

The Excluding Effects of Climate Change

A case study on how climate change affects land exclusion of small-scale farmers in the Vietnamese Mekong Delta

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Abstract

This thesis examines in which ways the effects of climate change are excluding small-scale farmers from land and capital in in the Vietnamese Mekong Delta. More specifically, it explores the relationship between powers of exclusion and the class differentiation between small-scale farmers in Ba Tri district. Through fieldwork interviews with farmers in Ba Tri district, the findings show that the effects of climate change affect farmers in unequal ways. The poorest farmers are excluded, and this very exclusion allows other farmers to accumulate more land and capital. From the empirical data, a class differentiation is identified and analyzed in connection with the exclusion. By using the theory of petty commodity production together with identifying different powers of exclusion at play in the case study area, I argue that climate change is a rising power of exclusion that excludes and dispossesses the poorest farmers, pushing them further out of production. However, this exclusion can only be understood in connection with an understanding of the historical, social and economic development of Vietnam where especially the state's turn towards neo-liberal policies plays a huge role for the structures of exclusion and class differentiation.

Keywords: *climate change, petty commodity production, Ben Tre province, Mekong Delta, Vietnam's agrarian transition, powers of exclusion.*

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1. Introduction

Since the late 1980s, Vietnam's agricultural sector has gone through a massive transition. Reforms radically changed Vietnam's central planned economy to a more market oriented economy under the term 'market socialism'. This kick-started Vietnam's economic growth and reduced the absolute poverty significantly. The transition pulled Vietnam from being one of the world's poorest countries to a lower middle-income country in just 25 years (World Bank 2017). But the transition was not without costs. Entering the global market while enforcing neoliberal reform agendas might have reduced the absolute poverty but the income inequalities have skyrocketed (Akram-Lodhi 2010). The inequality is spread unevenly across Vietnam and the Mekong River Delta in Vietnam is today overrepresented in the near-poor group of people (Lam 2017). Poverty is not the only problem that the Mekong Delta is facing. The consequences of years of excessive CO₂-emissions (emitted mostly by other countries) is starting to leave its stamp on Vietnam and can especially be felt in the Mekong Delta. With an average elevation of 0,3-0,7 meters above the mean sea-level, at present land subsidence rate of 1-4 cm y⁻¹ inside the delta and a global sea-level rise predicted of about 0,28-0,61 meter by the year 2100 (and most likely even higher locally), the delta is extremely vulnerable (Hak et al. 2016). Under the effects of land subsidence and relative sea-level rise, the delta is under great threat of saltwater intruding further inland, resulting in severe salinization (ibid.) that will be devastating to the 'food basket of Vietnam' providing 90% of Vietnam's rice production and 60% of its aquaculture (Anthony et al. 2015) – and devastating to the 18 million people living in the delta.

1.1. Aim and purpose

The aim of this thesis is to investigate *how the effects of climate change affects the inequality amongst small-scale farmers in the Ba Tri district in the Mekong Delta, both as an isolated factor and in combination with other factors*. Furthermore, the thesis will examine how it affects the farmers' exclusion from accessing land. Exclusion is understood as ways in which people are prevented from benefiting from things, in this case land, and operates through powers and is structured through power relations (Hall, Hirsch, and Li 2011). I put forward a hypothesis by which the effects of climate change increase the exclusion of the poorest farmers from their access to land, thus further increasing the inequality and creating a group of farmers that are highly vulnerable towards the effects of climate change. I argue that land is of high importance for the farmers as it makes up their livelihood and thus is fundamental for their

survival. The analytical framework developed by Derek Hall, Philip Hirsch and Tania Murray (2011) named Powers of Exclusion together with Henry Bernstein's (2010) theory of the Petty Commodity Production (PCP) constitute the theoretical basis for the thesis. With these two framework I will analyze how farmers identifying as part of the PCP are affected by the powers of exclusion and the effects of climate change.

With this thesis I connect Vietnam's agrarian transition, the rising inequality and the effects of climate change in an attempt to understand the current situation of small-scale farmers in the Mekong Delta. The thesis does not aim to generalize or quantify the experience of being a small-scale farmer in the delta, nor does it offer solutions to the problem of land exclusion and rising inequality to the Ba Tri district case that is the pivotal point of this thesis. I wish to *point out* a connection between Vietnam's rapid development and the effects of climate change that has left some farmers behind, now struggling to sustain their livelihood. Furthermore, to enunciate the importance of integrating the effects of climate change into the debate of inequality and exclusion and furthermore, to bring experiences and stories from farmers living in the hotspot of changes to the forefront, hopefully making it possible for readers to relate and engage themselves in the highly urgent issue of climate change.

1.2. Research Questions

- 1) How does the effects of climate change, isolated and in combination with other factors, influence farmers' exclusion from land in Ba Tri district in the Mekong Delta?
- 2) In what way is a class differentiation constructed among the small-scale farmers and how does this class structure influence the farmers' exclusion from land?

1.3. Structure of the thesis

The introduction and presentation of the research questions (1) is followed by the background and context (2) where I summarize the climate challenges in the Mekong Delta (2.1), explain the historical development of Vietnam's agrarian transition and the emergence of a class differentiation (2.2). The background is followed by the presentation of the research methodology (3), the applied methods during the fieldwork (3.3) and limitations of the used

methods (3.4). Section 4 introduces the theoretical framework, first by presenting the analytical framework Power of Exclusion (4.1) followed by Bernstein's theory on Petty Commodity Production (4.2). Thereafter, I analyze my data from the fieldwork, first identifying the powers of exclusion at play (5.2) followed by an analysis of the class differentiation between the farmers (5.3). After the analysis, I move into the discussion (6) where I discuss the interrelation between the powers of exclusion. This will be followed by reflections on what the future holds for the farmers in Ba Tri district (6.3) and finally, a conclusion (7) summarizing the findings, discussion and answering the research questions.

