Additionally, the congestion of waste exacerbates the situation. Adjacent to the community, there is a canal named Prek Baraing, which stretches from Borey

to the main drainage system known as New Road, which then flows into the river. However, the drainage system on the community road cannot connect to all the houses within the community, it can only assist in alleviating flooding for houses located in front of the road, but only partially.

6.2. Main sources of water in Boeung Chhouk Meanchey Thmey II Community

According to the research, there are three major sources of waste in the Boeung Chhouk Meanchey Thmey II community:

1. The waste that the community dumped and scattered in the past continues to exist now

If you look at the situation of Boeung Chhouk Meanchey Thmey II community, there is an abundance of waste, particularly under the houses of the community residents. Waste consists of solid and liquid substances including empty bottles, plastic bags, Styrofoam, and black water (leachate), all mixed together, emitting a foul odor that lingers for many months, even years. This issue arises from the practice of open dumping by the community residents, who have been disposing of waste under their individual houses for several years, since the waste collection company only began operating in the community within the past 1-2 years. Despite the claims made by the community residents that they now collect and store their waste properly without openly



Water tube connection down the house

Peng Huoth to Chbar Ampov High School. This canal can carry water from the community road's drainage system

dumping like before, upon observing the condition of their waste, it is evident that piles of newly-dumped waste can still be seen beneath their houses. The residents continue this practice of waste disposal on a daily basis.

Before, I did not go to dump it at any other place. The only place we had was 'under the house'. I kept dropping it down under the house. I did not have soil to fill [in the area] under my house. So, I had to fill it with garbage, said a community member.



A pile of old wastes mixed with new ones

The local authority stated that prior to the waste collection company collecting garbage, members of the community would carry away all the trash and dispose of it in a location at the base of the bridge. They would stack it up and burn it there. However, despite the waste collection company now coming to pick up the garbage, a small group of community members persist in openly dumping waste.

A local authority member mentioned:

They advised [us] to take the garbage to pile at the base of the bridge, instructing [us] not to dump waste openly for fear of open burning, but the people do not understand, they do not take them there.

2. The influx of solid and liquid waste into Boeung Chhouk Meanchey Thmey II community due to the construction of Borey Peng Huoth since 2012

The construction of Borey (gated community) Peng Huoth is indeed responsible for a significant amount of solid and liquid waste being discharged into the Boeung Chhouk Meanchey Thmey II community due to activities such as sand dredging, landfilling, and water usage by construction workers. While the water can still flow out through the canal, it carries along a substantial amount of waste from Borey Peng Huoth, resulting in the blockage of the water gate at the Prek Baraing canal near the community. This obstruction causes the water to flow out slowly and in limited quantities.

Additionally, the community is located in a low-lying area where water remains stagnant, making it challenging for the water to drain like in other areas with higher elevation compared to the community.

A member of the community said:

The land was dry. But when the Borey was developed it went under water. There was a big lake, canals, there was no garbage, the land was dry.

The local authority member said:

In the past, it was nothing. They came to build houses later. It could be discharged, but when Peng Huoth arrived water stayed around people's houses. Since 2012, water has come with garbage into the village.

Looking into the situation in the community, the local authority stated that 70% of people of the total households in Boeung Chhouk Meanchey Thmey II community live on piles of wastes mixed with water and they do not have a drainage system at their homes.

All consumed water falls under the houses and mixes with old wastewater. In the rainy season, the large amount of rainwater makes flooding worse. When the drainage system located on the access path to the community was not installed, the water [system] used by people from about 5 to 6 households along National Road 1 and Borey Peng Huoth flowed into the community.

A community member stated:

Previously, it flowed out. There were no houses. Now it does not flow out anymore. It is blocked completely.

3. Sources of Waste Coming out from the ground as claimed by the Community

By inquiring the members of the community, it was discovered that the statement regarding the community being a natural lake with abundant water and garbage was not accurate since it contradicted the claims made by the local authority representative, who stated that the community was previously the land of a solidarity group and did not have any garbage or water issues. However, the community has turned into a low-lying area due to the excavation of land for sale on the side of Chbar Ampov school. Before the houses were constructed, the residents of the community had been disposing of waste at that location, resulting in a significant buildup of garbage.



A community member claimed,

*At the beginning, it flowed.
But now no garbage comes out.
When we clear it, it does not go.
It emerges from the underground.*

The staff of CINTRI Waste Collection Company, who presented data on the average waste consumption by the community, stated that households use an average of 1.8 kilograms of waste per day. With 33 households, this amounts to $1.8 \times 33 \times 365$ days = 21,681 kgs of waste per year. Unfortunately, due to open dumping practices over the years, a significant portion of this waste sinks underground, making complete cleaning impossible.

This situation has led to confusion among community members who are unaware of the exact source of the garbage. The excessive amount of waste that has accumulated underground is a result of both the community's previous dumping habits and the additional influx of garbage through water during the construction of Borey Peng Huoth.

6.3 Impacts and Concerns of Waste Issues

In a community that resembles a deep pool, people cross a narrow concrete bridge to access their houses, situated below. Thick layers of waste float on

the dirty water, with a pitch-black color, enveloping the houses' pillars and emitting a foul odor.



Myriads of wastes flock together

Compared with the research conducted in 2022, the current study on the above topic suggests that waste continues to affect the community. Stench, and difficulties to breathe makes it hard to live there. Additionally, the community people added that all this waste may as well cause fires. They are concerned about fires because of burning cigarette butts, gas explosions, and electrical cable systems. They are worried that their children could be in danger or may drown when falling. A member of the community said:

My little daughter always runs around for fun. She has fallen down two times already.



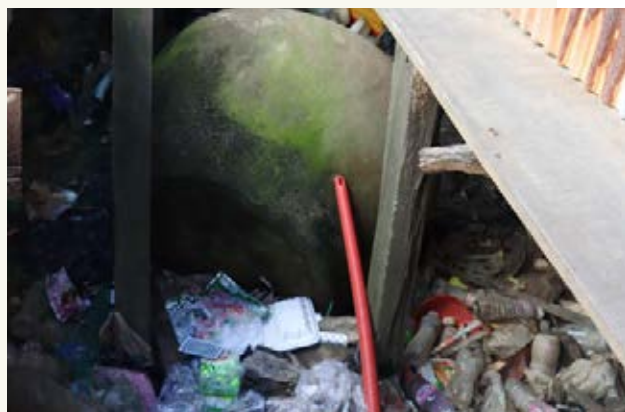
Concrete Bridge for traveling in the community

6.4 Methods to get rid of waste from the community

The community members mentioned that waste management at home is more favorable because they collect, package, and dispose of waste at the base of the bridge located about 100-200 meters away. The waste collection company then comes to pick up the waste in the community. They added that they often face challenges in waste collection due to the excessive amount of waste, resulting in foul odor. Some community members are unable to collect waste from their houses due to the water being deep, making it difficult to access them. The contaminated water under the houses causes itchiness and injuries from broken glass, as well as potential danger from harmful animals.

The community has received assistance from the local authorities in collaboration with STT to address the issue of waste sources. However, finding a tangible solution has been extremely challenging. Additionally, STT has provided assistance by cleaning and removing waste from under the houses of community members on two occasions.

The local authorities confirmed that there has never been a study conducted on the sources of waste in the community. As an additional measure, the community collects and disposes of waste at the base of the bridge, following the instructions from the authorities. Furthermore,



neither the local authorities nor the community have discussed the issue of waste sources or requested the identification of the sources of waste, as they are hesitant to submit such requests to the local authorities or the district or Sangkat authority.

I do not know. I do not dare to ask. I do not dare to request, said a member of the community.

According to an interview with the CINTRI Waste Collection Company, a company that collects waste in the community, the company visited to inspect the location five years ago and found that the community location did not have an access road through which it could come to pick up waste in the community. So, the people were required to dispose of waste on the main road. However, now there is infrastructure, namely the company's garbage truck can enter the community through another road which leads to the base of the community bridge to collect the waste 2-3 times a week. The company mentioned that they do not

have technicians to study the source of waste in the community, but the staff stationed in the community area assumed that the source of waste is open dumping by the people who did not take them to the dumpsite because the community location does not have inflows from other areas. The company made an outreach visit to educate the community on June 10, 2023, about packaging, sorting, and providing waste bins to the community.

community by requesting assistance. Moreover, they have available workers who can collaborate with local residents to collect garbage, including underneath houses.

