Master Thesis of Science in International Development Studies

How to better understand environmental (non)migration patterns through the livelihood and social identity of the fisherman community in Tambakrejo Kampung, Semarang, Indonesia

Figure 1. Villagers in Tambakrejo; 5 april 2024

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Abstract

This master thesis investigates the notion of migration in relation to climate change induced environmental changes by looking at livelihood and social identity through a case study of a small fishermen community in Tambakrejo kampung, Indonesia.

Migration and climate change are two very current topics at the moment and strongly related to development. Climate change induced environmental changes are increasingly affecting various areas in the world. Vulnerable populations, thus populations with a low socioeconomic status, are the ones most affected by these changes. This is often due to a lack of resources. The notion of "trapped population" is often used in academia to describe these populations as they don't have the capacities to move away from their vulnerable area. In the Tambakrejo case, the government tried to evict the people from the area for a river resilience project and offered the fishermen community of the village houses in the city, but they fought to stay where they currently live.

In my research I want to look at the livelihood and social identity of these fishermen to better understand the reason for this decision. Often there is a mismatch between governmental action intentions and outcomes. This paper explains how livelihood and social identity play a crucial role in migration patterns and their interconnectedness with climate change resilience. The research questions the "trapped population" assumptions by explaining the bigger picture and importance of livelihood and social dynamics in shaping capabilities and aspirations.

Through the use of qualitative methods of ethnographic field work and semi structured interviews, this paper grasps the social dynamics in Tambakrejo.

The findings show that livelihood and social identity shape capabilities and aspirations of vulnerable communities and affect their migration choices in various ways.

In conclusion the paper emphasizes the importance of resilience practices and the understanding of needs and wants of the vulnerable populations for voluntary (non)-migration outcomes, through education and communication between the government and the local people.

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Introduction

Agenda setting

Tambakrejo case

In 2019, the residents of a small fishermen's village called Tambakrejo were evicted from their homes as a part of the East Flood Canal river normalization project in Semarang City (Kismartini, 2022). As the dwellings of the fishermen's community were located along the riverbank they had to be moved for the project. This created a hard dispute between the fishermen and the local government as the inhabitants refused to relocate to flats given by the government. The flats were located too far from the sea and thus exercising their profession would be hard. After a lot of negotiations, the government allowed the fishermen to move to Kalimati, which is a riverbank not affected by the river normalization project (Kismartini, 2022).

Tensions between the local government and certain communities rose due to forced evictions. Students, NGOs, human rights activists and journalists fought alongside the residents for their rights to stay. The disruption and misunderstanding between the government and the local community resulted in migration issues.

Indonesia, and Semarang in particular, is one of the parts of the world most strongly affected by climate change. The city is already facing flooding, coastal erosion, drought, landslides, and land subsidence. But Semarang is one of the core ten cities in the Asian Cities Climate Change Resilience Network and is thus strongly invested in making the city climate change resilient (*Semarang Climate Adaptation*, z.d).

Migration is also an inevitable part of climate change. Whether directly due to climate change, such as flooding, or indirectly, such as governmental climate projects, climate mobility is a very current phenomenon (Warner et al, 2009).

Climate change and social inequality are strongly intertwined and research on this linkage is important to better understand the reasons for it, and how to avoid or minimize inequality reinforcement through climate change. In this case we can see that the poorer fishermen community from the Kampung are more affected by climate change and governmental

implementations. They are the first and most strongly impacted by climate change effects (floodings, land subsidence) and the ones least supported by the government projects.

This social inequality problem results in certain migration patterns. In this case forced migration and environmental non-migration can be noticed.

How, by talking to the residents, can we get a better understanding of climate change mobility?

This paper will investigate the link between migration patterns and social identity and livelihood by talking with the fishermen. When and why is it considered necessary and by whom? When is it voluntary and when forced? What aspects play a role in (voluntary) non-migration? And when and by whom are people considered "trapped" populations? I want to see whether there are ways to reduce climate change induced social inequality by listening and giving a voice to the residents to understand their thoughts and opinions about climate change, the local government, migration and social identity with a focus on livelihood through their occupation as fishermen.

As the fishermen are bound to the sea due to their profession, their social identity, we can understand why migration could be problematic. What are the relations between livelihood, social identity and environmental (non)migration patterns?

When looking at the existing literature about the topic, both themes, namely climate change induced mobility and social identity/livelihood get more attention in the research realm (Milán-García et al., 2021). This can be explained by the fact that the effects of climate change, especially in the last years, have become increasingly perceivable on the environment and people's livelihoods. Milán-García et al. (2021) furthermore emphasize the need for more empirical studies that investigate the mechanisms linking climate change to migration. When looking at the existing literature available on environmental mobility, in only 11% of publications, the authors focused on identity and cultural issues, and socio-economic topics comprised 9% of the total according to Gosh and Orchiston (2022). The knowledge gap here is thus on environmental (non-)migration in relation to social identity and livelihood. I want to focus on social mechanisms to make sense of mobility patterns. It is important to better understand, or take into consideration, the link between these aspects for better understanding of climate change induced mobility to explore social inequality decrease. Voluntary

(non)-migration is better than forced eviction or being trapped; which can have effects on livelihood and opportunities.

Scientific and developmental relevance of the research

The relevance of this research is very current regarding future development and climate change. One of the biggest challenges in the current century is humans' capability to adapt to the effects of climate change. This adaptation is directly linked to development. Researching current development ways and talking to the various stakeholders in various circumstances is necessary to show how each case is unique. This study will investigate migration through a social identity and livelihood lens. This perspective is important to include in research as, often well-intentioned, governmental initiatives fail to achieve their goals due to a lack of understanding of local contexts and complexities (Li, T. M., 2007). According to Li (2007), experts often impose their knowledge and solutions without adequately engaging with or understanding the needs and knowledge of local communities (Li, 2007). Ethnographic approaches and looking at the power dynamics involved in development projects are crucial and understudied. The scientific relevance is thus about understanding the reasons development interventions often have unintended negative consequences, through research about social dynamics. In-depth analysis and rich descriptions of the interactions between developers and local people are necessary to understand these mismatches.

The importance of looking at livelihood and social dynamics also emphasizes how each case is unique. A solution in one place can be a problem in another. Each development pattern will account for beneficiaries and short comers. Researching these effects to gain better understanding of social processes could benefit the future through minimizing short-comers' losses or accelerate and improve climate change actions.

Research questions

My main research question is:

How to better understand environmental (non)migration patterns through the livelihood and social identity of the fisherman community in Tambakrejo Kampung

My sub-questions are the following:

1. What are the water/climate-related risks they face?

2. What practices do they have to reduce risks, and how?

3. What did/does and will the government do?

4. What are their aspirations regarding migration?

Theoretical framework

Climate induced environmental change voluntary non-migration/mobility and resilience

The research on the relationship between environmental change and human mobility has largely focussed on the movement of people and less on the non-migration or staying of people (Zickgraf, 2021). When people with a low socioeconomic status in a vulnerable area are studied it is often through the notion of "trapped population", thus people who are unable to move somewhere else or forced to stay (Zickgraf, 2021). This theoretical understanding of immobility in relation to environmental changes nevertheless, is not encompassing all the possibilities and can minimize human agency and the diversity of (im)mobility. As Buchori et al. (2018) noted, most people preferred to stay and adapt in situ owing to social factors such as their community relationships. Migration does not seem as urgent for populations with a high socioeconomic level as they have the agency and choice to adapt to the circumstances. Thus that immobility not necessarily is only about not being able to migrate but also about wanting to stay, even in contexts of crisis. This can be explained through psychological, social, and cultural ties to the land. For example strong community bonds and a sense of belonging (Mallick and Schanze, 2020). In their text, Mallick and Schanze (2020), emphasize the need for a better understanding of the aspirations and capabilities of those who choose to stay. The needs of voluntary non-migrants should be integrated more in policy frameworks. They emphasize the importance of "holding factors" such as resilience and the availability of resources, that enable communities to withstand environmental changes without relocating.

This recent new analytical turn is a very interesting phenomenon to study as it allows for more academic acknowledgement and understanding of the wants and needs of vulnerable socioeconomically low populations.

Thus when looking at environmental change and migration the social inequality aspect cannot be overlooked as it influences agency or capabilities.

Farbotko et al. (2020) found that indigenous people of the Pacific increasingly prefer to stay on their lands for cultural and spiritual reasons rather than to relocate.