2. Background and Context

2.1. The Agrarian Transition

The Mekong Delta has over the last 200 years transformed from one of the world's greatest and biggest wetlands to the rice bowl of Vietnam with only 1,5% wetlands remaining (Huu Nguyen et al. 2016). This transformation is largely caused by Vietnam's agricultural industrial development and the recent agrarian transition, which is important to incorporate in order to understand how class differences and climate change play a role for farmers' exclusion from land access.

With the era of reforms in Vietnam known as Doi Moi (translated: renovation) in the late 1980s and 1990s, a rapid capitalist agricultural development emerged in the Mekong Delta which was in sharp contrast to the rest of Vietnam, and the Mekong Delta soon became one of the most commercialized regions in the country while at the same time, the landlessness in the delta increased from 16,9% in 1993 to 28,9% in 2002 (Gorman 2014, Akram-Lodhi 2005).

2.1.1. The agrarian history of the Mekong Delta

Gorman (2014) explains the rapid development in the Mekong Delta in the aftermath of the reforms with the particular political culture, the moral economy. He argues how the moral economy of the emergent class of semi-commercial upper farmers in the Mekong Delta has been formed since Vietnamese sovereignty over the region in 1802. While central and north Vietnam in this period designed 'cong dien' (communal granted land) in order to manage the scarce agricultural land and periodically redistribute it to the landless, thus creating an

understanding of communal property, the villagers in the Mekong Delta dissolved into atomized settlements where they cleared the land themselves. Here there was no granted land and ‘thus their right to access and use was rooted in the application of labour’ (Gorman 2014, p.506). With French colonial rule, the land of the Mekong Delta was controlled and exploited to generate profit for the colonial power and they established a two-class system where farmers rented land from landlords, creating a power relationship of dependence between the two. As Gorman (2014) argues, a capitalist mode of agricultural production in the Mekong Delta emerged during the French colonial period where the population was compelled from ownership over the means of production to ‘enter exploitative relations of tenancy or wage labour’ (p.506) which was met with great resistance from below. With independence of South Vietnam in 1954 after the First Indochina War, reforms dissolved the advantages for landlords and instead transformed former tenants to landowners of the plots they previously had been renting. Since the plots the farmers had been renting varied in size, the reform did not eradicate social differences, but instead, as Gorman explains it, *cemented* them (Gorman 2014). During the Second Indochina War (known as the Vietnam War) the government of Southern Vietnam and the National Liberation Front (NFL, also known as the Viet Cong’s) both promised to address the ‘historical grievance of dispossession through land reforms’ (ibid., p.507). In 1970, the government of South Vietnam launched, in cooperation with its American advisors, a ‘land to the tiller’ reform that gave landownership rights to the households. The reform aimed (besides weakening the NLF) to create a new class of small farmers that embraced the ‘liberal ideas of political and economic freedom’ and to expand the capitalist relations in agriculture. After South Vietnam lost the war, and South and North Vietnam were reunified in 1975, a new constitution was drawn up in 1980 that banned private property, declared all of Vietnam’s land to be state property and businesses of foreign capitalist companies were confiscated (Pham 2016). As Pham (2016) describes ‘there was no market, no competition, and no freedom of contract under the 1980 Constitution’ (p.267). This was met with great resistance from both upper-middle and poor farmers in the Mekong Delta as they emphasized the earlier property claims.

2.1.2. Doi Moi – an era of economic reforms

The central planned structure led in the late 1980s to a near-collapse of the regime with an extensive food shortage and agrarian crisis which became the beginning of the agrarian

transition and the de-collectivization of land (Akram-Lodhi 2005). As a response to the crisis, an era of economic reforms named Doi Moi, was implemented in the late 1980s into the 1990s that piece by piece dismantled the central command system. These reforms were to transform Vietnam's central planned economy to a market oriented economy in order to establish a 'socialist-oriented market economy', also known as market socialism.

In 1988 Resolution 10 was approved and with it the return of private ownership and production, and a dismantling of collectives. The 1993 Land Law also had great impacts on the distribution of land. The law strengthened land property rights by making it legal to lease, transfer, exchange, inherit and mortgage land that thus dissolved the idea of collective farming. With the law, land became a commodity that could be legally exchanged in the market and distributed by market mechanisms (Quang Tuyen 2014). In 1993, around half of farming households in the Mekong Delta produced exclusively for the market and consequently, landownership decreased while landlessness increased as better-off households expanded their land while poor households sold theirs (Gorman 2014). Since the reforms under Doi Moi, Vietnam has transformed from being one of the world's poorest countries to a lower middle-income country. The agricultural transition and a rising market liberalization, kick-started Vietnam's economic growth and reduced the absolute poverty significantly (World Bank 2017). At the same time, poor households were forced to turn from on-farm jobs to off-farm jobs as the agricultural productions shifted from subsistence-based to intensive export-based production (Quang Tuyen 2014).