The solution for residents to prevent trash problems is that they should package all the garbage and not throw it below any of the houses. As a long-term solution, we should install another drainage system to drain water from toilets, and any water that remains should then flow out

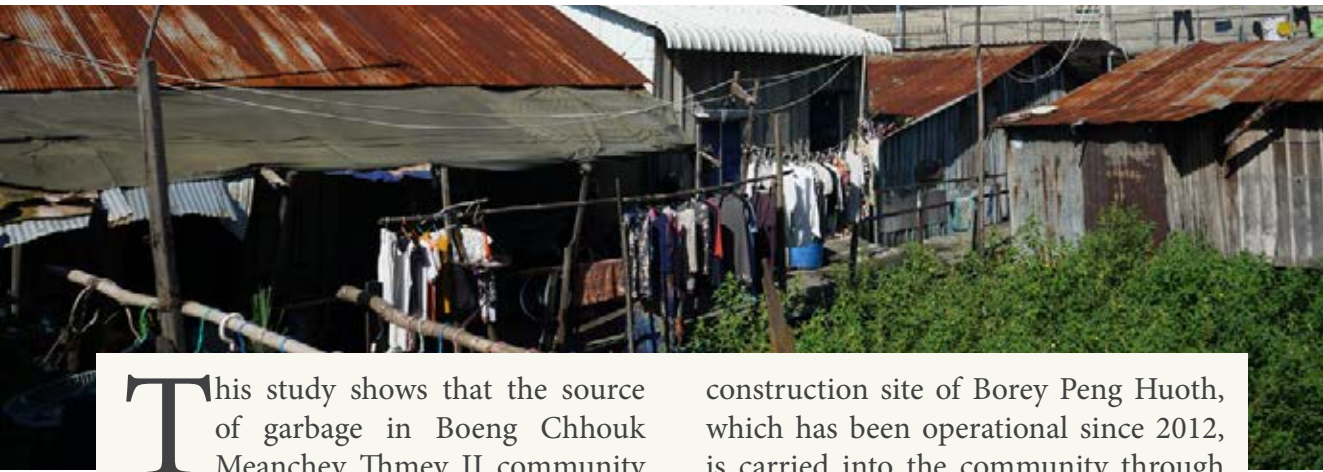


The company stated that they have initiated a campaign to offer free garbage collection services for areas with dry garbage. However, due to limited access caused by narrow roads obstructed by house pillars, deep water, and possible dangerous animals, waste collection is challenging in the current community.

Nevertheless, the company has implemented methods to facilitate the

completely from the community. Additionally, landfilling is a good option to get rid of the rubbish. However currently the cost is very high, because the water mixed with garbage is very deep, around 3 meters, and the community's location is difficult for trucks to enter. Local authorities have said that the authorities do not have the budget to cover the costs of landfill for the Boeung Chhouk Meanchey Thmey II community.

7. CONCLUSION



This study shows that the source of garbage in Boeng Chhouk Meanchey Thmey II community is mostly solid waste, which comes from the garbage that the community has dumped openly so far and continues to exist now, and the waste flown by water into the community from the construction of Borey Peng Huot that has operated since 2012. Liquid waste is mainly caused by rainfall during the rainy season and the daily use of toilet water in each household of the community people. The community's claim that garbage comes out of the ground is not totally correct. The previous solution could only reduce some of the solid waste in the community, as the old rubbish that sinks underground is difficult to collect because it is obstructed by more water that is not yet discharged by sewer pipes.

The study reveals that waste in Boeung Chhouk Meanchey Thmey II community predominantly consists of solid waste. This waste primarily originates from the open dumping of garbage within the community, a problem that persists to this day. Additionally, waste from the

construction site of Borey Peng Huoth, which has been operational since 2012, is carried into the community through water channels. Liquid waste mainly comprises rainfall during the wet season and the regular use of toilet water by the community residents.

The community's assertion that garbage emerges from the ground is not entirely accurate. The previous solution only managed to reduce a portion of the solid waste in the community, as the old rubbish buried underground is challenging to gather due to the obstruction caused by excess water that has not yet been discharged through sewer pipes.



8. RECOMMENDATIONS



1. LOCAL AUTHORITIES

- Local authorities to hold meetings with local people to tackle congested garbage and waste source issues in the community.
- Local authorities to hold meetings to create awareness and knowledge on waste management of community people.
- Local authorities to install another drainage system to release water, covering every house in the community.
- Local authorities to facilitate clearing landfills.

2. COMMUNITY PEOPLE

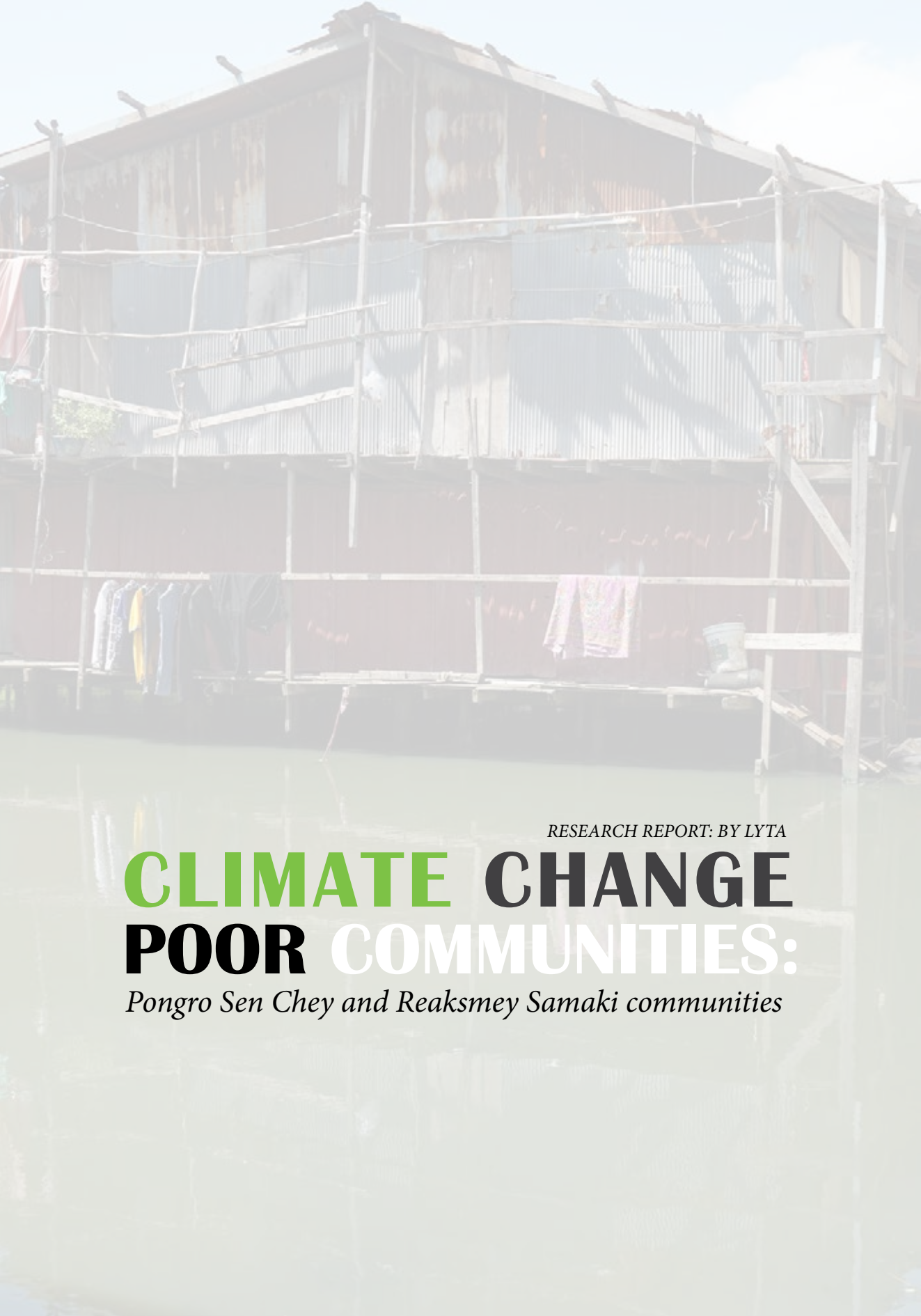
- People participate in cleaning and packing garbage and throwing it into waste bins that are provided properly by the waste collection company and refrain from throwing waste away under the houses.
- People discuss with local authorities to seek assistance from non-governmental organizations (NGO)-partners to fill the land.

3. WASTE COLLECTION COMPANY

- The Waste Collection Company should continue its outreach education campaign to raise awareness among people about the consequences of not clearing trash and waste management at least two times a year.
- The Waste Collection Company should provide materials such as black bags, trash forceps, trash pickers and workers to help collect garbage in the community.
- All waste collection companies should have technicians to study waste sources in the community.
- The waste collection companies should engage and cooperate with local authorities to take responsibility for collecting garbage in all garbage areas under their competency, even if there is no home in the area.

4. NGO-PARTNERS

- NGO-partners should provide funding support and work together with the local authorities and people to discuss the possibilities for landfills in the community.