This is shown in the Tambakrejo case through resistance towards migration, as social factors about immobility have not been considered. (Farbotko et al., 2020).

The importance of agency in immobility calls for more research on the topic to get a better understanding of the social processes happening. The choices of immobility also raise questions of inequality at the individual level: whose choices are these, for example within households or communities (Nawrotzki and DeWaard, 2018).

Resilience is an important factor to consider when thinking about mobility in regards to climate change as its effectiveness can influence mobility choice.

Resilience is the capacity of individuals, communities, systems, or environments to cope with, adapt to, and recover from adverse events, stresses, and shocks. It involves the ability to withstand difficulties, minimize damage, and bounce back to a stable state while possibly undergoing transformation and growth (Folke, 2006).

When looking at resilience actions in the context of Tambakrejo I want to add another theoretical layer discussed by Lukas Ley (2021). In his book "*Building on borrowed land*" Leys introduces the notion of "chronic present" to describe the local resilience capacities. His main argument is that the locals have to endure and live in a constant state of this "chronic present" due to the dysfunctional flood protection systems (Ley, 2021). By this he refers to continuously having to manage the present conditions rather than moving towards a better future as the environmental urban structures need regular fixing. In familiar Dutch terms this could be related to always putting tape on a bicycle tire leak instead of fixing the whole tire (system). This is an important thing to understand, namely that the resilience practices vary according to socioeconomic status and power dynamics.

Livelihood theory

The definition of livelihood as accorded by Chambers and Conway (1992:7-8) is: "A livelihood comprises the capabilities, assets and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the long and short term."

In short livelihood, is the way through which an individual secures the necessities of life. A livelihood can be compared with an occupation, but a livelihood encompasses more than just the financial aspects of securing a living, such as human, social, natural and other capital. Livelihoods are influenced by various factors, including social, economic, environmental, and cultural contexts.

Recently the concept of sustainable livelihood has gained attention. It tries to understand what sustainable livelihoods are and how they can be achieved, ideally and practically. Sustainable livelihoods (SL) can be seen as a way of thinking about the objectives, scope and priorities for development to enhance social equality and minimize poverty (Ashley & Carney, 1999). SL tries to capture, and understand, the fundamental causes and dimensions of poverty without only focusing on limited factors such as financial means.

Following McLeod (2001) the assets that are generally recognised within sustainable livelihoods theory are:

- Natural (Environmental) Capital: natural resources (land, water, wildlife, biodiversity, environmental resources).
- Physical Capital: basic infrastructure (water, sanitation, energy, transport, communications), housing and the means and equipment of production.
- Human Capital: health, knowledge, skills, information, ability to labor.
- Social Capital: social resources (relationships of trust, membership of groups, networks, access to wider institutions).
- Financial Capital: financial resources available (regular remittances or pensions, savings, supplies of credit).

She also proposes the addition of two new assets: institutional knowledge and institutional or political capital.

Unlike more traditional approaches that try to tackle poverty by identifying and addressing needs of people, the SL approach seeks to improve their lives by building on what they have, their assets (*Human Development Report 1999*, 1999).

The SL concept and methodology seeks to bridge the gap between macro policies and micro realities (and vice versa). It situates assets in their broader context and encapsulates dynamics and multiple dimensions; material dimensions such as low income, and non-material dimensions such as powerlessness and social exclusion.

But the ways in which people use assets in pursuit of beneficial livelihood outcomes that meet their own livelihood objectives, are also influenced by their environment. The viability and effectiveness of livelihood strategies is dependent upon the availability and accessibility of assets, services and opportunities which can be positively enhanced or adversely undermined by ecological factors, social structures or institutional processes (McLeod, 2001).

Social identity theory

Scheepers & Ellemers (2019) explain that social identity refers to a portion of an individual's identity that stems from the social group they belong to. The groups people belong to are important sources of pride and self-esteem. Social identity groups can give you a sense of belonging, purpose, self-worth and identity (Tajfel and Turner, 1979). Social identification starts with social categorization which is the tendency of people to classify themselves and others into various social groups based on certain common attributes. This categorization is an inherent social phenomenon that humans are used to doing with all aspects of the world to understand and make sense of them. After social categorization, social identification starts, which is the adaptation of the identity of that group. This means they begin to see themselves in terms of group characteristics and adopt its norms, values, and behaviors. There will be an emotional significance to an identification with a group, and self-esteem becomes bound up with group membership.

Some social identities are more robust than others as they perform better in standing the test of time. Tradition is a good example, as customs that are passed on through generations can be seen as deliberately adopted characteristics with emotional value that make an individual identify with a group (Miller & van Maalen, 1982). Miller & van Maalen (1982) describe fishing as a *"tightly knit, family-based endeavor followed by those who share strong*

normative expectations regarding what is considered proper behavior for fishermen within a given geographic and temporal location" p.28.

Social identity also is crucial in forming strong community bonds that are accompanied by social networks of support which can be indications of resilience (Magis, 2010).

It thus is a strong action and identification process that is crucial in decision making and overall identity shaping. As with the Miller & van Maalen example, it can often be intertwined with livelihood.

Conceptual framework
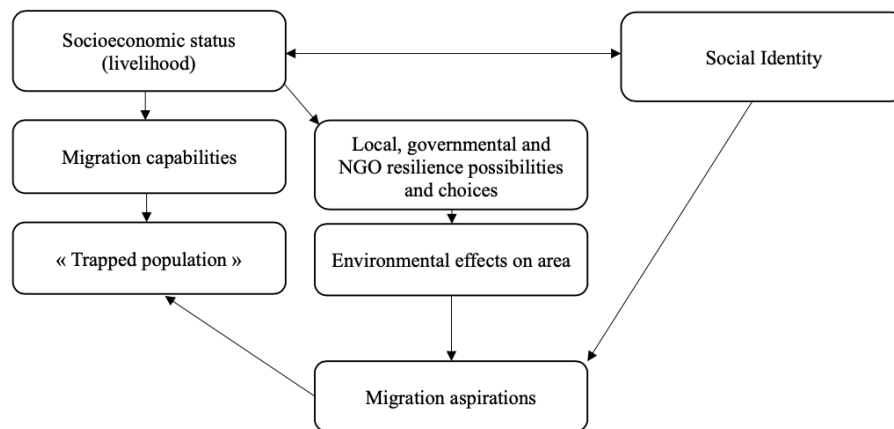
Figure 2. Conceptual framework graph

In this framework we can see how the different concepts have effects on each other and the importance of social dynamics. I believe that the reality cannot be grasped in its totality in a graph, but that this graph can give a better broad understanding of the interplay between different concepts.

We can see that socioeconomic status (which is both an outcome and a cause for a livelihood) and social identity shape each other. Their livelihood plays a role in identity shaping and identity affects livelihood choices. Their socioeconomic status affects their migration capabilities as it influences their resilience and/or migration capabilities. The latter can then create the notion of "trapped population" as they can not migrate. But the fact that people can't doesn't mean they would want to. In other words, there is also another aspect that needs to be taken into account namely the aspiration to migrate. This is affected by social identities as they can create a sense of belonging and community feelings, thus attachment to the area. Another factor that influences aspirations is the impressiveness of the environmental effects

on the area. These can be lessened through resilience practices. These practices, nevertheless, are impacted by the socioeconomic status of the affected population as it influences their capabilities and the interest of NGOs and the government. Migration effects thus are strongly interconnected with livelihood and social identity, as these things shape the actions and wants of various stakeholders.