2.1.3. An emerging class differentiation

Even though the reforms created a reduction in absolute poverty, the landlessness amongst farmers rose in the Mekong Delta and thus increased income inequalities (Akram-Lodhi 2010). According to Akram-Lodhi the 'processes of rich peasant accumulation are clearly predicated upon mechanisms of social differentiation during Vietnam's agrarian transition' (ibid., p.96). He argues that the agrarian transition created a differentiated access to capital, technology and labor power and how a farmer class stratification emerged between rural farm households. He identifies three classes of farmers; rich farmers who produce high-value crops and have access to technology and hired labor; small farmers who dominate the Vietnamese agriculture, using family labor and where a large share of the crops is used for subsistence-based; and the

emerging class of landless farmers who are forced to sell their labor in order to survive because they lack access to the means of production. Similarly, Gorman (2014) argues that the ‘access to land has been a necessary but not sufficient means of achieving upward social mobility among farmer producers in the Mekong Delta’ (p.517) and those who were not allocated land during the reforms were far more likely to experience negative social mobility.

I argue that the identified farmer class system that has emerged with the development of a capitalist market economy, and with it the differentiated access to assets, especially land and thus a differentiated social mobility amongst farmers, plays a great role when discussing the effects of climate change and who becomes excluded by them.

2.2. Climate change in the Mekong Delta

The Mekong Delta is a river delta, formed by fluvial sediment supply 5300 to 3500 years ago. It is sustained by sediment supplies from the Mekong River. For thousands of years, sediment has been transported by the Mekong River to the delta all the way from the Tibetan Plateau down to Vietnam and the South China Sea, making its way through China, Burma, Laos, Thailand and Cambodia (Anthony et al. 2015). The Mekong Delta is the world’s third largest delta with a population of nearly 18 million people and accounts for 90% of Vietnam’s rice production and 60% of its seafood, making the delta crucial to the food security of Southeast Asia (ibid.).

As a low-lying coastal system, the Mekong Delta is highly sensitive to sea level rise related to climate change which will increase already existing sand erosion, submergence and coastal flooding. Only when the rivers discharge enough sediment to overcome currents that wash them away, can the delta exist (Giosan et al. 2014). Besides sand erosion from the ocean, the Mekong Delta is experiencing a rapid decline in the supply of sediment from the Mekong River due to the fast expanding hydropower dam projects that restrain the sediments in its huge basins that further increases coastal erosion (Anthony et al. 2015). In 2007, a report from the Intergovernmental Panel on Climate Change (IPCC) identified the Mekong Delta as a hotspot for vulnerability, predicting that more than 1 million people will be directly affected by the sea-level rise by 2050 (Nicholls et al. 2007). With global temperatures rapidly rising, a sea-level rise of 30 cm in 2050 has been predicted for the coast of southern Vietnam (Smajgl et al. 2015).

The sea-level rise is expected to accelerate salinization in the delta, affecting 50% of the area under cultivation (CARE 2009), together with more frequent storm surges, droughts and floods (Wong et al. 2014).

The environmental changes in the Mekong Delta due to climate change should not be regarded as far-off future predictions but changes that are happening right now and will accelerate to massive problems in the near future. The most recent evidence in the Mekong delta was a great drought in 2016, triggered by reduced rain due to the El Nino phenomenon and exacerbated by climate change, causing seawater to penetrate 90 km inland (Minh 2016, Larson 2016).

2.2.1. Ben Tre province

Ben Tre province has a population of around 1,26 million and covers an area of 2.360 km². It is a coastal province with a 65km coastline. The economy of the province is highly based on agriculture (especially coconuts) and aquaculture (shrimp, clam, oyster, crab and fish). Map 1 shows the geographical placement of Ben Tre Province.



Map 1: The Mekong Delta. Ben Tre province is highlighted with red (by author).

The national poverty rate in 2016 was 5,8% where Ben Tre's poverty rate was 7,1%. The monthly average income per capita in 2016 in the Mekong Delta was 2.327.000 VND¹ with a monthly average living expenditure per capital at 1.741.000 VND. In Ben Tre, the monthly average income in the agriculture, forestry and fishery sector in 2016 was 865.000 VND (General Statistics Office of Viet Nam 2016).

Ben Tre is identified as one of the provinces that is especially vulnerable to climate change and sea-level rise where the problem of salinization is a big concern. The rainy season occurs in May until November and the dry season from December to April. In the dry season, with a decrease in the supply of fresh water upstream, the salty seawater enters into the rivers causing salinization in almost all areas of the province and causes severe freshwater shortage (Ben Tre Provincial People's Committee 2015). In 2016, the province experienced the worst drought in 100 years where 100% of the rice harvest failed due to salinization throughout the whole province, over 88.000 households lacked fresh water and total damage cost 66 million US dollars (personal communication with Ben Tre Department of Natural Resources and Environment).

3. Methodology and applied methods

I will in this section present the methodology that the research is formed from and built upon. This will lead into a presentation of the applied methods during the fieldwork, followed by a discussion of ethical considerations and limitations.

3.1. Methodology

3.1.1. Critical realism

My research takes a point of departure in the traditions of critical realism that seeks understanding through epistemological skepticism; our knowledge of reality is *partial and socially constructed*, and ontological realism; the biophysical reality is '*externally real*' to human experience (Forsyth 2001, Isaksen 2016). To research the effects of climate change, it is crucial to accept that there is a reality out there, where climate change is a real biophysical phenomenon, creating massive changes external to the human experience of it. At the same

¹1 million VND is around 43 US dollars.

time there is a socially constructed – and incomplete – understanding and knowledge of the effects of climate change, that needs to be explored.