RESEARCH REPORT: BY LYTA

CLIMATE CHANGE **POOR COMMUNITIES:**

Pongro Sen Chey and Reaksmei Samaki communities

Table Of Content

01	INTRODUCTION.....	1
02	RESEARCH METHODOLOGY.....	3
03	RESEARCH ETHICS.....	4
04	RESEARCH OBJECTIVE.....	5
05	RESEARCH FINDINGS.....	6
	5.1. Pongo Senchey Community.....	6
	A. Impact of High Heatwave.....	6
	A.1. Transportation problems.....	7
	A.2. Economic problems.....	7
	A.3. Health problems.....	7
	B. Impact Of Heavy Rains During The Wet Season.....	8
	B.1. Infrastructure problems.....	8
	B.2. Travel problems.....	8
	B.3. Health problems.....	8
	5.2. Reaksmey Samaki Community.....	9
	A. Impacts When High Heatwave Strikes.....	9
	A.1. Business problems.....	9
	A.2. Heath Problem.....	9
	A.3. Costs and Expenses.....	10
	B. Impacts During Heavy Rainfalls.....	10
	B.1. Infrastructure problems.....	10
	B.2. Health problems.....	11
	B.3. Damage to Materials/Equipment and Houses.....	11
	5.3. Strong Winds.....	12
06	ADAPTATION TO LIVING.....	13
	6.1. When Heat Waves Rise.....	13
	A. Pongro Sen Chey Community.....	13

Table Of Content

B. Reaksmey Samaki Community.....	13
6.2. When it rains.....	13
A. Pongro Sen Chey Community.....	13
B. Reaksmey Samaki Community.....	14

07 CONCLUSION.....	15
---------------------------	-----------

08 RECOMMENDATION.....	16
-------------------------------	-----------

1. INTRODUCTION



Climate change is the increased global warming caused by human activities that produce greenhouse gases (GHG). Climate change contributes to many problems such as drought, water shortage, increasing heat waves, fluctuating sea levels, melting polar ice, storms, floods and other disasters. Floods have destroyed homes and livelihoods of poor people¹.

According to the 2014-2023 Climate Change Strategic Plan, floods also cause damage to infrastructure and sewerage. Further, the strategic plan states that there is an increase of 27% in greenhouse gas emissions annually between 2000 and 2050.

This was discovered by the Ministry of Environment's Greenhouse Gas (GHG) project². The fourth assessment report by the Intergovernmental Panel on Climate Change (IPCC) released in 2007, also found that there are challenges to climate change caused by human activities on the

planet³.

Like other countries, Cambodia is facing problems caused by climate change. Tropical storms LINFA and NANGKA hit Vietnam, Cambodia, Laos and Thailand, leaving some 11 people dead and destroying 67,995 homes in 19 provinces. The hardest-hit provinces include Battambang where 38,890 homes were destroyed, Pursat where 18,365 homes were destroyed and Banteay Meanchey where 7,034 homes were also destroyed⁴. Cambodia has also been affected by disasters caused by climate change combined with urban development issues, which have led to an increase in floods. A study by the European Commission confirmed that Cambodia had a moderate risk rating on the risk index in 2020 and a high score on its vulnerability and lack of capacity to cope with disasters⁵.

Some impoverished communities in Phnom Penh are currently grappling with various challenges brought about

¹ What Is Climate Change? | United Nations

² Cambodia Climate Change Strategic Plan (cambodiaip.gov.kh)

³ Cambodia Climate Change Strategic Plan (cambodiaip.gov.kh)

⁴ <https://reliefweb.int/report/viet-nam/vietnam-cambodia-laos-thailand-severe-weather-and-tropical-cyclones-activity-dg-echo>

⁵ <https://drmkc.jrc.ec.europa.eu/inform-index>

by climate change. These issues have served as the catalyst for conducting this study. To establish the foundation for this research, two key questions have been raised concerning these difficulties:

1. What obstacles do these communities encounter in relation to climate change, particularly during heatwaves and heavy rainfall? And 2. How do these communities adapt in response to heavy rainfall or high temperatures?



2. RESEARCH METHODOLOGY

Two impoverished communities, namely Pongro Sen Chey and Reaksmey Samaki, were carefully chosen to be the focus of this study. The selection was based on various criteria, including the absence of adequate infrastructure and vulnerability to climate change in these areas. With a combined total of 210 families, equivalent to 633 individuals, these two communities present an ideal representation for our research. Pongro Sen Chey, a disadvantaged community residing on a small concrete road approximately 200 meters long, finds itself in close proximity to vacant land and buildings associated with a real estate (Borey) development project. This particular community consists of 142 houses accommodating 150 families, which amounts to 501 residents. On the other hand, Reaksmey Samaki community is located in Meanchey District, within the Royal Capital of Phnom Penh. The majority of community members here reside alongside the sewage canal in 55 houses. In total, Reaksmey Samaki community is home to 60 families, making up a population of 132 people. Moreover, a

total of 52 individuals, comprising 30 participants from Pongro Sen Chey and 22 from Reaksmey Samaki, took part in the interviews conducted for this study. Due to the limited number of interviewees, it is important to note that the findings may not fully represent the opinions of communities that may not have been included in the research. The aforesaid data collection was conducted through oral interviews with Pongro Sen Chey and Reaksmey Samaki community members from 15 to 30 May 2023. The interviews took 10 to 20 minutes per household. The interviews were conducted based on a questionnaire that focused on adaptation to life and impacts that members of both communities have experienced.



3. RESEARCH ETHICS

The data collection conducted during the research process was both unbiased and ethical. Prior to the interviews, the interviewees were given a clear explanation of several key points. These points include the voluntary nature of their participation, the right to refuse

any questions they are not comfortable answering, the objectives of the interview and research, as well as the assurance that all participant biodata will be kept confidential. Furthermore, it was emphasized that all data obtained will be used solely for research purposes.



4. RESEARCH OBJECTIVES

This research was conducted with 3 objectives:

- **Explore the challenges and impacts faced by impoverished communities as a result of climate change issues, such as extreme heatwaves and heavy rainfall.**
- **Gain an understanding of how these communities adapt or change their lifestyles in the face of climate change events**
- **Additionally, Present comprehensive recommendations to both the communities and local authorities and stakeholders in order to identify viable solutions.**



5. RESEARCH FINDINGS



Field researchers conducted face-to-face interviews with members of two communities to assess the impact of climate change. The research revealed that the climate in the community is erratic and presents as hot or cold interchangeably with rainy or dry weather. When it rains, the communities face congestion due to inadequate drainage. Some interviewees shared that their communities face multiple difficulties because of the heatwaves and heavy rains, including issues with businesses, sales, and higher water and electricity costs. These difficult conditions also impact transportation, living, and children's healthcare.

5.1. Pongro Sen Chey Community

Pongro Sen Chey community is a poor residential area located in Phnom Penh. The community members have been living on the canal since 2000, located in Toul Pongro village, Sangkat Chaom Chao I, Khan Pou Senchey, Phnom Penh. The community is located between private land, a factory and a Borey (residential development

area). The majority of the community members in this area are mostly civil servants, factory workers, motodup drivers, tuk-tuk drivers, construction workers, vendors on the streets and wheel-carts. Nearly all community members have access to electricity and clean water supplies from the state. Most children attend NGO schools near the community. Based on our observations, the access road to the community is small and there is no lighting at night.

The infrastructure in the community is not yet robust, and because the roads in the community are narrow, it is very difficult for them in the dry season.

A. Impacts Of High Heatwaves

Through oral interviews with the people in Pongro Sen Chey community, they said that each time a high heatwave strikes, it causes some disturbances and impacts to the

community members such as:

A.1. Transportation problems

Among those who participated in responding to interviews in the community, 7% of the 30 participants said that due to extremely hot weather, it was difficult for adults to take errands. They have difficulties going to work or going to the market to buy food. As for community members who are vendors and factory workers, they find it very difficult to transport goods to sell and sit in the factory, whereas most children face high temperatures when going to and from school.



A.2. Economic problems

Climate change has a significant impact on the socio-economic aspect as it leads to increased expenses due to extremely high temperatures. People are compelled to spend more money on water and electricity. According to a survey of 30 respondents, 50% stated that they constantly rely on using

fans and consume more water. Additionally, they have to bear the burden of medical costs. The hot weather increases the likelihood of health issues, especially for children. Consequently, they have to seek treatment from nearby healthcare facilities, with some even resorting to medication provided by pharmacists at pharmacies.

A.3. Health problems

Thirteen out of the 30 members of the Pongro Sen Chey community who were interviewed expressed that a majority of both children and adults were experiencing health issues.

Many children often suffer from high fever and flu, while adults frequently experience dizziness, shortness of breath, and dehydration due to the intense heat. In addition to these problems, the community members also face other health issues such as skin diseases and sleep disturbances. The main contributor to these problems is the construction material used for the houses in the community, which consists of corrugated roofs. These roofs make the houses stuffy, hot, and humid, requiring frequent night-time baths.

B. Impacts Of Heavy Rains During The Wet Season

Eighty-seven percent of the 30 respondents in Pongro Sen Chey community who were interviewed, said that the impacts they experienced during the rainfalls included the following:

B.1. Infrastructure Problems

The community was facing problems related to infrastructure such as clogged drainage and canals. Thirty percent of the residents said that in the community, whenever it rained, drainage systems were jammed, particularly in May and June. The community people also confirmed that they had raised funds among themselves to install drainage systems in front of their respective houses. They added that those who had stopped the water from flowing were not local authority members.