Methodology

Operationalization of concepts

Table 1. Concept operationalization table

Concept	Definition	Measurement
Environmental voluntary non-migration, immobility in regards to climate change	The fact that immobility can be, and often is, voluntary rather than forced. Thus that immobility is not necessarily about not being able to migrate but rather about wanting to stay, even in contexts of crisis.	- Through interviewing the people and asking them why they want to stay and under what circumstances they would consider migrating - Already look at resilience activities and initiatives and potential correlation with immobility
Resilience	Resilience is the capacity of individuals, communities, systems, or environments to cope with, adapt to, and recover from adverse events, stresses, and shocks. It involves the ability to withstand difficulties, minimize	- Look at the local resilience practices - Look at the resilience practices of NGOs - Look at the governmental practices to improve the life of the local people in regards to environmental changes

	damage, and bounce back to a stable state while possibly undergoing transformation and growth (Folke, 2006).	- For all three focus on the level of adaptation, the capabilities, the power, the effectiveness and the agendas
Livelihood theory	A set of **capabilities**, **assets** and **activities** to support means of living. In this sense, a sustainable livelihood is when someone can cope with and recover from stress and shocks and maintain or enhance the capabilities and assets that will provide sustainable livelihood opportunities for the current and the next generation (De Haan, 2012 & Serrat, 2017).	- In regard to **capabilities**: look at their access to their job and to other potential livelihood or well-being beneficial aspects such as schools or hospitals or other institutions. - In regard to **assets**: o Human capital: look at their (neath, nutrition, knowledge, skills, capacity to work, and capacity to adapt (Serrat, 2017) o Social capital: look at their networks and connections, family friends, relations of trust, groups (formal and informal), norms and values, collective representations, leadership, participation in decision making and power relation, statuses (Serrat, 2017) o Natural capital: look at their land, production and biodiversity (Serrat, 2017) o Physical capital: look at their surrounding environment sanitation, housing, energy and

		water supply, tool and technology (Serrat, 2017)
		o Financial capital: ask them about their financial assets
		- In regards to **activities**: look at their day to day life and how it builds their livelihood and what parts are endangered, restricted or changing though their environment
Social identity theory	A portion of an individual's identity that stems from the social group they belong to. The groups people belong to are important sources of pride and self-esteem. Social identity groups can give you a sense of belonging, purpose, self-worth and identity (Tajfel and Turner, 1979).	- Through interviewing asking them different questions about feelings of belonging and how they would describe themselves - Ask them to also describe others and the importance or values they attach to being a fishermen - Look in the village at interactions and if they differ or show certain social identity groups according to their occupation or their location - Whether they are proud to be from Tambakrejo or not and what their opinions are on other people

		- Look at the social structures present in the village: Family ties, group formations, association, or other

Research design for data collection and analysis

For the research I conducted 21 semi-structured interviews with fishermen, and women of Tambakrejo, people from NGOs, the university and fishermen's organizations. I interviewed fishermen from both sides of Tambakrejo. I also did photo-elicitation and participant observations with the inhabitants of Tambakrejo Kampung. I stayed with the villagers in their home in the village, adding an immersive experience to it.

I believe that one-on-one conversations, living with them and the immersion within the field as much as possible within my capabilities, are the best ways to get a better understanding of their social identity. I asked them questions about their occupation, their relation to their occupation, their relation to the place they live in and other aspects that could tell me more about what shapes their social identity and to what extent. By keeping the interviews semi-structured, leaving space for discussions, I gathered a lot more interesting information, things I haven't thought about before. And topics they would themselves lean towards or elaborate more on than others. I followed the saturation method for the interviews. Saturation in qualitative research is when, through the course of interviewing, the same themes come out, repeatedly (Guest et al., 2020). While interviewing more participants, at some point there is a stop in finding new themes, ideas, opinions, or patterns, that's when interviewing stops. The reason why I decided to conduct semi-structured interviews is because I believe that, following my theoretical/conceptual frameworks, this method allows for effective study of subjectivity as it allows me to gain rich, nuanced insights into individual and collective experiences. Social identity is something very subjective and personal that I can grasp through semi-structured interviews and saturation and field work/ethnography can grasp the cultural and collective aspects of it (Geertz, 1973). I think that conducting personal interviews is the best way to gather the information I am looking for in my research. I think that it gives the villagers their agency and I want to remain as less impactful as possible in my position as researcher.

I also did some photo-elicitation and participant observation to retrieve information about social identity in how the people act and interact with each other and their surroundings. The idea of photo-elicitation is to insert photos taken by the researcher as they trigger deeper elements of human consciousness than words (Harper, 2002). Participant observation is a method where the researcher immerses themselves in a social setting and observes behavior, interactions, and practices (George, 2023). In this case real immersion was difficult to achieve due to language barrier and time issues but I tried to observe and participate as much as possible where opportunities came up.

Reflexion: limitations and positionality

The biggest limitation in my research was the language barrier. The fact that I wasn't able to understand or talk to the villagers of the Kampung and needed a translator or google translate, limited my possibility of integrating and really getting to know the people better.
A translator leads to less privacy during the interviews which could lead to less openness.
Translation can never be perfect as the specific meaning of choice of words/linguistics can get lost and my translator was not a professional. Linguistics and intonations play an important role in communication. Thus the information I can retrieve is only through the potential of my translator.

Considering the limited amount of time I had, I might not have had enough time to get the best understanding of the cultural practices or community feelings within the Kampung.

Another possible limitation is the fact that I am not Indonesian and haven't lived in Indonesia, this will only allow me to have a positionality from an external standpoint and I will know less about common or cultural practices. The fact that I look different could also create a barrier or initial distrust.
Regarding the positionality I do have difficulties with it myself, coming from a country from the global north and due to the colonial history of The Netherlands and Indonesia. I don't want to conduct neo-colonial research or talk "on behalf of" people at all. I am strongly against this kind of research. Following Sultana, F. (2015), I therefore paid a lot of attention and worked a lot on reflexivity, my positionality, the production of knowledge and the power

relations that are inherent in research processes to undertake ethical research. I reflected on my positionality vis-a-vis the way others constructed my identity while conducting the study, by talking with Farah (my translator) and after the research, through a personal reflection case description.

Regional contextual framework

Semarang, one of the core cities in the Asian Cities Climate Change Resilience Network (ACCCRN)

Semarang is the capital and largest city of central Java. It was a major port during the Dutch colonial area and still remains important until today. It is the ninth most populous city of Indonesia with about 2 million inhabitants (Leinbach et al., 2024). In 1682, the Semarang state was founded by the Dutch colonial power. Dutch history can still be perceived in the architecture, especially in the city center as it reminds of Dutch style.

Semarang is also strongly affected by climate change. Due to sedimentation of the upper area of Semarang, its coastline extended about 4 km further since the 6th century. This made Semarang an even more important coastal city. Unfortunately, the current trends of sea level rising increase the flooding risks of this area. Urbanization also plays a strong role in Semarang with an ever growing urban sprawl especially in the south and the east. The city thus has to undertake a lot of measures to counter the effects of climate change. In the document of the city's Resilience Strategy are 6 pillar strategies and 53 initiatives listed. Even if the idea is good we can see in the example of the river normalization that these actions still have beneficiaries and less beneficent areas and can result in social inequality increase. The river normalization project aims to clean and widen the Kaligarang and West Flood Canal. The program improved the capacity of the rivers from 300 to 400 cubic meters per second to 740 cubic meters per second, meaning that heavy rain that might have previously caused floods can be accommodated by the West Flood Canal (Mukhlis, 2013).