3.1.2. Critical Ethnography

The central data collection of this study consists of qualitative interviews with farmers living in Ben Tre province in the Mekong Delta. The strategy for my research approach has its outset and inspiration in critical ethnography.

Critical ethnography built upon an ethical responsibility to ‘address processes of unfairness or injustice within a particular *lived* domain’ (Madison 2012, p.5 emphasis in original). The researcher gets involved and tries to change the processes of injustice towards greater equity by using resources, privileges and skills available to her and thus giving voice to subjects that otherwise would not be heard. With critical ethnography, the researcher goes beyond the surface and investigates the underlying practices of power and control (ibid.). In order to understand the lived domain, phenomenology is emphasized. Phenomenology is concerned with the lived experience and the subjective view. The phenomenological orientation toward embodiment and the human perception is embraced in critical ethnography in order to uncover and understand what it *feels like* to experience processes of injustice and power structures in the subject’s life world (ibid.). When using a critical ethnographical approach, it is important to acknowledge my own positionality concerning power, biases and privilege in the research. Conducting ethnographic fieldwork is a personal experience and accordingly, it is important that my own subjectivity and political perspective is transparent (ibid.).

Even though my research approach has been inspired by critical ethnography, when looking at how my fieldwork developed, it should not be regarded as complete critical ethnographical research. I did and do address processes of injustice in the lived domain and try to give a voice to farmers that otherwise might not be heard but limitations during the fieldwork that will be addressed below such as interview circumstances and time limitations affected how well-integrated critical ethnography actually was in the collection of data.

3.2. Applied Methods

The primary data of this thesis consists of data collected through fieldwork carried out in May 2018. My fieldwork took place in Ba Tri district in Ben Tre province, located in the Mekong Delta, Vietnam. The data consists of interviews with 16 farmers, several expert interviews with professors and NGOs and observations from the field. The 16 interviews will be the foundation of the analysis while the expert interviews will work as supportive and integrated background knowledge.

3.2.1. Location: Ba Tri District

As I did not have the opportunity to travel to the Mekong Delta to identify the most suitable location myself, I instead consolidated with several of my contact persons in Vietnam prior to travelling. This became a back and forth conversation where I, based on literature research and articles, described my interests in areas that had experienced all or some of the following problems:

- a. Hazards and events related to climate change
- b. Induced migration from the area
- c. Environmental changes that affected farmers' livelihood
- d. Sea-level rise and salinization
- e. Different social classes (landless, middle and rich)

These problems did not all turn out to become relevant, as I chose to focus on small-scale farmers with access to land and not as (e.) describes, look at landless, middle and rich farmers. Furthermore, migration has been a huge interest of mine but did not turn out to be the main focus of this thesis. Based on my interests and my contact persons' in-depth knowledge of the delta, I decided that it would be very relevant for me to visit Ba Tri district in Ben Tre province. The interviews were conducted in Giong Sao hamlet and Giong Trom hamlet in Ba Tri district, Ben Tre Province in the Mekong Delta (see map 2).



Map 2: Case study area in Ba Tri district in Ben Tre province (by author).

In order for a foreign researcher to interview farmers, I needed a research permission. I applied for a research permission from the local authorities in Ben Tre province in collaboration with Can Tho University. In order to get this, I had to submit a letter of request (see appendix 1), a schedule of my planned activities, my questionnaire and number of farmers I wished to interview. When receiving my research permission, I was granted permission to spend 5 days in the field.

As the area in which this research is conducted is small in size and only 16 farmers were interviewed, the study cannot be quantified to explain changes and challenges that are happening all of the Mekong Delta. Although the sample is rather small, I argue that some degree of generalization is possible for at least farmers living in the Ba Tri district in Ben Tre province. The study represents how small-scale farmers (whom are the most common in the delta) are effected by climate change and the effects are somewhat the same in the district but also to some degree in the province. Of course environmental variations arise between inland and coastal areas but the tools and methods that the farmers can adapt is the same. I will return to the generalization of the study in the end of the thesis.

3.2.2. Sampling

As part of the research permission, the selection of interviewees was made by the local chief and the local People's Committee. I was explained that the farmers chosen were based on my interests explained in the letter of request (see appendix 1) and my questionnaire (see appendix 2) that they requested to see before the fieldtrip. After the two first interviews, it became clear that they were introducing me to farmers that were well off, had a fair amount of land and a good capacity to adapt. I asked to talk with a more diverse range of farmers – some with for example less land. Afterwards, I visited a range of different households with very different access to land. My initial thought for the research was to talk to both landless, middle and rich farmers but as time was restricted and the landless were out working all day, I ended up interviewing 16 middle class farmers which, as will become clear in the analysis, turned out to be a very diverse and differentiated group. An introduction to the 16 farmers can be found in appendix 3.

3.2.3. Interview structure and process

The interviews did all take a point of departure in the same questionnaire as it was important for me to get around the same main themes in all of the interviews. The interviews were structured as standardized open-ended interviews where the farmers were asked identical questions but most of the questions were worded so responses would be open-ended (Turner 2010). At the same time, it was important for me to allow the farmers to contribute as much as possible with the details they desired to tell and the open-ended questions allowed this to take place while at the same time I was able to ask follow-up questions. I divided the questionnaire in four sections:

1. Background and context

This section has the most closed questions that were to clarify demographics and the farmer's current living situation. One of the questions in this section was 'Do you own this land?'. This question is somewhat incorrect to ask as private ownership is not permitted in Vietnam but the law allows ownership of rights to use the land (The National Assembly 2013). The farmers' answer should therefore be understood as whether they own *the rights to use the land* with the State as the administrator.