A 31-year-old community member said, The drainage was not installed by anyone else. It was the community members who raised money to set it up. Since the bridge was built the canal has become smaller and it is not wide enough for the water to flow as before. On October 9, rains poured down heavily in the evening, so the members and I pulled together to open the canal for the water to drain. And, they closed it again and said they did not allow us to open it. Their intention was to sink all of us.

B.2. Travel problems

When it rains traveling is also a problem. Community people have difficulty doing business and performing work, as well as going out to buy food, all of which interrupts children's education. Due to severe flooding, children had to go to school through water from the community, wetting their school uniforms. The interviewees mentioned that last year, floodwaters inundated the community, severely affecting their daily lives and livelihoods, while most community members then had to travel back and forth through water every day.

B.3. Health problems

Most community members face some health problems when the community is flooded. Some



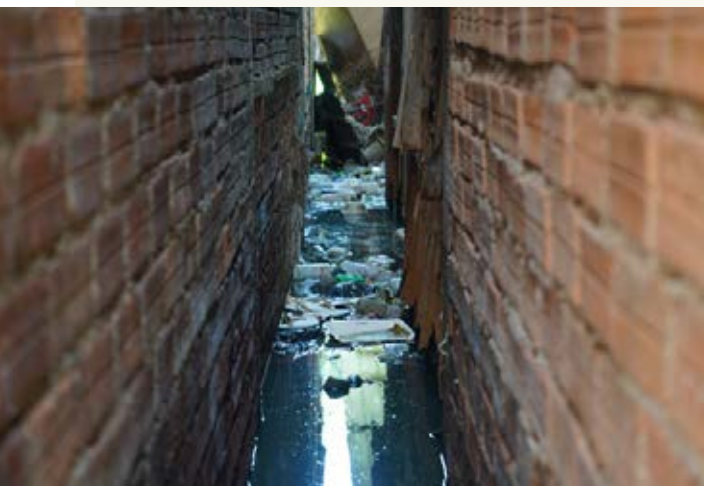
community folks said during the rainy season, many of them often caught a cold, and some had dengue fever because of mosquitoes. In 2022, when floodwater inundated the community, the most common disease in the community was skin disease because they had to walk through the contaminated water every day.

5.2. Reaksmey Samaki Community

Reaksmey Samaki is a poor community in Phnom Penh, located in Russey 1 Village, Sangkat Stung Meanchey 2, Khan Meanchey.

In the community, there are 55 houses, 60 households and 132 people. Most of these people have been settled there since 1998 and continue to live there today.

Their challenge is that they are living along the canal, which puts them at risk of air pollution and floods every year during the rainy season. They also experience some difficulties during the dry season as explained below.



A. Impacts When High Heatwave Strikes

For Rasmey Samaki community, when the weather is very hot, community members suffer impacts similar to those experienced by Pongro Sen Chey community:

A.1. Business problems

Six out of the 22 respondents stated that conducting business, such as selling goods, has become increasingly challenging. This difficulty arises from the hot weather, which deters potential customers from leaving their homes and coming out to make purchases. Moreover, as vendors, they face the additional challenge of finding it very difficult to remain at their designated selling locations. The intense heatwave compels them to seek shelter in shaded areas or return to their own homes.

A 53-years old resident of Rasmey Samaki community said, "I cannot make a good sale. And, when people leave their work, they drive home directly."

A.2. Health problems

Eighteen of the 22 community people interviewed said that due to extreme hot weather, they have high temperature, headache and fatigue every day and frequent

shortness of breath. Most children have a fever very often.

A resident of about 40 years old said: Every day, as it is too hot, I lose appetite, I'm not feeling hungry. I am only thirsty. When it comes to illnesses, both young and old people have fevers and colds pretty often.

A.3. Costs and expenses

As for expenses, most of them raised issues similar to those mentioned by Pongro Sen Chey community people. Some community members stated that during the hot season, they stay calm in front of their houses and fans all the time. This increases the cost of water and electricity. Some community members also said that owing to the hot weather, the elderly and children are in very poor health and often sick, so they must make a lot of payments for medical treatment and medicine.

B. Impacts During Heavy Rainfalls

Reaksmey Samaki is a community where its population lives along the sewage canal in the neighborhoods of Sangkat Stung Meanchey 2, Khan Meanchey, Phnom Penh. When it rains heavily, the community people encounter some problems:

B.1. Infrastructure problems

About 41% of the respondents in Reaksmey Samaki community said that there is no drainage system in the community and that there is the only canal behind their houses. Therefore, when it rains, the rainwater will flow into the canal behind their houses, which can be full and the water can spill out of the canal coming into their houses through to the roads in case of heavy rains. Thus, each time it rains the community is inundated for one to two hours and sometimes the floods fill up to half of their houses

According to a community member, aged over 40 years old, In that place, there is no drainage, so whenever it rains heavily, or whenever they release the water from the upper canal the water will flow across our houses spreading all over the roads.



B.2. Health problems

The primary health issue within the community stems from odor pollution, leading to respiratory symptoms. Approximately 19% of the individuals surveyed reported being at risk for respiratory problems, particularly children. The proximity to foul-smelling canals results in individuals experiencing symptoms such as dry coughs and nasal allergies. The situation worsens when it rains, intensifying the stench and facilitating the breeding of mosquitoes. The foul odor emitted by the canals greatly impacts the health of those residing in this community.

A resident of Reaksmey Samaki community, aged about 30 years old, said, It stinks so badly, especially when it rains. And, when the rain stops it smells even worse. Since it stinks so badly, I got a nasal allergy now.

B.3. Damage to materials/equipment and houses

Floods caused by heavy rains damaged the equipment and property of the community, including motorcycles, televisions, refrigerators, and metal cabinets. In 2022, water overflowing from the canal into one house caused a motorcycle to sink in water and be damaged. If people in the community didn't store their

items high enough, they were also damaged. Many people find it challenging to carry on with their daily lives when floods occur.

A community resident in his/her 40s said: My belongings never last long. They rust so quickly and break easily. I have just bought this television and it nearly stopped working now. People say that it is the canal smell that makes our belongings rust and break quickly.

B.4. Daily life problems

Another challenge for the people in Reaksmey Samaki community is that they live in fear because the canal behind the community people's houses has a lot of insects, rats, centipedes, and pythons.

Community member, 31 years old said: "The canal at the back is full of small insects and animals, especially pythons. Sometimes getting up in early morning, I see them right away on the water hyacinth in the canal".

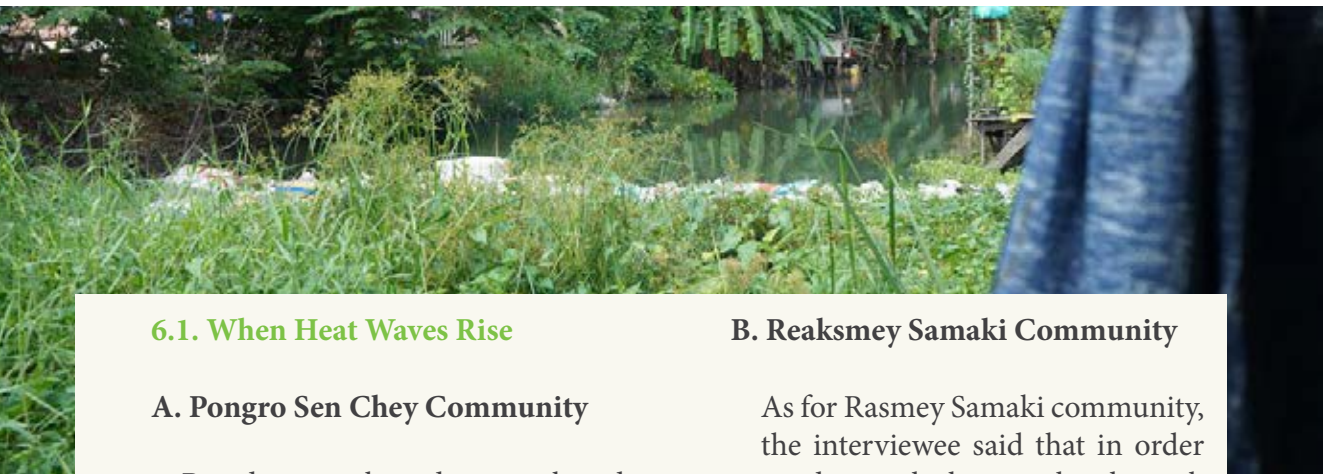


5.3. Strong Winds

According to interviews conducted in both communities, the majority of the 52 community members confirmed experiencing strong winds. However, the impact of these winds was minimal as they only caused the displacement of a few materials and scattered some waste.