This can be very beneficial for the city in its whole, when I was there I also experienced the flooding of the city center. But it neglects the vulnerable populations that have to be evicted for the project such as the fishermen in the Tambakrejo Kampung, who are less affected by floods due to rainfall but rather due to sea level rising and land subsidence.
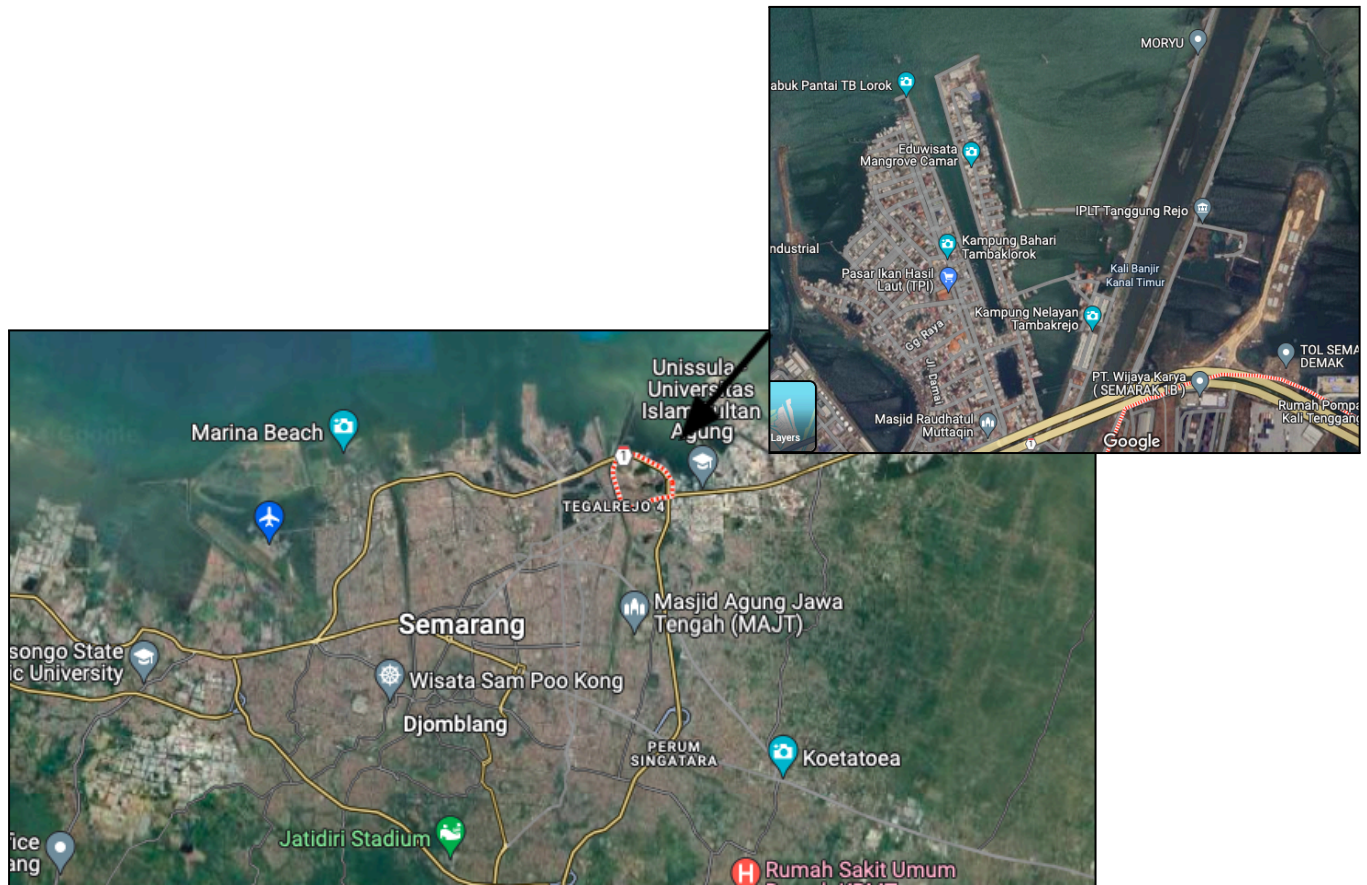

Figure 4. Map of Semarang and Tambakrejo (google maps)

Kampung Tambakrejo

"He's looking at our sandals.
He's wondering... ...where. He's concerned about our sandals.
He already has the schedule of the tide."
"We will get wet feet"
"Yeah…" - Farah

Tambakrejo is the northernmost kampung in the Gayamsari District of Semarang City in Central Java Province. This area is affected by flooding, especially when sea water is high tide. A kampung is a unique and complex urban form. Usually, it is a form of informal settlement, the residents don't own the land they build their dwellings on. They are crucial for providing affordable housing and livelihoods for low-wage workers who cannot afford to live in more formal urban areas. This makes kampungs a necessary component of the urban

systems as they support the cities by offering flexible living situations that formal urban development can't provide (Kusno, 2019). Tambakrejo is known as a fisherman village because most of its residents work as fishermen. But, the sea, which has been the focus of the livelihood of Tambakrejo fishermen to support their families, is starting to threaten their future. Tambakrejo is often affected by coastal abrasion due to its location; this erosion due to the sea threatens the fishermen's residence (*Pesisir Tambakrejo Kelurahan Tanjungmas Kecamatan Semarang Utara - Ecolify.org*, z.d.). Other effects present are: floods (figure 5), land subsidence (figure 6), loss of biodiversity in the water (there are less and less fish in the sea), waste management problems (figures 7 and 8).

Figure 5. Floodings, Tambakrejo Figure 6. Landsubsidance, Tambakrejo Figure 7. Waste, Tambakrejo Figure 8. Waste Tambakrejo

The village is affected by floods on a daily basis, in the time I conducted my research the floods started around 15:00 and reached a maximum height of up to half of my lower legs.

As discussed in the Introduction, the eviction of 2019 is the reason why the kampung has caught my attention. Not only mine, but also a lot of international, and especially local instances. It is through the help of these different actors that the villagers could remain living close to the sea and that their livelihood is not jeopardized. It is important to understand the twofoldness and contextualisation of Tambakrejo before diving into the social identity findings. Tambakrejo has two areas, one of them already existed for a longer time and the other side has gradually been settled on since about 2000. The basis of these settlements was illegal.

It is important to understand the complexity of kampungs in landownership. The Basic Agrarian Law (1960) governing land ownership and rights in Indonesia requires all land to be registered and owners to hold formal land titles. However, many kampung residents lack these formal titles, rendering their houses technically illegal under this law. But in the 1945

Constitution it is written that the Indonesian Constitution guarantees the right to a decent living, which includes adequate housing. Article 28H (The 1945 Constitution of the Republic of Indonesia, 1945) explicitly states that every person shall have the right to live in physical and mental prosperity, to have a home, and to enjoy a good and healthy environment. (The 1945 Constitution of the Republic of Indonesia, 1945; The Basic Agrarian Law, 1960). Without formal land titles, kampung residents are vulnerable to eviction. The law provides some protection against forced evictions, especially if they are carried out without due process or adequate compensation. The Eviction Guidelines set by the United Nations, to which Indonesia is a signatory, also provide some level of protection by advocating for fair and humane treatment during evictions.

Figure 9. Eviction Tambakrejo, 2019 (Batubara, Alghofani, 2024) Figure 10. Destruction of houses, Tambakrejo 2019 (Batubara, Alghofani, 2024)

When conducting my interviews, I realized the conversation quickly went towards the eviction. I found it very hard to try and keep the conversation about social identity, as there is a lot of loss and pain from the past. There also still is a lot of insecurity about the future of their housing, if they can stay living in the area or not. According to the NGOs the government gave them the houses for five years and then will reconsider, a lot of the villagers are unaware about this time limit. Transparency and communication has been a big issue in the eviction process. The topic was very important in the village. This is an example of indirect climate change induced mobility and problems, as it is through a governmental plan to prevent climate change effects on the city, that these people have to move. In this paper I will not be able to go in depth about the dynamics and tragic happenings of the eviction as the focus will lie on livelihoods and social dynamics, some links will nevertheless be made to the event as they do have impacts on social identity.

Tambakrejo thus has two sides; a side that has villagers who own their houses and another where people settled since around 2000 without legally owning the land on which they built their houses. Their houses have been destroyed and the villagers protested and had to live in tents for three years, it was supposed to be 18 months. The fishermen with NGOs, students, journalists and other activists fought for their rights according to the constitution. Finally the government agreed to build new houses for them. These settlements are not prone to floods anymore but very small; 6x4m. For a big family that can be tight, I will dive into this later in the paper. In the figure below we can see the governmental plan for the houses (). And how they look(). The question is how long they can live there, as communication between the government and the fishermen remains unclear.

Figure 11. House plans (Batubara, Alghofani, 2024) Figure 12. House Pak Marzuki (4 april 2024)

Thus one side of Tambakrejo still gets flooded on a daily basis and on the other side the eviction happened. Both sides are affected by sea biodiversity loss, strong winds, trash pollution, land subsidence and floods on different scales.

Results

I have decided to present my findings in three parts with each their own sub-chapters. Following the essential regional framework and theories chosen, I present the findings in a

topical matter and then discuss them in combination with each other within the Tambakrejo context.

I will start by talking about the resilience approaches in Tambakrejo by dividing them into the local resilience, resilience by the NGOs and other helping parties and finally governmental environmental actions. I believe that resilience is an important aspect to consider when looking into climate change induced migration as the effectiveness of these actions play an important role in migration choices. Afterwards I will discuss the livelihood of the fishermen to get a better understanding of its effects on migration capabilities. Finally I will discuss the social identities of the fishermen to get a better understanding about willingness to migrate. After the presentation of the findings I will combine all these different dynamics and provide an answer to the research question in the 'discussion of findings' chapter.