2. Current environmental challenges and situation

This section opened up a conversation about the effects of climate change and how it had affected the farmers and their family.

3. Solutions

I asked this section of question to get a feeling and understanding of the farmer's capacity to adapt and whether they felt excluded from their land do to the changes. Furthermore, I found it interesting to get a sense of the importance of land and why people chose to rent out or sell their land.

4. Future

Future is a difficult category because it can be hard for the single interviewee to relate to situations that has not happened yet (Kvale and Brinkmann 2009). With this in mind, I still found it interesting to ask the farmers how they pictured the future in Ba Tri and what they hoped for. This gave me a sense of what they expected would be challenging in the future and what were necessary for them and their family to obtain their livelihood.

Discussing the research culture in Vietnam with several researchers, I was told that the interviewees often are members of the Farmers Union, which is controlled by the government. This I chose to control by including a question asking 'are you are member of the Farmers Union?' in my questionnaire. I will return to the research culture in the following section. The complete questionnaire can be found in appendix 2. Not all the questions turned out to be relevant during the interviews and often the farmers managed to tell stories and facts that answered more than one question. That gave room for me to go more in depth with the things, that the farmers told me and I discovered that many of the farmers were willing to discuss and their economic problems (example growing debt) which became central to the analysis.

The interviews varied between 30 minutes and 1,5 hours and were all conducted in the farmers' homes, except one farmer, who was interviewed at another farmer's home. All the interviews were recorded after gaining consent from the farmers and later transcribed. I used the same translator for all the interviews which turned out to be recommendable as we developed a good,

dynamic teamwork. If there were troubles with the translation of a word or question, we managed to work it out in the situation and furthermore, she was very helpful in explaining and giving me an understanding of Vietnamese cultural habits. Not that using a translator was without limitations as I will return to.

3.2.4. Method of analysis: Coding

I had all the interviews transcribed and translated into English in order to analyze them. The analysis is based on the frameworks that will be presented in section 4. In order to use the frameworks and gain an understanding of how the framework and data could be integrated, the transcriptions were used for coding. The coding is based on the definitions of the powers of exclusion and the different factors, determining poor, middle and rich farmers in PCP.

3.3. Limitations

3.3.1. A foreigner in Vietnam: The official research permission

Conducting research as a foreigner in Vietnam turned out to be a very bureaucratic process. I chose to follow the rules for official research and applied for a research permission as I considered the consequences of approaching farmers without a permission too risky. After awaiting answer for around a month and a half, I was granted permission to spend 5 days in the field. This was a lot less days than I had hoped for but I managed to conduct 16 interviews in that time.

One of the consequences of informing the local authorities about my presence was that I was accompanied by two governmental officers from Ben Tre province during the five days in the field. Officially they were escorting me around to protect me and keep me safe but unofficially from what I observed and discussed with professors and students, they were there to interfere when I asked questions, outside my already submitted questionnaire, that was considered as sensitive issues to the state. For instance, when I asked questions that directly pointed to land issues, such as conflicts over land ownership, I was interrupted and told to return to the approved questionnaire. That of course restricted me in my follow-up questions to issues that I found very interesting and would have liked to investigate more deeply.

Besides the two governmental officers, I was on the first day welcomed to Ba Tri district by the Local People's Committee. Several from the committee joined me on the first day of the fieldwork while for the rest of the week, one person joined us. This was to help us navigate around the area and connect us to the local chiefs of the two hamlets we visited, that introduced us to the farmers in the area. In total this meant that I on the first day of the fieldwork was accompanied by a personal escort of 5-6 people besides myself and my translator. Fortunately, the number of people following me around reduced during the days of the fieldwork but the presence of especially the governmental officers has very likely affected the farmers' answers and actions during the interview. In order to verify the stories and feeling I was told by the farmers, I subsequently consulted other researchers conducting similar research in the Mekong Delta to find consistencies and differences.

3.3.2. The interview process

The presence of the many officials during the interviews created several situations where I found it hard to control the interview situation. Most of the time, the governmental officers, local chief and employee from the People's Committee did not interfere or comment during the interviews, but in certain situations they broke in and started to talk with the farmer in Vietnamese. This could be discussing certain details about the time of a drought, certain storms or governmental programs installed to help the farmers. This made me lose some of the control over the interview as my translator was not always able to translate all that was said.

Even when there were no interruptions during the interview, it must have been a great pressure for the farmer to be interviewed in front of 5-8 people, all scribbling notes and looking at you. I was a stranger entering their home with a handful of local authorities. In the beginning of every interview, I presented my purpose and research to the farmers and made it clear that I did not work *with* the Vietnamese state but I do not know if they were convinced. There was nothing natural about the conversation There were several times where I doubted whether the farmer was telling what was truly on their minds or telling what they thought the local authorities (and I) wanted to hear and thus trying to avoid getting in trouble. In a couple of the interviews, the farmers contradicted themselves, for example saying that they were pleased with the help they got from the government and at the same time explaining their struggles with debt and low market prices. From talking with independent experts, I got an understanding of which themes

were sensitive, such as land reforms and critique of the State. It is likely that questions pertaining to those themes made the farmers even more careful about their answers.