6. ADAPTATION TO LIVING



6.1. When Heat Waves Rise

A. Pongro Sen Chey Community

Based on the data gathered from interviews, a majority of community members find ways to adapt to high heatwaves. They do this by either bathing or sitting in front of fans and drinking ample amounts of water. Some individuals adapt by bathing multiple times and staying in front of fans, while others take baths, cooling themselves by wearing wet scarves on their heads. In an effort to combat the heat, one family even sprinkles water throughout their house for relief.

A resident of Pongro Sen Chey community aged 50 years old said, When it was too hot, I splashed water in the house. Once I spread it, it cooled down for a while.

B. Reaksmei Samaki Community

As for Rasmey Samaki community, the interviewee said that in order to adapt to the hot weather, he took showers frequently and did not go out so much. Then the community people mostly retreated to their houses and sat before the fans. They drank a lot of water. They have also tried to plant small trees around or near their houses.

A 40-year-old resident of Rasmei Samaki community said, "I have nothing to do but sit in front of the fan and try to drink a lot of water, and I plant baby trees and they help reduce the heat to some extent."

6.2. When it rains

A. Pongro Sen Chey Community

The interviewed community members mentioned that in the event of heavy rain, which causes drainage water to accumulate, they would clear the canal to facilitate

smooth water flow or allow it to drain naturally. Some individuals would relocate to houses with upper floors and move their belongings above the water level.

B. Reaksmei Samaki Community

For the Reaksmei Samaki community, the way in which individuals adapt to this issue is by patiently waiting for the water to recede while staying in one location and ensuring that their belongings are kept out of the water's reach. If there is a need to venture outside, they either maneuver back and forth through the water or limit their trips to purchasing essential medication.



7. CONCLUSION

A young girl in a school uniform is filling a water container from a public tap. In the background, there are other people and a motorcycle, suggesting a public area like a school or community center.

Research indicates that communities are grappling with the impacts of climate change, including extreme heatwaves and heavy rainfall. However, based on interviews conducted in both communities, it is evident that they face significant challenges and adverse effects specifically during rainy periods.

In the Pongro Sen Chey community, it was observed that roads become flooded due to a blockage in the drainage system, allowing sewage water to accumulate.

This creates an ideal breeding ground for mosquitoes, putting community members at risk of diseases such as fever, dengue fever, and malaria. Additionally, economic hardships are prevalent, with rising water and electricity prices, as well as disruptions to travel and businesses.

Similarly, the Reaksmey Samaki community faces infrastructure issues as they lack a proper drainage system, relying solely on a canal located behind their houses. This often leads to frequent flooding during rainfall, resulting in a range of difficulties encompassing travel, health, daily life, and livelihoods. The presence of insects and reptiles in the canal exacerbates the situation, making it extremely challenging for community members to reside there.

Regrettably, both communities have limited means of adapting to these circumstances. When confronted with extreme heat, they rely on multiple baths to cool down, while during flooding, they must endure until the water subsides and the area dries up.



8. RECOMMENDATIONS



1. Ordinary people

- People should learn more about climate change by reading different documents describing climate change and how to adapt and participate in reforestation and planting more trees.
- People should report the problems they face to local authorities and cooperate with local authorities in resolving the problems they encounter in the community.

2. Local authorities

- Local authorities should be actively involved in tackling a number of issues for the two communities, such as re-organizing community infrastructure and spraying pesticides or mosquito repellents (fumigation).
- Local authorities should visit the communities frequently to update on problems that people experience by meeting with the communities one or two times a month so that the community can make suggestions

to local authorities.

3. NGOs or relevant institutions

- Relevant non-governmental organizations (NGOs) or institutions should raise awareness to people about climate change and how to adapt by distributing to people various documents describing climate change and how to adapt.
- Relevant NGOs or institutions can provide financial assistance to people who have experienced health and economic problems due to flooding and high heatwave.



RESEARCH REPORT: BY HOY SREYHONG

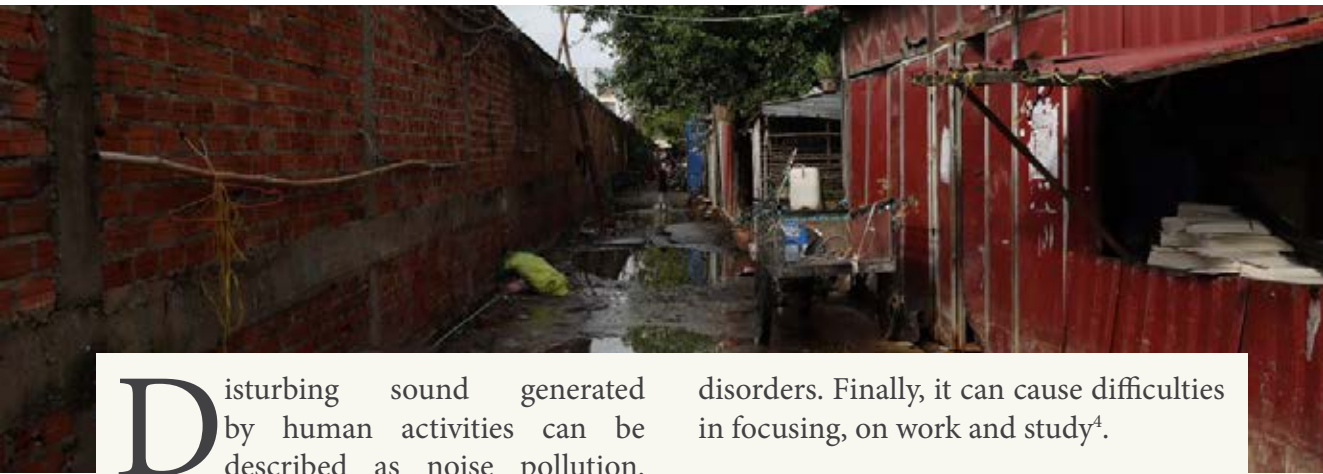
POLLUTION BY LOUD MUSIC IN POOR COMMUNITY: **CHALLENGES** AND **IMPACT**



Table OF Content

01	INTRODUCTION.....	1
02	RESEARCH OBJECTIVE.....	3
	2.1 Main questions in the research.....	3
03	RESEARCH METHODOLOGY.....	4
	3.1 Data collection.....	4
	3.2 Research ethics.....	5
04	LAW AND REGULARY FRAMEWORK RELATED TO NOISE POLLUTION.....	6
	4.1 Sub-decree on Control of Air Pollution and Noise Pollution.....	6
	4.2 Sub-decree No. 43 SD on Public Order in the Royal Capital of Phnom Penh and Province/Municipality.....	7
05	FINDINGS AND DATA ANALYSIS.....	8
	5.1 Overview of the two communities.....	8
	5.2 People's knowledge of Noise Pollution.....	9
	5.3 Types and sources of noise pollution existing in the community.....	10
	5.4. Source of Noise Pollution.....	11
	5.5 Challenges caused by noise pollution.....	12
	5.6. Solutions to Noise Pollution.....	12
	5.7 Intervention by local authorities.....	13
	5.8 Effectiveness of the authorities' response.....	14
06	CONCLUSION.....	15
07	RECOMMENDATION.....	17

1. INTRODUCTION



Disturbing sound generated by human activities can be described as noise pollution. Noise pollution is difficult to see. It is complicated to measure and at the same time it has a deleterious effect on people's daily lives¹. According to an article on noise pollution by the National Geographic Education, disturbing sound that affects human health is considered to be noise pollution, which can be measured in decibels².

Noise pollution includes sound pollution from traffic (land, water and air), noise from entertainment parlors (loud music), shouting noises, noise from factories, industries and construction sites. Noise generated by these human activities is estimated to have levels ranging from 30 to 140 decibels³. Noise pollution can have many effects, including hearing impairment, it can cause headaches, high blood pressure, heart attacks, or mental health problems such as depression, anxiety, fatigue, stress, and sleep

disorders. Finally, it can cause difficulties in focusing, on work and study⁴.

This research was conducted to explore challenges and actual effects of noise pollution in two communities, 60-meter Prek Ta Kong community and Andong 1 community located in Phnom Penh. As a result, this research reveals that:

- **Challenges**

- Most community people lack an understanding of what noise pollution is and problems that arise from noise pollution.
- The two communities have all experienced noise pollution, including people's shouting triggered from theft at night, gangsters distributing drugs at night, and fumigation noise coming from condominiums (next to the 60-meter Prek Ta Kong community), people making loud

¹ <https://madreshoy.com/km/que-es-la-contaminacion-acustica-y-como-nos-afecta/>

² Noise pollution is considered to be any unwanted or disturbing sound that affects the health and well-being of humans and other organism

³ <https://www.geeksforgeeks.org/noise-pollution/>

⁴ <https://www.geeksforgeeks.org/noise-pollution/>

noise, music sound coming from people playing music at home and people's gatherings to drink alcohol.

- **Effects**

- Physical health: For the elderly or adults, it can cause heart problems, sleep, headaches, fatigue. For children and infants, it can create fear.
- Mental health: Fearfulness, insecurity, boredom, stress.
- With violence, living becomes difficult as it leads to the loss of valuable relationships and gives rise to anarchy within the community.