Resilience

Local resilience

"[Interviewer]
...Does that also mean the sedimentation got lower and lower?
[Speaker 1]
20 centimeters.
[Interviewer]
20 centimeters?
[Speaker 1]
Yes, every year.
[Translator]
Every year. 20 centimeters got here.
[Interviewer]
Wow. Extreme.
[Speaker 1]
This is not my house. My house, the roof, the roof has become a balcony. I built it in 1993. The roof is 5 meters higher than the balcony. Now, the end of the roof has become a balcony.
(...)
[Translator]
He built the floor 9 times…"

Local resilience practices depend a lot on the income of the people as it influences their capabilities. This can be linked to Ley's argumentation. As the land subsidences are very strong, one of the main resilience practices is the heightening of their houses. The economic status of the people influences their capabilities to heighten their houses. In the pictures

below we can see (figure 13) the heightening of a house in Tambakrejo and (figure 24) inequality in capabilities. Note, the house heightening is only on the Tambakrejo side that has not been affected by the eviction. The houses on the evicted side have been rebuilt by the government and are not anymore affected by the floods and land subsidences as urgently.

Figure 13. House Tambakrejo, 5 april 2024 Figure 14 House Tambakrejo, 5 april 2024

Resilience can also be seen in regards to the decrease in biodiversity. The fishermen build 'rumpons' as a resilience solution for this problem. A rumpon is a bamboo construction that some fishermen build in the sea to fish on. The construction is mainly made for green shell fishing. The green shell construction also attracts fish and can provide shelter for breeding. As the biodiversity of the sea is decreasing, the green mussel cultivation is growing. The growth has become even more after the river normalization project as it caused the loss of mangrove blocks which were habitat for carbs and other sea life that usually was caught and sold by the residents. So the livelihood sees a shift towards this kind of fishing practices. Building a rumpon is intense physical work as the fishermen build it by hand. They stick the bamboo branches in the seafloor by going in the water and jumping on them to deepen them into the ground.

Figure 16. Rumpon, 16 april 2024 Figure 17 Rumpon, 16 april 2024 Figure 17 Rumpon building practice, 16 april 2024

NGOs, associations

The NGOs and associations aid has increased a lot since the eviction happened, Tambakrejo caught their attention, making it very important as a vulnerable area. NGOs have done a lot during the eviction and fought with the people for their rights alongside them.

A big focus of the NGOs while the eviction, and still now, is about their rights. Law firms such as LBH (a legal aid organization with the primary mission to provide legal assistance and advocacy focussing on human rights violations and structural issues that affect marginalized communities) organizations such as Walhi (the Indonesian Forum for the Environment, an environmental advocacy organization focusing on various ecological and social issues centered on addressing environmental degradation, promoting sustainable development, and advocating for the rights of marginalized communities affected by environmental issues) or Hysteria (also known as 'Grobak Hysteria', a cultural community organization dedicated to empowering urban kampungs through arts and culture) and scholars fought for their rights and taught the fishermen about the rights they have. As stated in the constitution, the fishermen have a right to adequate housing and evictions must be carried out fairly. A lot of the fishermen don't know their rights and have been surprised by the eviction. These organizations came to redeem equality and justice for the villagers. They are taking part and organizing a lot of communal events such as fishermen's day and trying to educate them about various things.

One of the things they teach them is how to create their own organizations within the community. Working together can get them more financial aid from the outside as well.

The Hysteria organization layed a focus on the importance of culture and storytelling.

Figure 18. Fishermen's day, 5 april 2024 Figure 19. Fishermen's day 5 april 2024

Next to the educational aspects, the organizations have other resilience practices such as mangrove planting. The CAMAR Farmers Community has been planting mangrove trees since 2011 to dispel abrasions that ravage their territory. CAMAR, short for "Cinta Alam Mangrove Asri dan Rimbun," is an environmental group based in Semarang. This group is primarily focused on combating coastal erosion through the planting and maintenance of mangroves (*Pesisir Tambakrejo Kelurahan Tanjungmas Kecamatan Semarang Utara - Ecolify.org*, z.d.). Mangroves are natural barriers against floods and storms and coastal erosion as their root systems stabilize shorelines. They also serve as biodiversity conservers (like the rumpons) as they provide a natural habitat and protect the water ecosystem. They also improve sea and air quality and decrease air temperatures.

Figure 20. CAMAR poster, 19 march 2024 Figure 21 CAMAR card of mangroves, 19 march 2024 Figure 22 Mangrove plant, 19 march 2024

There also are local organizations such as KNTI, short for "Kelompok Masyarakat Tertinggal dan Rentan Tambakrejo" meaning "Marginalized and Vulnerable Community Group of Tambakrejo.". KNTI focusses on social welfare and development programs to improve living conditions and socioeconomic status. They organize different things such as cleanup days or get fundings for boats.

From the organizational help and explanation of the NGOs Fishermen's association arose. These will be discussed in the social dynamics part.

Government

When looking at the government it is important to acknowledge that there is the local and the state government. The side of Tambakrejo where people live legally (have house ownership) had been visited by the president who decided to build a wall to protect the village from the floodings. All the villagers have given positive feedback about the wall, it has proven to minimize the flooding (It didn't completely stop the floods from entering the village as planned). The village still gets flooded on a daily basis (while I was there, it started at around 15:00 every day), the water usually didn't get higher than the middle of the lower leg. Whereas before it was way higher.

Figure 23. The Wall 5 april 2024 Figure 24 Pak Ratno on the wall in front of his house 19 march 2024

The wall had been proven to minimize the floodings but not stop them from happening.

Figure 25. Floods in the street of Tambakrejo 3 april 2024 Figure 26. Floods in the streets of Tambakrejo 3 april 2024

On the other side of Tambakrejo, the one that has been settled illegally, the government evicted the people for the River Normalization Project.

The government also has some plans for the future of Tambakrejo. They plan to build floating houses. It seems to be a hidden agenda as not a lot of people know about the project. The question here is what the exact agenda of this plan is and if the plan will go through. Their idea is to change the whole area. Figures (27, 28) show the plans from the government. They want to relocate the people and change the whole area. When entering the kampung one can see a prototype of these floating houses. But the plans still are very unclear if they go through, as it is an enormous programme and, until now, the government only built the wall and the prototype house (figure 29). It seems to be more an ideology that may not happen as even the initial plans for the wall have not all gone through and stopped in the midst of the process, one of the reasons why the wall is not 100% waterproof. We can see that tourism attraction seems to be in the interest of the governmental plans (30).
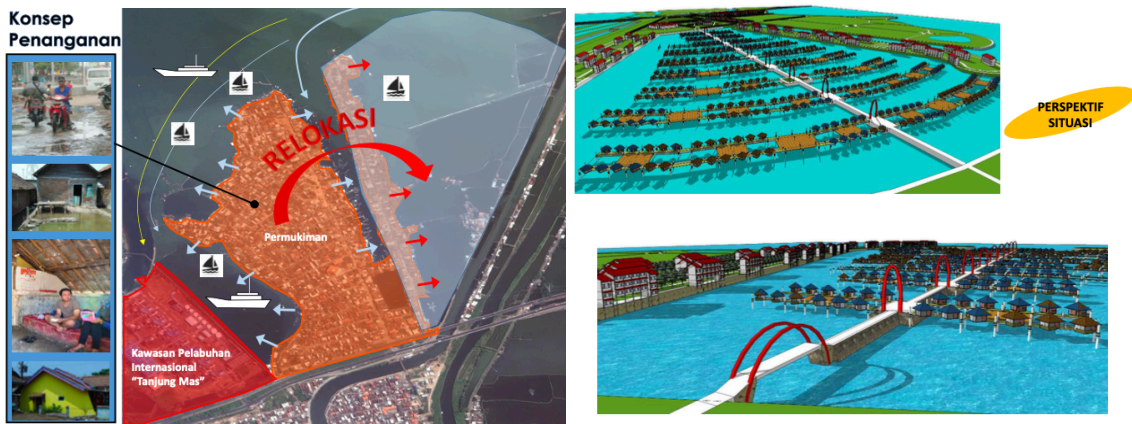
Figure 27 Relocation plans (Konsep pengembangan) Figure 28 Plans for Tambakrejo (Konsep pengembangan)

Figure 29 House Prototype, 6 april 2024 Figure 30 tourism plans (Konsep pengembangan)

It is very important to look at the power dynamics and agendas of the different actors and approaches. We can see that the local resilience is, as explained by Leys, a reaction towards the environmental changes occuring. NGO work is focussing more on education about rights and help. Their help thus is aid in reactionary practices and own reactionary practices as well as aid to get out of the reactionary cycle to get towards the preventive one (out of the "chronic present" cycle). The governmental actions differ according to the legal status of the Tambakrejo area. We can see that they are following different agendas and that the communication between the governmental actions and the local community is very poor as the evicted people suddenly had people destroying their houses and don't know what the future of their houses entails.