3.3.3. Language and translation

Even though I had a good and communicative relationship with my translator, who was not professional, the interview process was challenged by the translation factor. I had no prior experience using a translator and I found it hard to be dependent on the translation to gain an understanding of the answers. During a lot of the interviews, I experienced that the farmers' answers were much longer than what was translated. When I mentioned this, I was told that the farmers repeated themselves many times so there was no point in translating it all. Also details got lost. I believe many of the interesting parts are found in what people chose to repeat and describe in detail. Thus, I decided to transcribe all interviews (some by me and my translator, some only by my translator) in order for me to read the farmers' answers word-for-word.

3.3.4. Limitations to the methodological approach

As mentioned above, the research approach is inspired by critical ethnography but limitations during the fieldwork should be discussed in relation to the approach. Part of critical ethnography implies that the researcher gets involved and tries to uncover and understand the lived experience (Madison 2012). As much as I tried to do this during my interviews, I do not believe that 30-60 minutes talking with a complete stranger (and authorities breathing down your neck) can uncover the 'full' lived experience of the effects of climate change. Time was most definitely a great limitation, both in terms of the duration of the interviews but also the limited time in the field; five days is a very short time to gain a deep understanding of a lived domain.

These are reflections that are important to remember and consider when discussing the methodology of the research, but even though there are several limitations, taking a point of departure and inspiration from critical ethnography has helped me to figure out what I wished to address and uncover with the research and then, under the restrictions that comes with conducting research in Vietnam, get as close to it as possible.

3.4. Positionality and ethical considerations

Many of the above mentioned limitations and their consequences require ethical considerations. Not only was I followed around by an escort of people, the farmers I talked to were chosen beforehand by the local chief of the hamlet together with the People's Committee. This raised the question of whether the farmers were given a choice in whether to participate in the interview or not. I can only explain what I experienced, but from the interviews, the farmers (with the exception of two very shy farmers) seemed comfortable and genuinely happy to talk with me, explaining their problems and being listened to. Even though they might have wanted to tell about their environmental problems, they probably kept other problems that they struggled with to themselves in order to avoid confrontation with authorities. That aside, many of the farmers ended the interviews thanking me for visiting and listening to them, although some might have felt a pressure to participate that they did not show. In order to thank the farmers for their time, I had small gifts that I gave at the end of the interview. These were bought with the help of my translator and thus culturally appropriate.

Another issue is the one of anonymity. I have given all participants pseudonyms, avoiding to give away their identity but even though I have chosen to do this, there was the local chief, an employee from the People's Committee and governmental officers present at the interviews. This leaves the idea of complete anonymity questionable as I was not the only one participating in the interviews. I chose to use pseudonyms after all because I prior to all interviews, promised the farmers not to use their real names. I do not fear for my interviewees security as much of what we talked about was environmental problems and daily routines but the insecurity of how voluntary the farmers' participation was *and* the question of anonymity are important to be aware of. Choosing to get a research permission lead to a situation where a lot of the decisions were out of my hands and left to the authorities, with the Vietnam state's 'best' at their minds, to decide.

Arriving with authorities also makes it necessary to address my positionality and the power dynamics during the interviews. The interview was not 'a dominance-free dialogue between equal partners' (Brinkmann and Kvale 2005, p.164) but very asymmetric as I sat the agenda, controlled the conversation and determined the interview topics. Furthermore, I had a somewhat 'hidden' agenda as I knew that some topics were sensitive and I would get interrupted by the

governmental officers if I asked directly. This can in some way be understood as a manipulative dialogue (ibid.) where I did not directly ask the farmer but tried to gain an understanding of the issues indirectly – both to avoid being interrupted but also to avoid putting the farmer in an unpleasant situation where they might feel forced to answer in certain ways. Asking indirect questions leads to another important ethical consideration – the interviewer’s monopoly of interpretation (ibid.). In the following analysis of the collected data, I have interpreted what I believe the farmers really meant with their answers. Another researcher might have interpreted the same data differently.

4. Theoretical framework

This section will explain the analytical framework that I use to explore the powers of exclusion that are at play in Ba Tri district and that the farmers have experienced and described in the interviews. Furthermore, an introduction to the framework of PCP will be made and finally an argumentation for the combination of exactly these two theoretical frameworks.

4.1. Powers of Exclusion

Derek Hall, Philip Hirsch and Tania Murray’s (2011) has created a framework to use when explaining how exclusion operates through powers and how it is structured by power relations. They define exclusion as ways in which people are prevented from benefiting from things, in this case, land. There are three types of processes of exclusion; ‘the ways in which already existing access to land is maintained by the exclusion of other potential users; the ways in which people who have access lose it; and the ways in which people who lack access are prevented from getting it’ (ibid., p.7-8).

Exclusion is inevitable, hence when one person makes use of a piece of land, it automatically excludes another person from using that same land, and is what Hall, Hirsch, and Li (2011) calls the ‘double-edge’ of exclusion. What is interesting is not merely that exclusion happens, but how exclusion plays out in a certain context, what it means for different groups of people and which powers that are at work in each specific case. Hall, Hirsch, and Li (2011) argue that there are four main powers structuring exclusion and the social relations at play in a specific context. For analytical purposes, they are presented separately but they should not be regarded

as independent from each other. On the contrary, they are highly interrelated and operates together.

(1) Regulation

Regulation is formal and informal rules that control the use of land and who can access the land and who are excluded from it. The most important actor is the state, who are central to the processes of land titling, land allocation, land formalization and land conservation. The state defines the use of some land for agriculture, some for conservation, some for tourism and so on. The state can regulate who has access to land, for what purposes and under what conditions. With the use of land titling programs 'states intervene to shift the grounds of access from social identity to market power. States regulate who is set free to dispose of land as a commodity, and who is constrained' (ibid., p.193).