2. RESEARCH OBJECTIVES

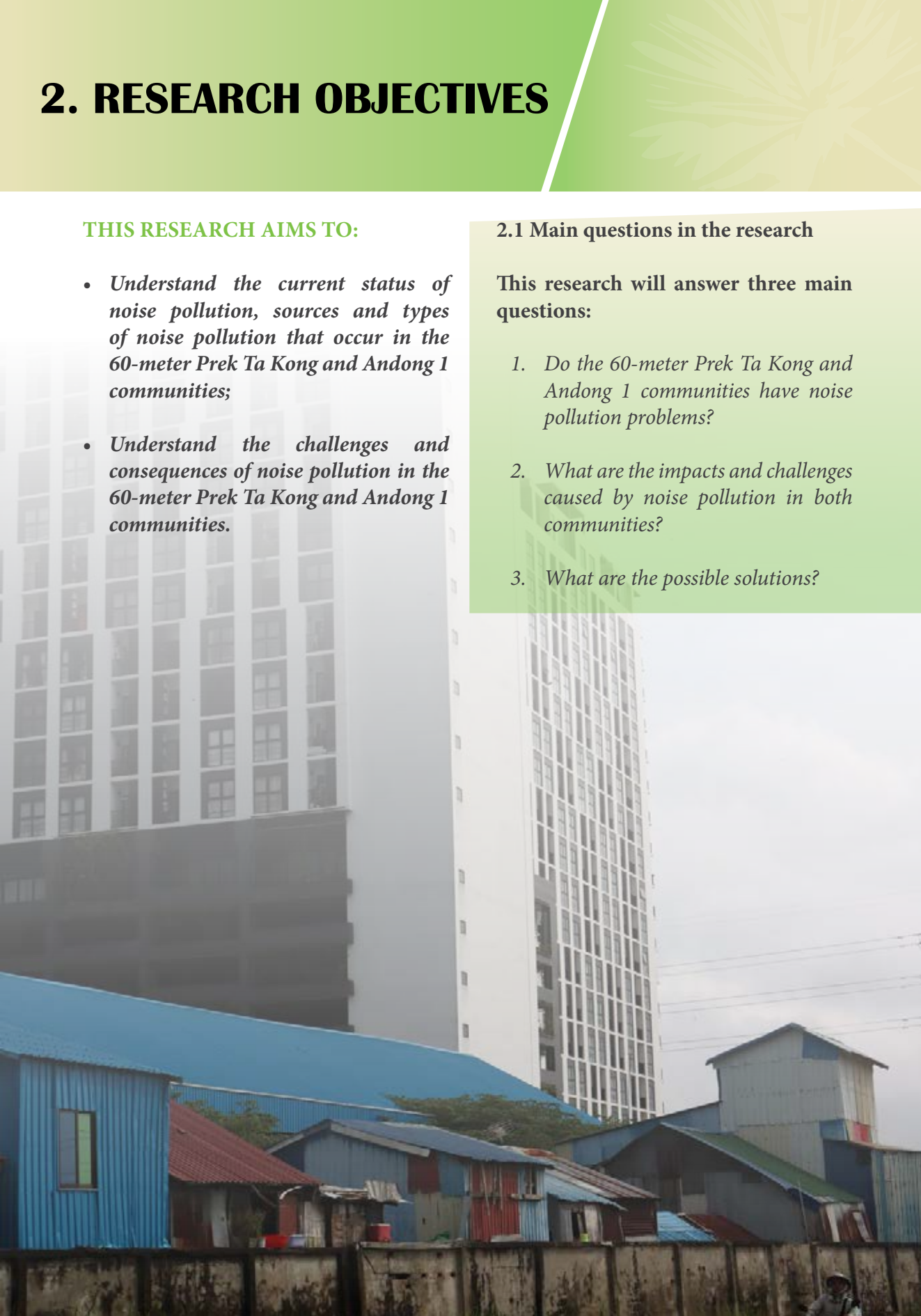
THIS RESEARCH AIMS TO:

- *Understand the current status of noise pollution, sources and types of noise pollution that occur in the 60-meter Prek Ta Kong and Andong 1 communities;*
- *Understand the challenges and consequences of noise pollution in the 60-meter Prek Ta Kong and Andong 1 communities.*

2.1 Main questions in the research

This research will answer three main questions:

1. *Do the 60-meter Prek Ta Kong and Andong 1 communities have noise pollution problems?*
2. *What are the impacts and challenges caused by noise pollution in both communities?*
3. *What are the possible solutions?*



3. RESEARCH METHODOLOGY



3.1 Data collection

This study was conducted through questionnaires, surveys and reviews of laws and regulations related to noise pollution in the 60-meter Prek Ta Kong community located in Chak Angre Leu commune, Meanchey district, and Andong 1 community located in Sangkat Kork Roka, Khan Prek Pnov, Phnom Penh. Data collection was conducted through surveys and interviews, with each interview lasting between 45 and 60 minutes for a total of 50 samples, of which 33 samples were received from the 60-meter Prek Ta Kong community (22 females, 11 males, and out of the 22 females, 1 was the leader and 1 was the deputy leader of the community) and 17 samples from Andong 1 community (9 females, 8 males, and out of the 8 males, 1 was the deputy village chief).

To achieve the research's objectives, a brief assessment was conducted through a combination of interview methods, use of research questions (qualitative and quantitative) to elicit key information in the survey and when conducting field visits to collect data directly.

Data collection in the 60-meter Prek Ta Kong community was conducted for three days.

The first and second data collections were conducted by visiting the community in person, and the third data collection was conducted through phone call interviews.

Field data collection activities (60-meter Prek Ta Kong community)

1. The first data collection was conducted on May 11, 2023.
2. The second data collection was conducted on June 29, 2023.
3. The third data collection was conducted on July 3, 2023

Field data collection in Andong 1 community was conducted for 2 days. The first was making field visits to conduct a survey and collect data in person, and the second one was conducted through direct phone call interviews.

Field data collection activities (Andong 1 community)

1. The first data collection was conducted on May 14, 2023.
2. The second data collection was conducted on July 6, 2023.

The reason why the 60-meter Prek Ta Kong and Andong 1 communities were selected as samples for this study was because the people living in these two communities have experienced noise pollution to a great extent.

3.2 Research ethics

In order to prevent any risk to the participants, the researchers strictly adhered to the code of ethics such as confidentiality, respect for diversity, and to ensure the anonymity and confidentiality of the study. All interviewees in this research were informed of the purpose of the study and asked for consent to participate. Respondents may not answer, skip questions or withdraw from the interview any time.

No identifying information regarding interviewees was disclosed at the time of writing this report.



4. LAW AND REGULATORY FRAMEWORK RELATED TO NOISE POLLUTION



4.1 Sub-decree on Control of Air Pollution and Noise Pollution

Article 7

The standard for noise emission from various resources like vehicle, manufacturing place and the standard for maximum noise emission for public and residential areas shall be specified in the Annex 5, Annex 6 and Annex 7 of this sub-decree.

Article 9

Absolutely prohibit the creation of noises that do not meet the standards set out in tables of Annex 5, Annex 6 and Annex 7.

Article 30

In the event that there is complaint or report that any source of pollution discharges any contaminants of air pollution or noise pollution or vibration that are harmful to public health or property, the Ministry of Environment in collaboration with concerned ministries, may enter the site of this source of

pollution and conduct inspection and take sample for testing.

Article 32

In case of flagrante delicto (crime in action) that causes noise pollution, the inspection official of the Ministry of Environment shall:

- a. Take record, collect and seize evidence of such criminal acts and impose a provisional fine, if the offense does not create serious contamination or does not badly affect public health and property and environmental quality.
- b. Collect and seize evidence of such criminal act for recording, and forward the case file to the competent agency, if the offense causes serious pollution or badly affects public health and property and environmental quality.

Article 25

In case it is found out that the discharge of any contaminants of air and noise

pollution from any source does not meet the standard as stipulated in the Article 5 and Article 7 of this sub-decree, the Ministry of Environment shall:

- a- Issue a written order requiring the owner or responsible person of such pollution source to correct the violation activities immediately within a specific time period.
- b- Issue a written order requiring the owner of responsible person of such pollution source to suspend his/her activities temporarily until the criminal act is corrected if the criminal activities are harmful to public health or affects the environmental quality.

Article 31

In case of serious accident or imminent danger resulting from noise pollution, the Ministry of Environment shall make an urgent inspection on the serious accident or imminent danger and shall inform relevant ministries and local authority⁵.

4.2 Sub-decree No. 43 SD on Public Order in the Royal Capital of Phnom Penh and Province/Municipality

This law aims to ensure public order management by maintaining order, aesthetic value, sanitation, cleanliness of the environment, quietness, social stability, preservation of national tradition, and the dignity of citizens, focusing on five main components, including aesthetics, sanitation/hygiene, quietness, safety/security and order.