In the discussion section we will go more in depth about the resilience practices, to discuss their coworking or counterproductivity. But we can already see the mismatch between governmental actions and resilience practices of the local people. We can see that agendas are not synchronized. Often the villagers are not enlightened about what is happening, when

looking at the eviction case most of the villagers don't know that they have their houses for only five years and the day they came to destroy the houses also took them by surprise. The wall from the government also can have its downsides as it is less good for the biodiversity of the sea as the mangrove plantations.

Livelihood

(Wife of a fisherman) "We can't imagine living far from the sea. One of the reasons why me and my husband decided to stay in Tambakrejo is because our formal education is not that good. Formal education in the eviction place is the worst. We don't have a degree. So, if we are challenged by people from the West who have a good education, we will lose. We don't know what to do. We don't know what to do. We don't have a certificate."

(Farah) "Because, for them being fishermen, they only have skills as a fisherman. So, they can only ride in the boat and do the same as fishermen. So, it's not possible for them to move away."

Most of the villagers are fishermen. Most people are either men living by themselves or families. The families all live together in one house. The fishermen's livelihood entails some distinctive features such as not having a boss, neither having a fixed time schedule and the job is dependent on certain weather conditions. I will make an analysis of their livelihood through the theoretical framework chosen by defining livelihood through the different parts it entails namely capabilities, activities and assets.

Capabilities

(Farah) "Because the location is very strategic, they said. Near from anywhere, they said. From the market, from maybe the train station, from the port station, from the bus station, like that. And the land, they said, is a very strategic location for them."

Capabilities in regards to livelihood are about access to their job, and to other potential livelihood or well-being beneficial aspects, such as schools, hospitals or other institutions. Access to their job, as explained in the introductory part of the paper, is the main reason why the fishermen didn't want to move. Thus in this sense the capabilities of the fishermen in Tambakrejo are good for fishing activities. Their houses are located close to the sea which is

necessary to execute their profession. The proximity allows them for flexibility which is crucial for fishermen as their job hours are dependent on the weather. They also need a lot of material and boats and having it nearby is practical. Their overall capabilities are nevertheless affected by environmental changes induced by climate change and governmental implementations.

When looking at infrastructural quality, they are limited by the floods and the land subsidence. The houses on the non evicted side need constant renovation and adaptation, even after the building of the wall, land subsidence and floods still remain problematic.

The floods also contribute to less hygienic living conditions as water can make things rot quicker, attracts mosquitoes and is very dirty which can also create diseases. The dirtiness of the water has even increased since the governmental changes. As the building is messy and not cleaned up properly.

When looking at access to other important institutions Tambakrejo is rather located close to the city for lower income kampung standards, but the area is difficult to reach as the main road to access Tambakrejo gets flooded on a daily basis as well, which makes it not a very attractive area for people from the outside to go and generally a less accessible area. In my own experience it was not always easy to get to Tambakrejo from the city, the Gojeks (scooter taxis) would cancel (especially if one would want a car) or couldn't access my final destination. Depending on the situation, floods would block some areas of Semarang, with Tambakrejo being one of the first ones affected by it.

Within the kampung the infrastructures are minimal, there is a market, some little snack shops and a mosque.

The evicted side of Tambakrejo, has different capabilities than the non-evicted one as their housing situation is not in line with their needs. The houses are all the same and 6x4m. One house is for one family. The people that accepted the houses in the city want to return because they have to pay rent which they can't. The family's growth capabilities are also very limited because of the lack of space.

Thus capabilities are necessary but not sustainable in the Tambakrejo case. We can see that for the livelihood of a Fisherman, proximity to the sea is essential, but the environmental conditions in Tambakrejo are deteriorating. The access to institutions could be better if the government had met the demands of the citizens and if the road for accessing the village would not be flooded.

Activities

The term activities here refers to their day to day life, how it builds their livelihood and what parts of it are endangered, restricted or changing though their environment.

When looking at activities of fishermen they are differently scheduled than most livelihoods and are very diverse. They make their own schedule which gives them a sense of freedom that most of them enjoy and are used to.

A day to day life is thus difficult to describe as their activities are very diverse and season dependent. While conducting my research it was Ramadan and as their job is very physical, a lot of them slept throughout the day or rested to keep their energy and get through the day.

The fishermen's activities encompass going fishing on their boats. A typical day in the life of a fisherman is that he wakes up early in the morning to throw his nets in the water. Then they come back to the land and later that day go on the water again to collect the fish.

Other activities are fishing from a (self built) tower with an arrow, pulling a net behind their boats, or through the rumpons. On rumpons they collect green shells.

Next to the actual productive work there is also reproductive work such as building and maintaining the rumpons, knitting nets, maintaining their boats and other assets in good quality. Some of the fishermen build fish houses (which can be compared to a rumpon except they are floating on the water through fixing empty tonnes under a bamboo construction) or rumpons for the others and sell them. The fishermen's activities are very physical and can be dangerous. Thus at a later age they often need their sons to provide for them as going out in the sea is not possible anymore. Or they change their focus on land activities regarding fishing.

Thus when looking at the activities of the fishermen they are various and not regular, the activities are physical and can be dangerous. Even though they have the knowledge and experience of the sea for a long time, natural forces remain a dangerous factor that can affect fishing activities more than other livelihoods. The fishermen say they know the sea really well and they like the sea and living with it.

Figure 31 Pak Marzuki on his boat in the morning, 16 april 2023 Figure 32 Fishing tower, 16 april 2024 Figure 33 "Fish House", 16 april 2024

Assets

- **Human capital**

Knowledge

> "People need to work, right? So, maybe we should drop out of high school. It's about the cultural things that people, in the beginning their parents think that it's not a useful thing to do.
> Because you already can earn money from doing fisherman things. So, why do you go to school?"

A fisherman's knowledge is primarily about fishing and other fishing related practices. They know how, when and where to fish.

Most of the fishermen dropped out of school at an early age. Dropping out of school and a fishermen's livelihood are interrelated as they both affect the other. A lot of fishermen dropped out of school to start fishing and provide for the family instead of studying, which consequently narrows their possibilities for other livelihoods. In general the level of education among the urban poor is low, which can also be seen in Tambakrejo. Of the 314 residents whose education was documented, only two people had a bachelor's degree, with the majority of residents having a primary school level (Batubara, Alghofani, 2024). When asking about the current trends, most of the children of the fishermen do pursue their school and want to become something else than fishermen. When asking the parents if they would want their children to become fishermen answers differ, some of them want their children to

become fishermen whereas others would want their kids to do something else, or what makes them happy.

Something that had been discussed when talking with people from the NGOs, is that the fishermen don't know about their land, housing and other rights. They emphasized the importance of educating them about the rights they have.

The limiting consequence of quitting education at an early age shows itself as their side job or career switch capabilities are limited. A lot of them, for example, don't know how to read (Batubara, Alghofani, 2024). Finding a side job, when talking with the fishermen, seemed like something increasingly necessary for them, as their income flows are not stable and dependent on environmental circumstances such as weather circumstances or seasons. To carry out their livelihood the fishermen know the weather and seasons well, a lot of them say that they could notice a change in seasons throughout the years. When asking the fishermen if they believe in climate change all of them said they do believe in it, as they can see the weather and seasonal changes affecting their capabilities. They also noticed a decrease in fish in the sea.

Farah, my translator, also mentioned that the vocabulary of the fishermen increased when talking about fishing activities. Their vocabulary was more elaborate and rich when they were talking about fishing related activities compared to other ones.

Fishermen knowledge thus includes wisdom in fishing practices, weather and seasonal knowledge and knowledge of the sea and its dangers.

Skills (capacity to work and adapt): Their skills are primarily fishing related practices, they are very handy in building things and have good knowledge about the seasons, weather and the sea. They know how to build rumpons and other fishing material.

Their capacity to work is dependent on them but also on the environment. A fisherman's job is very physical and dependent on the weather conditions and equipment.

Their capacity to adapt within their livelihood has been shown by their changing from fishing fish to fishing green shells as the fish biodiversity decreased in the sea. Regarding other adaptations, such as for example finding a side job, these are more difficult due to their livelihood and education.

- **Social capital**

The social capital of community feelings and groups of fishermen will be discussed in depth in the social identity part. Their norms and values are rather conservative when looking at families. The husbands and sons provide and women often do the reproductive work at home. Religion plays a strong role in the village. A fisherman doesn't have a lot of power in the city as the livelihood is not seen as a very good one. In the village, nevertheless, as most people are fishermen there seems to be a stronger feeling of community and pride. Most fishermen are proud of their occupation and like it.