(2) Force

The power of force is the most straightforward power. It is when people are excluded from land with the use of violence or the threat of violence.

(3) The Market

The market can control access to land through its manifestation in the price of land, crops, labor and agricultural inputs. Markets are socially embedded institutions that are underpinned by the three other powers of regulation, legitimation and force. In many cases, the power of the market is also used by the state and NGOs to try and create new markets and different price signals that will work for development purposes. It is a 'signature move' of neo-liberal policy and having an increasing impact on exclusion in Southeast Asia' (ibid., p.195).

(4) Legitimation

Legitimation is the moral basis that is used for making exclusion claims socially accepted and based on the discourse of right and wrong and often on the sense of belonging. It is absolutely vital to the process of exclusion as the moral basis is underlining new rules, the use of force or the rights to buy and sell. This often entails that legitimation is often not regarded and discussed in debates or deeper analysis because it is taken for granted.

These four powers are not the only ones at play or the only ones that matter. Hall, Hirsch and Li (2011) stress how many other powers are at play such as environmental change, knowledge and technologies. They only mention the power of environmental change briefly and gives examples of how it works to exclude people from land access through salinization and pollution, landslides and the environmental consequences of semi-urbanization. According to Hall, Hirsch and Li (2011) the four main powers to focus on is regulation, force, the market and legitimation that together constitute the corner stones of their analytical framework.

The empirical data that I have collected will be investigated and analyzed by using the powers of exclusion to gain a deeper understanding of what is at play, who is excluded from land, who is gaining land and why this is. I argue that there is a fifth main power of exclusion, the one of climate change, that should be integrated as a corner stone (see figure 1).

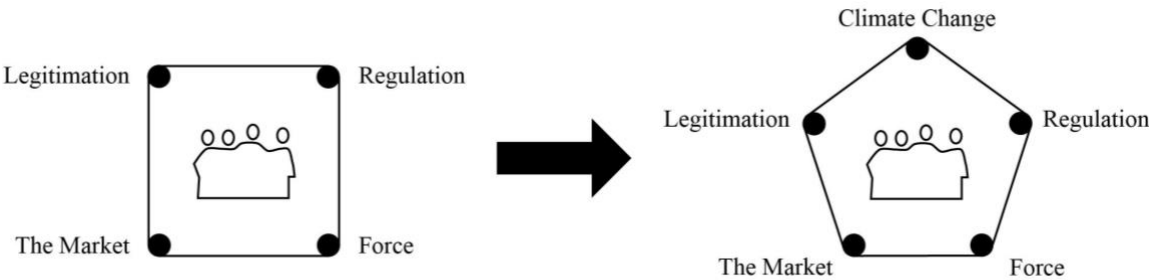


Figure 1: Powers of Exclusion. Illustration of the four corner stones in the analytical framework from Hall, Hirsch, and Li (2011) and how the power of climate change is integrated as a fifth corner stone (by author).

The consequences of climate change are human-induced *environmental* changes and not a purely social category as is the case of the four fundamental powers offered by Hall, Hirsch and Li (2011) which makes this power somewhat different – and perhaps even more intertwined with the others. I argue that the power of climate change needs to be accepted as a corner stone of this analytical framework due to the massive expansion of the changes and its influence on the current power structures.

(5) Climate Change

Climate change excludes people from land through land changes and climate hazards such as salinization, sea-level rise, drought, floods and storms. Climate change is somewhat the same

as the environmental changes mentioned above but I argue that there is a necessary need to term it ‘climate change’ and not ‘environmental changes’. Climate change is human-induced environmental changes created by some countries’ years of burning fossil fuels into the common atmosphere for their own development and thus calls for a question of global responsibility towards these changes. The exclusion from climate change is thus not only a local environmental problem but a global one, that needs to be addressed and recognized. Other environmental changes created by human activities such as pollution of fresh water or erosion due to detainment of sediment at hydropower stations are important to recognize and understand in context with climate change. The effects of climate change can become even more exaggerated in combination with other environmental changes.

4.2. Petty Commodity Production

I wish to investigate the dynamics of exclusion by applying the question of class relations. In order to understand how the powers of exclusion affects the farmers differently, it is necessary to investigate the class formation. Class formation are intimately tied up with the question of exclusion and in order to understand the complex social realities within exclusion, ‘understanding class dynamics [in a capitalist world] should always be a point of departure and a central element’ (Bernstein 2010, p. 123). Class relations intersect with other social differences, especially gender but also race, ethnicity and religion. It lies beyond the scope of this thesis to intersect all of these relations and the focus will be on class relations *between* households, not *within*. This is done with the reservation that class places are not distributed evenly within the household (ibid.). I have chosen to seek understanding of class dynamics by using the theoretical framework of petty commodity production (PCP).

PCP is a Marxist concept, mostly elaborated by Engels. Many has since tried to conceptualize and theorize the household forms of agricultural production with a point of departure in Marxian political economy (Goodman and Redclift 1985, Bernstein 1986). For this thesis, Henry Bernstein’s explanation of agricultural petty commodity production will be used. This framework identifies class differentiations inside the PCP. Using the framework means locating the farmers in their relations with capital and the state or as Bernstein (1977) explain: ‘within *capitalist relations of production* mediated through forms of household production which are

the site of a struggle for effective possession and control between the producers and capital/state' (p.73 emphasis in original).