Article 16

Anyone who causes loud noise or quarrels that disturb quietness and public social order without permission shall be fined 5,000 Riel. In case of recidivism, the fine shall be doubled⁶.



⁵ https://www.moe.gov.kh/wp-content/uploads/2017/02/Sub-decree_Air-and-Noise-Pollution.pdf

⁶ http://www.ecosoc.gov.kh/images/regulations/Sub_043_08_94.pdf One page 4, /24/2023

5. RESEARCH FINDINGS

5.1 Overview of the two communities

The 60-meter Prek Ta Kong Community

This community is located in Prek Ta Kong Village, Sangkat Chak Angre Leu, Khan Meancheay, Phnom Penh, next to the Urban Village Condominium. The 60-meter Prek Ta Kong Community has a total population of 281 or 63 households, of whom 167 are women. About 80% of the residents in this area migrated due to forced evictions caused by various development projects.

The community members here encounter numerous challenges, including poor living conditions, inadequate housing, frequent flooding during rainfall due to the lack of a proper drainage system, issues related to illicit drug use, new residents with unclear identification moving into the village, the presence of gambling activities, and the persistent threat posed by gangsters, which greatly jeopardizes the well-being of the community residents.



Andong 1 Community

This community, consisting of over 200 households, is situated in Andong 1 village, Sangkat Kork Roka, Khan Prek Pnov. The history of this community is intertwined with the forced eviction of newcomers from Borei Keila community, carried out by a developer company and Phnom Penh authorities. Following their eviction, these individuals resettled in Andong Chas community and came to be known as the 'villagers of Andong Thmey' (New Andong). The community was officially established in January 2006. Living conditions in this community vary, with different families experiencing different levels of economic well-being. There are individuals who are better-off, some belonging to the middle class, while others face poverty and marginalization.



5.2 People's knowledge of Noise Pollution

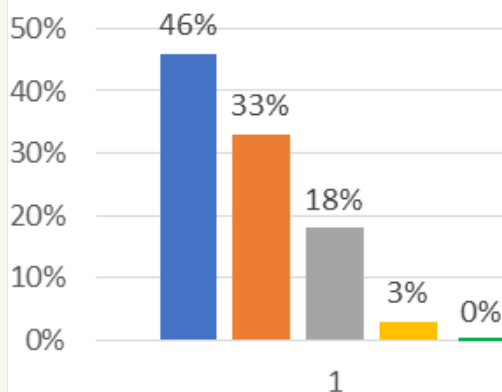
Less than half of people from the 60-meter Prek Ta Kong and Andong 1 communities interviewed had knowledge of what noise pollution was. According to the interviews with people in the 60-meter Prek Ta Kong community, 46% of the respondents stated that their community

had noise pollution, with 33% reported to have some noise pollution.

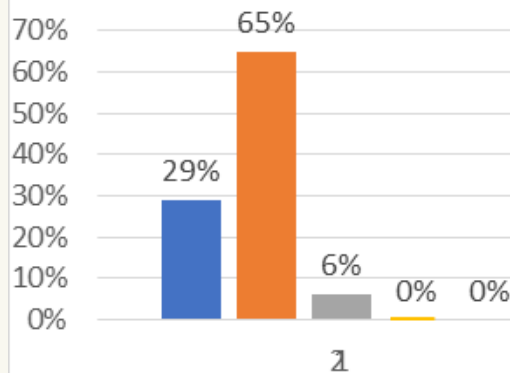
In addition, 18% of the respondents said that there was no noise pollution and 3% reported that there was no noise pollution at all in the community.

Respondents in Andong 1 community said there was noise pollution while 65% said there was some disturbing noises and the other 6% said there was no noise pollution.

The 60-Meter Prek Takong Community



Andong 1 Community



A. មាន B. មានខ្លះៗ C. មិនមាន D. មិនមានសោះ E. មិនដឹង

5.3. Types and sources of noise pollution existing in the community

Findings from the interviews conducted in both communities indicate that the 60-meter Prek Ta Kong community has been more affected by noise pollution compared to the Andong 1 community. The presence of noise pollution and its sources have resulted in numerous adverse effects on the residents of both communities, particularly the 60-meter Prek Ta Kong community.

Based on the research findings, it was revealed that 67% of the individuals residing in the 60-meter Prek Ta Kong community encountered noise pollution caused by people engaging in loud shouting during nighttime and arguments involving drug traffickers, among others.

Additionally, 18% of respondents from the same community reported a lesser degree of noise pollution, making it difficult for them to identify its source. Another 15% of participants experienced noise pollution originating from the neighboring condominium, with the disturbing sound being attributed to fumigation or mosquito sprays.

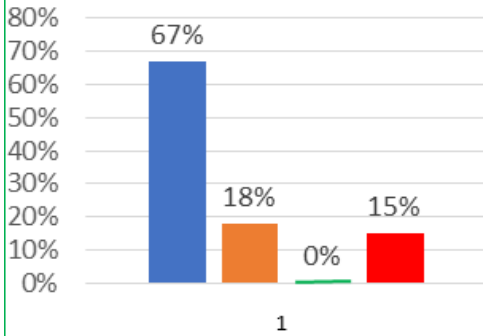
One middle-aged woman stated, "The source of the noise pollution stems from individuals living within the community. There is a considerable group of bad people involved in illicit drug use. These drug users frequently roam the community at night, engaging in theft. They often carry stolen goods from other locations to distribute within the community. Occasionally, they engage in quarrels and loud shouting, causing disturbance and making the dogs bark throughout the entire village."

In the Andong 1 community, the primary source of noise pollution is the loud music played through loudspeakers.

A teenager shared, "The source of noise pollution arises from the parties and excessive drinking habits of our neighbors. Most of these individuals gather on weekends, playing music and singing at high volumes. They come together and party from as early as 8 am until at least 11 pm."

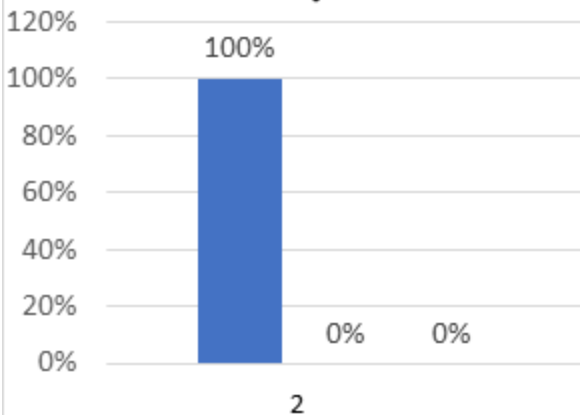


The 60-meter Prek Ta Kong Community



- A. Noise from people shouting at night
- B. Not much
- C. Sound of music
- D. Sound of fumigation

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- A. Sound from loudspeakers
- B. Noise from partying and drinking
- C. Others
- D. None

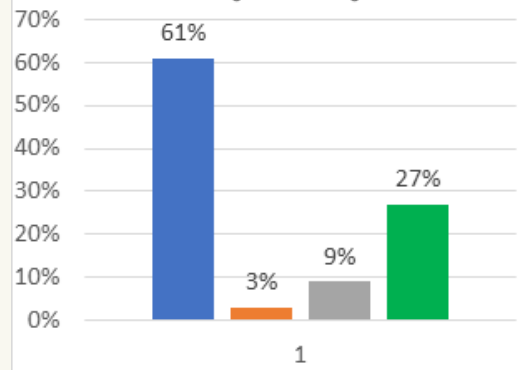
5.4. Source of Noise Pollution

According to the data collected from the 60-meter Prek Ta Kong community, it was found that the primary source of noise pollution in the area was drug trafficking and distribution, accounting for 61% of

the total noise generated. Additionally, noise from gangsters in the slums contributed to 3% of the noise, while 9% originated from a nearby condominium. Interestingly, 27% of the respondents stated that there was no source of noise pollution in the community.

Taking a closer look at the Andong 1 community, the study revealed that gatherings for eating and drinking were the sole cause of noise, constituting 100% of the total noise produced. There were no instances of noise originating from construction or quarrels in this particular community.

សហគមន៍ព្រែកតាគង់១០ម៉ែត្រ



- A. Drug trafficking and distribution
- B. Gangsters from the slums
- C. Condominium buildings next to the community
- D. None



5.5 Challenges caused by noise pollution

According to an interview with a member from the Prek Ta Kong 60 meters community, noise pollution has had negative impacts on both physical and mental health. These impacts include heart problems, fatigue, and severe boredom, among others.

One community member specifically mentioned, "Whenever I was disturbed by noise, it would disrupt my sleep. The loud noises of homeless people shouting at night terrified me, almost causing my heart to stop and leaving me feeling extremely insecure. I found it incredibly difficult to fall back asleep once I woke up."

Another resident of the community expressed, "This pollution has made it incredibly challenging for me to get a good night's sleep. I often experience headaches and a lack of energy. It also causes great anxiety, especially for my young child, who becomes fearful too. Their heart starts beating rapidly and they start screaming, crying loudly, and flailing their arms and legs."