- **Natural capital**

Natural capital is very important in a fishermen's livelihood, the sea is a crucial element, but its biodiversity is decreasing which is problematic.

- **Physical capital**

Their physical capital are their boats and fishermen equipment. They remain rather poor due to their low income, most of them buy their boats second hand which, when looking back at the activities carried out by the fishermen, can enhance the dangers of the sea as poor quality of equipment will provide for less safety. A new boat costs about RP 150'000'000, and a net costs between RP 200'000-300'000.

- **Financial capital**

"We don't know. We can't predict the result of a fisherman. One day we can get 1 million or 1 million more in one day. The next day, we can get 200.000. The next day, we can get 400.000. The next day, we can't get it. So, we can't predict the result of a fisherman."

The fishermen's financial capital can be divided in their salary and their equipment.
Their salary is not very high and not very stable as it is very dependent on their environment and weather conditions. It depends on the season but can also vary per day. It is also dependent on their health and age. They don't have a pension thus are dependent on their legacy or other forms of fishermen practices that are less dangerous and physical for money

at an earlier age. Per time they go fishing, a fisherman can earn between IDR 70'000 and 100'000. The minimum wage in Semarang is around IDR 3,200,000/month (*Provincial minimum wage in Central Java*. (z.d.).

From this we can thus see that the livelihood of the fishermen is central to their lives. As opposed to other livelihoods, theirs is strongly intertwined with their lives as they choose their own working hours and live in the place where they work. It is the main livelihood of the area making it a central topic and creating communities and social ties.

Social identity

Social identity is the way people perceive themselves; it is often related or induced by a certain social categorization and belonging. In the case of the Tambakrejo community their social identity is strongly shaped by their livelihood, which is also dependent on their environment. In this chapter I would like to address the effects of their livelihood and of other factors such as religion, culture and the eviction that shape their social identity.

Religion

> (Farah) "So, the people here... Have trust of themselves that God will help. They believe in it.
>
> Because the majority here is Muslim. And they have belief in God that... Something that God will help."

This subchapter of the research has been a very insightful part for me personally, as, while conducting the research, it was Ramadan, I could experience it in a muslim country surrounded and living with only muslim people as Tambakrejo is primarily muslim. When talking with the people they were all very welcoming and grateful, two aspects that can partly be related to religion. When asking them about their current living situations they all answered they were grateful (quote). A lot of them also said they weren't against the government, even though the government did evict them. (quote) they were grateful.

A lot of villagers rely on faith in God that things will be alright and through their religion they learn to be very grateful for what they have.

Culture

> (Farah) "They have on themselves that the sea as a medicine for them and healing all of the sickness that they have.

He also has an illness of the breath condition. And when he was diving into the sea, he got healed."

"Oh, I see."

(Interviewee) "So, when the rich people get sick for 3 days, he goes to the doctor to get help and medicine and anything else. But he did not get healed. And when he got to the sea to get a bath, he got healed."

(Farah) "He said that we can't prove it from the scientific side. But it works. Because it's the effect of the body. We don't know the science yet. But they believe it."

When looking into culture, Indonesian people are very friendly and smiling, they are warm people. I could experience this throughout my whole stay in Indonesia and especially when staying in the village. Pak Ratno (change name) was the first person I interviewed for my thesis, he instantly invited me to stay with him and his family, which shows how welcoming they are. Every place I went to interview offered me food and to stay for dinner.

Indonesian culture is also very curious. People talk a lot. The structure of cities can be through different Kampungs. A Kampung can be seen as a neighborhood. Each Kampung also has their own culture that emerges through social dynamics. The Hysteria NGO focuses on the importance of these stories and that they give a humanness to an area and culture. In Tambakrejo one of the stories is about the healing effects of the sea. Culture is affected by the environment especially when a livelihood is in the same place as where one lives and the livelihood directly is related to the space of one's surroundings. The livelihood also is shared with the other members of the Kampung.

Community feeling

"You have kids, do you want them to be fishermen?"

(Interviewee) " Yes. For me, the most important thing is that the love grows from the next generation. For the parents, they want their kids to be fishermen. But sometimes, it's (education) more important for the next generation."

(Farah) "He wants his kids to be fishermen in the future. But he's holding back what he wants, for the next generation."

"Is it because he wants to teach them and it's a tradition in the family?"

(Farah) "The little hope, he was saying, it's also considered with the halal thing. Because, he also experienced that the job is to get halal salary, halal pay. So, it's just considerably more and your children will have a better life for themselves."

Community is important and closely linked to their livelihood. One of the important social ties, as explained in the education part, is family ties. In relation to their livelihood the fishermen still live and rely a lot on their offspring as being a fisherman is a physical job. The more conservative family dynamics also are more in place as most of the wives stay at home

and take care of the household, but the women are also the ones that go to the market to sell the fish the men have collected. Thus family plays an important role in the livelihood of fishermen as women usually are in charge of the selling process and their offspring are a guarantee for care when they are too old to fish.

In Kampungs also are RW and RT. "RW" (Rukun Warga) and "RT" (Rukun Tetangga) are community-based leaders that play crucial roles in local governance, social cohesion, and community development. RW is a larger administrative unit that encompasses several RTs. They are kind of the governors of a Kampungs and are important in community cohesion and decision making.

The fishermen also have fishermen associations. As discussed in the resilience part, the NGOs stimulate and teach the fishermen to create associations to accumulate the benefits from it. Most of the fishermen are taking part in associations, the associations often own a rumpon together and have monthly meetings to discuss the future or issues. Being in an association can benefit the fishermen as the government can provide them with benefits if they apply as an official organization.

The women in the village also created associations, their associations have names of sea animals such as crab or other. This also stimulates senses of community and togetherness.

As the village is quite small the people know each other well. Often when conducting interviews neighbors would pop by or children from other families.

We can thus see that apart from the more common or official community leader functions such as RT and RW other communities have also taken shape in the village.

The eviction also left its mark in the village. The people form the side that didn't get evicted didn't fight alongside the illegal settlers. As they just were helped by the government with the wall and believed that as they are living there illegally, it is in the government's right to evict them. But the people on the evicted side, on the other hand, grew closer due to the traumatic experience. They had to live in three different small tents for over two years, super close to each other. A situation like this creates a feeling of community and fighting for their land right provides attachment to the area.

Discussion of findings:

"So are the floods a reason for her to move away from here? "

(Interviewee) "For us, who are used to working with water, I don't think there's a problem with the water. I don't think we're afraid of the water.

It's normal, nothing happens. We just enjoy it."

(Farah) "She mentioned that because of the job, they're used to being faced with water, so the flood is like nothing for them."

In the results chapter the resilience actions, the livelihood and the social identity of the fishermen have been presented. I will here discuss some of the correlations and effects these social dynamics have on their migration patterns.

I believe that while reading the results sections various interlinkages have been unconsciously made in the head of the reader. I want to try and point out some of these correlations as they are an important aspect to later understand the complexity of migration patterns.

The main focus of the research, according to the coding scheme, is the question about climate mobility and the notion of "trapped population" as opposed to the upcoming trends of looking into voluntary staying. I will divide my discussion in generalization, resilience, disruptance aspirations and capabilities of the fishermen and incorporate the livelihood and social dynamics findings into these two latter categories.

It can be difficult to generalize the population. A lot of interviews had different opinions and views on what is happening in the village. People's opinions differ and thus generalization is difficult. I will grasp the overarching trend that I could notice.

When looking into the different resilience practices according to the different actors, we can see different outcomes, approaches, efficiency and most importantly agendas. We can see that due to their socioeconomic status, linked to their livelihood, the resilience practices of the fishermen are and can only be mostly reactions to effects. The NGO practices are about acute help. They also incorporate sustainable livelihood approaches by teaching the fishermen about their rights and how to create their own organizations. This creates a more sustainable livelihood for them as it will allow for better understanding of trends. The government, having more power, has strong action possibilities. While the NGOs and locals did the best in their power to overcome the natural disasters, the government, by having the power to build the wall, had a huge impact and played a very important role for the future of the area. When

talking with the residents, all of them were very grateful for the wall and all pointed out the huge difference the wall has made. When having different actors with different resilience strategies it is important to look at their coefficient or potential counterproductivity as well as the reasons for action. The agenda setting is important for this interpretation. The government came to the village and saw the environmental effects they were faced with. Actions such as building the wall have been undertaken but not finished entirely, next to these actions a potential future plan has been created for the area. It is important to think about the power dynamics of the implementation of this plan. Who would benefit and who wouldn't.

When thus looking at the capabilities of the fishermen we can see that their livelihoods are dependent on their environment which is deteriorating, their resilience practices are limited due to their financial status. Because fishermen often don't have a very high education, changing one's occupation is not realistic especially at a certain age. Thus when looking at the capability to migrate, they want to remain in the area because of their occupation.

(Farah) "They were like, oh, flood happens, just like that. It's a natural thing. When the flood came, they were just mopping the floor. Sp she's more scared of getting evicted again than of the floods."

When looking at the aspirations of the fishermen, we can, nevertheless, notice that there is not a strong aspiration to move either. Subjectivity plays an important role; for example some interviewees did not like the city, where others did and some were satisfied with their state of living where others were not. But even with these different opinions, one can conclude that most of the interviewees got used to the floods and the change in their state of living. I believe this shows the ability of humans to adapt to situations. The fishermen have lived their whole life in this manner so they also don't know any other ways.

They are also very grateful with what they have and mostly happy. Gratefulness and being welcoming can partly be explained through its embeddedness in the muslim religion and within Indonesian culture. The resilience practices from the various stakeholders seems to satisfy them, even if they don't work completely, as they are very grateful.

The biggest reason why the villagers would want to move is the fear of another eviction. People won't move out of their homes if they still can stay. Aspirations are not very strong, they are happy and also used to this way of living. So the question whether the Fishermen's decision to stay is voluntary or non-voluntary can be answered by saying they can't move due to their socioeconomic status, but they are also happy and don't seem to be aspiring a lot for more, this is what they are used to, for them as long as they can pursue their lives they are

happy. For the current generation it is best to stay there as it is their homes and where they come from, changing their livelihoods seems unrealistic. If the government wants to pursue their plans they have to respect the human rights of the people living there/affected.

They are not really geographically trapped but rather economically. As good resilience practices from the different actors, and especially governmental actions in line with the people's wants and needs, could lead to a better livelihood. When noticing the impact of the educational aspect, a trend from the younger generation to move away from fishermen practices and towards another livelihood is noticeable. NGOs stimulate and emphasize the importance of education and of knowing their rights and, with the fishermen community, focus on getting the attention and support of the government. We can see that some fishermen seem to agree with the governmental plans, or even seem to think that it's their idea to focus on tourism to be able to stay living in their area: "We are optimistic We don't think that we are going to be exiled. So this is kind of like a given proposal to the government to try to develop the village to make a tourism village so they can have educational things to do outside. Like, for example, to learn about how to do fishing things. We have already asked the Ministry of Tourism for the future.". Communication between the government and the villagers, and aid from NGOs to protect the villagers rights seem to be the current situation. This paper shows the importance of understanding livelihood and social identity to come to a mutual agreement that does not increase the inequality gap but rather focuses on the needs of the people.

Conclusion

To conclude, this paper shows the importance of understanding local social dynamics in migration activities and the importance of socioeconomic inequality in migration choices. When developing migration activities, historical activities, patterns and socioeconomic inequality in migration choices have to be considered.

To answer my research question from the beginning *How to better understand environmental (non)migration patterns through the social identity of the fisherman community in Tambakrejo Kampung* we can see that the fishermen mostly don't want to move from where they live. Primarily it is because of their livelihood as fishermen. They refused to move because the option from the government was not sustainable for their livelihood and a change in livelihood was not realistic.

Through this paper I want to explain that it's a big web of interlinkages. Social matters such as the dynamics of the village, education, culture and religion are important not to overlook. As they play a role in the understanding of migration patterns. When thinking about the notion of "trapped population" or "voluntary non-migration", this case shows that this categorisation is not that simple as the social dynamics are more complicated. Their livelihood and social identity can't be seen apart from their environment as they grew out of it and are dependent on it. With the deterioration of their environment, migration resilience practices emerge and not an aspiration to move. Because of the lack of capabilities in resilience, NGOs try to help for the future. The notion of trapped population thus stems from the decrease of capabilities to sustain their livelihood within their environment and the lack of capabilities to create a sustainable livelihood somewhere else due to their livelihood which influences their education and socioeconomic status. The notion of trapped thus implies various social codependent factors out of which the main ones are: livelihood, education and environmental dependence.

While studying the people, I realized that the notion of migration doesn't play as strong of a role as I initially thought. When interacting with the various stakeholders in the problem, the government played a crucial role in how the future of these people will look. The term trapped populations doesn't really have a strong connection to space but rather to social inequality. Their livelihood cannot be sustainable due to the environmental changes and that a change in livelihood is impossible due to the capabilities focused on fishing practices. But is it a trapped situation? NGOs stimulate and emphasize the importance of education and of knowing their rights and, with the fishermen community, focus on getting the attention and support of the government. The fishermen are not very worried about the floods as since the building of the wall the non-evicted side is less strongly affected by them, they are used to having floods as they grew up with it. The main worry is the evicted side to get evicted again as they currently have a permit to stay in the houses for five years.

Currently the government, some fishermen and NGOs are thinking of making Tambakrejo a tourist attraction by showing the local practices. And they show the importance of the skills the fishermen have by making the place an area for teaching fishermen practices. But not everyone wants this and still the question is whether the government would push this plan through.

To conclude, I believe that actively deconstructing presuppositions about migration and listening to the needs of the people within their context is crucial. Have coworking resilience

actions instead of counter productive ones, to maximize positive outcomes. I hope that by looking into their agency and listening to their needs, the notion of "trapped populations" can be widened and also see the other way around as "forced migration" due to social inequality; forced through unequal power dynamics and capabilities.

I believe that education and communication are the keys to counter these two trends namely forced migration or trapped populations.

First education about their rights and how to fight for them is important, and secondly education allows for more possibilities and capabilities in other words more choice and agency. Resilience agendas should be synchronized for the best outcomes by incorporating local knowledge and demands.

The future for the area still remains very unclear as different agendas are mentioned. The experience has been very insightful and I hope that this document will contribute to changes in future approaches that will allow for voluntary (non)migration outcomes.

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Appendix

Interview Guide:

General questions	- How long have you lived in Tambakrejo Kampung? - How did you get your current place/home? - What is your occupation/job?
(Non)Migration	
Natural hazards (resilience)	- How often and what kind of natural hazards do you experience? - Do you believe in climate change? - What was the main reason why you wanted to stay in Tambakrejo? - What kind of actions do you do against environmental effects? - What kind of actions does the village as a collective to against climate change effects? - What does the government do against climate change effects? - (And NGOs?)

	- What did the government and NGOs do against such environmental problems, when, with what rationales, objectives, and costs (if you know), how, and for whom? - Do the gov and NGOs' programs/interventions achieve ist objective?
Livelihood	- How did you end up with this job? Why did you decide to become …? - Income? Spent on what? - Have you experienced significant changes in livelihood due to environmental effects? (wall) - How do you see the future of your livelihood evolving? - Do you think the younger generations should become fishermen as well (continue the legacy?) or search for other job opportunities? - Could you envision yourself doing something else for a living?
Livelihood (assets)	- Human capital: - Social capital: Do you have connections here? Fishermen groups? Knowledge sharing? Family ties? How are the social dynamics in the village? - Natural capital: What are things in your surrounding that are valuable for you as a fisherman? Mangrove? Fish in the sea? Earth? - Physical capital: What are things you need as fishermen? - Financial capital: What is the financial capital of a fisherman? Boat? Objects? Revenue?
Livelihood (activities)	- Tell me a typical day in your life? - What are the different types of fishermen there are and different types of activities? - Do the activities change throughout time (season, age, climate change, assets, knowledge, possibilities…)? - In how far is life as a fisherman different from other livelihoods?
Social Identity	Culture - Are you religious? - Are there activities you share together as a community in the village (traditions)? - Can you tell me about the narratives or history of Tambakrejo? - What do you think are typical attributes of people from Tambarkejo compared to others? - Do you feel closer as a community since the eviction? Knowledge/education: - what is your level of scholar education? - Do you read a lot? - Do you know a lot about the news in the world? - Do you know a lot about fishing? Feelings of belonging: - Do you feel secure in the village? - Do you feel attached to the area (to the sea and rural living?) -