Similarly, in the Andong 1 community, nearly 100% of the population reported being impacted by noise pollution, primarily affecting their sleep.

A middle-aged community member stated, "This pollution disrupts my sleep and fills me with immense stress, making it difficult for young children to fall asleep."

5.6. Solutions to Noise Pollution

To address the issue of noise pollution in the community, residents employ various strategies, including issuing warnings and expressing anger. However, some individuals are hesitant to take action.

One community member, in his middle age, shared his previous approach: "I used to shout expletives at those troublemakers from the safety of my home because I was afraid to venture out at night due to the presence of homeless individuals, who could pose a threat."

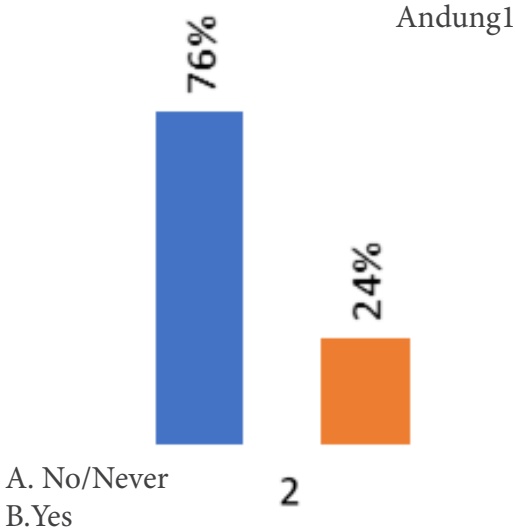
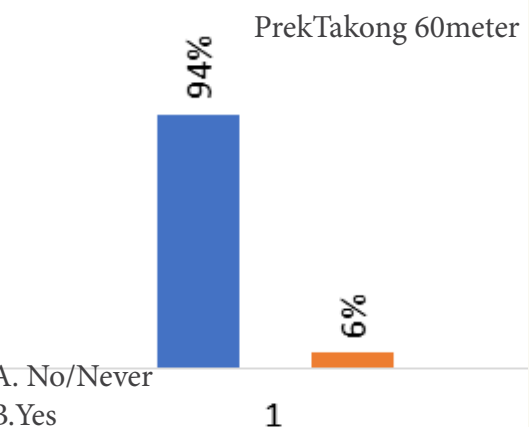
Similarly, another community member, around 30 years old, stated: "I felt compelled to endure the noise and didn't dare report it to the authorities. Even if I had informed them, they would promise intervention but never take any action."

Research conducted in the Andong 1 community clearly demonstrates that people lack the courage to report issues occurring in their surroundings, as they perceive noise pollution to be a minor problem of limited significance.

Another middle-aged community member expressed, "I simply didn't dare approach the local authorities, although I believe it could have yielded some results if I had reported it to them."

5.7 Intervention by local authorities

According to the data, a staggering 94% of the individuals residing in the Prek Ta Kong community 60 meters, have sought interventions from the authorities. It is noteworthy that their primary concern predominantly revolves around drug-related issues, as they perceive this to be the most prominent and severe problem within their community. Conversely, a mere 24% of the inhabitants of Andong 1 community have ever voiced their apprehensions pertaining to noise pollution.

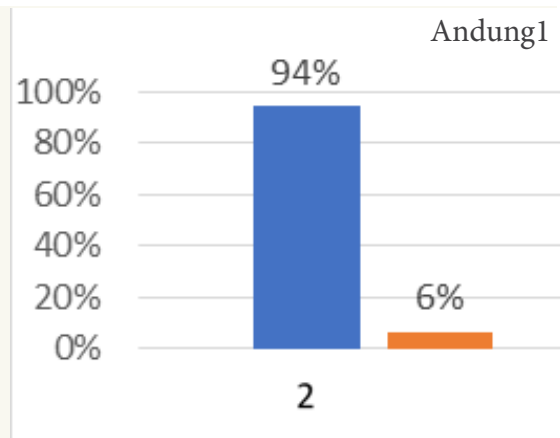


B. Did not respond

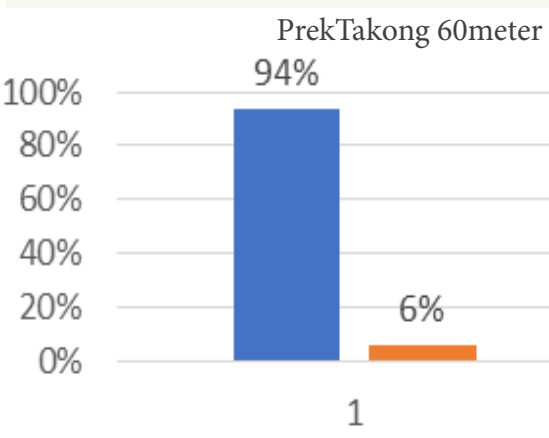


5.8 Effectiveness of the authorities' response

Overall, local authorities' intervention was found to be less effective for both communities. In the 60-meter Prek Ta Kong community research, 94% of community members reported that the assistance provided by the authorities was inadequate. Similarly, in the Andong 1 community, 94% of the residents expressed that the intervention of the authorities had a somewhat limited impact.



A. Less effective
B. Did not respond



A. Less effective
B. Did not respond



6. CONCLUSION



The two communities, the 60-meter Prek Ta Kong community and the Andong 1 community, both suffer from noise pollution. However, the Prek Ta Kong community experiences more severe pollution compared to the Andong 1 community. In the Prek Ta Kong community, noise pollution arises from various sources including people shouting at night, drug trafficking, drug use, and the sound of fumigation. On the other hand, the Andong 1 community deals with noise pollution caused by loud noises from loud speakers and gatherings where alcohol is consumed at home.

Additionally, there is a lack of understanding among community members regarding the issues and problems related to noise pollution. The adverse effects of noise pollution on physical health are evident, with issues such as heart problems, sleep disorders, headaches, fatigue, and fear among children and infants due to loud noises. Furthermore, noise pollution also takes a toll on mental health, resulting in feelings of fear, insecurity, anxiety, stress, and even violence within the community.

There are several methods that the residents of these communities can adopt to prevent and combat noise pollution. One way is to tolerate and bear with the noise they hear, while another approach involves confronting and blaming the individuals responsible for creating loud noise.

Some members even resort to shouting swear words as a means of expressing their frustration. Reporting the issue to the relevant authorities is also a possible course of action, although this method proves to be ineffective as the authorities have shown little support or initiative in addressing the problem.

In cases where severe noise pollution arises from loud music and alcohol gatherings in the Andong 1 community, some local authorities have intervened, but without significant impact. Likewise, the interventions of authorities in the Prek Ta Kong community have not led to substantial changes, despite their frequent patrolling of the area.

Unfortunately, the residents of these communities have been subjected to the most severe forms of noise pollution. They have repeatedly reached out for assistance in addressing the issue of drug use, which serves as a major source of noise pollution, but their pleas have fallen on deaf ears, receiving no response from the authorities. The authorities' indifference

and neglect towards the drug issue in the Prek Ta Kong community clearly illustrate their failure to fulfill their duties as responsible figures of authority. This starkly highlights the disparity between the rights and safety of those living in the slums compared to those residing in more structured urban areas.



7. RECOMMENDATIONS



Community people

- Citizens should adhere to dignity in living and be disciplined in living so that in the community there will be no noise pollution that can disturb life, do not use loudspeakers beyond a limited level as stipulated in the Sub-Decree on Control of Air Pollution and Noise Disturbance No. 42, dated July 10, 2000⁷.
- Community people should report to the authorities to deal with any problems the community encounters.

Local authorities

- The sub-national Royal Government of Cambodia should monitor the implementation of the law related to drugs and strictly enforce the law, and conduct regular patrols in the community every night.
- Authorities should lay out specific plans for patrols in the 60-meter Prek Ta Kong community, which may

involve one local authority member and at least four local police officers patrolling every night between 9 pm and 1 am. Authorities should also continue this regular patrol activity with a schedule and assess the output before and after the monthly patrol.

- Local authorities, police and commune/Sangkat councils should help monitor and track the situation in the 60-meter Prek Ta Kong community, especially problems related to drugs, theft and help meet the needs of people living in the community.

NGO-partners

- Non-governmental organizations (NGOs) should help monitor and pay attention to noise pollution through community outreach activities, establishing training forums on noise pollution, which can include challenges, effects of noise pollution, ways to prevent

⁷ https://www.moe.gov.kh/wp-content/uploads/2017/02/Sub-decree_Air-and-Noise-Pollution.pdf Page 20, /07/2000

noise pollution that people can use and helping people understand their rights and how to exercise their rights in accordance with the law.

Ministry of Environment

- he Ministry of Environment should develop a law on noise pollution more precisely and specifically that is generalized and easy to understand and avoid using too technical terms.
- The Ministry of Environment should distinguish the law on air pollution and the law on noise pollution more precisely, spelling out their definition, and meaning of each article, and providing for more specific penalties for those who commit illegal activities.





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