PCP can be described in the following way:

The concept of PCP specifies a form of small-scale (usually 'household' or 'family') enterprise in capitalism engaged in more or less specialized commodity production, and which combines the class places of capital and labour. The agents of this form of enterprise (petty commodity producers) are capitalists and workers at the same time: capitalists because they own or have access to means of production (unlike landless or otherwise propertyless workers, that is, proletarians), and workers because they use their own labour (unlike those capitalists who employ the labour power of others). In short, they are capitalists who employ (hence exploit) themselves (Bernstein 1994, p.54).

Bernstein (1994) explain how farmers become petty commodity producers when they cannot reproduce² themselves any longer without engaging in capitalist commodity production. When this happen, the capitalist commodity production becomes a necessary condition in order for farmers to continue to farm and is incorporated into the organization and activity of farming itself. Thus farmers as petty commodity producers are created by the capitalist relations of production. Bernstein identifies how class differentiation between the farmers in the PCP arises by making use of four different factors that influence how well the farmers can reproduce both their means of production (as capitalists) and their labor (as workers):

1. **Access to key resources**

The conditions for the farmer to access key resources such as land, credit and the markets and the farmers' relation to powerful groups and individuals such as agrarian and industrial capitalists and state officials.

2. **Nature**

The influence from climatic uncertainty and ecological degradation but also the farmers' availability of land and labor-enhancing technologies.

² Reproduction is understood as *all* the needs in order to secure the conditions of future production (for example; household's consumption, replacement of tools, seeds and securing next generation of producers) (Bernstein 2010).

3. **Markets**

The influence from the prices and terms of trade and what you need to buy and sell in order to purchase the necessities to keep farming and supplying for your family.

4. **Government policies**

Policies can influence a great deal on farmers' economic conditions and determine the access to public goods such as health care, clean water and education.

According to Bernstein (1994), the degree to which farmers are successful in dealing with the above mentioned factors can be illustrated in their class differentiation. The differentiation is not a uniform trend that is observable at all places at all times but it represents a tendency in capitalism. It is a tendency I find very interesting to explore in the context of farmers living in Ba Tri district. Class is based in the social relations of production and a class can only be identified through its relations with another class.

Bernstein (1994) describes three classes of farmers in PCP, that originally was identified by Lenin (Lenin 1964). There are the **poor farmers** experiencing what he calls *a reproduction 'squeeze'* on their capital, labor or both of them. This could be very low prices on their crops that makes it very difficult to maintain their means of production which would squeeze them and drive them onto a downward spiral that might push them out of production all together and force them to rent out or sell their land (see figure 2). Their means of production can be understood as both lack of enough land of good quality and lack of capacity to buy for example tools or seeds. If pushed out of production, they would no longer be petty commodity producers but become semi-proletarianized or proletarianized where their livelihood would be depending on working largely or wholly for others (Bernstein 1994).

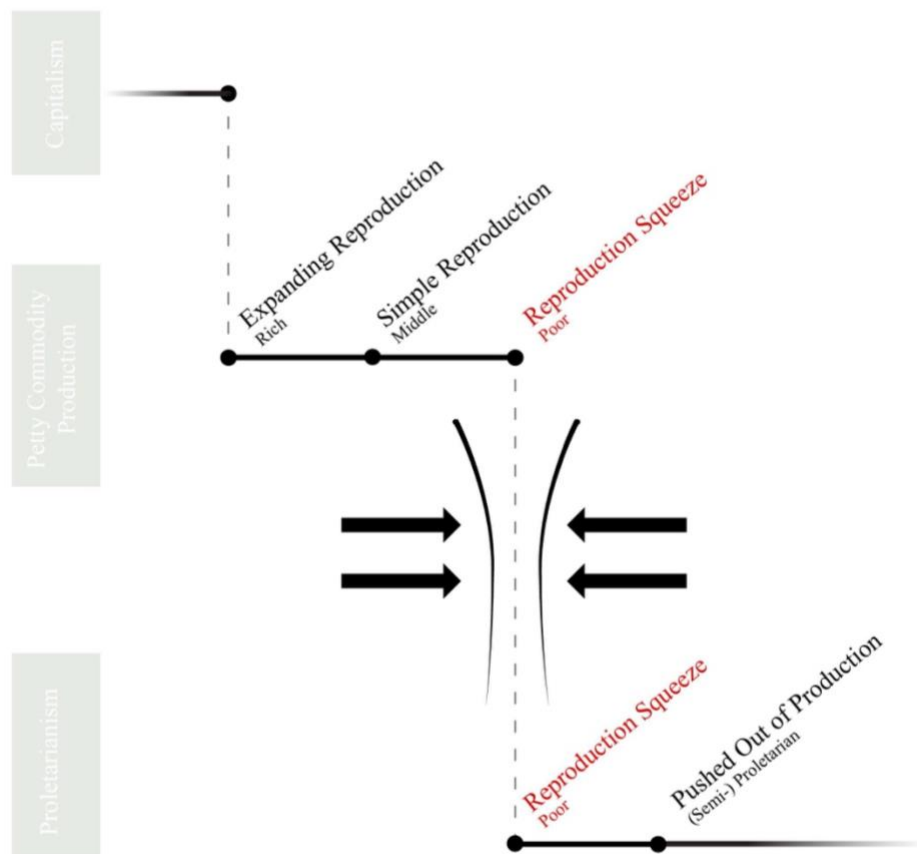


Figure 2: Reproduction squeeze. An illustration of the reproduction squeeze where the farmer experience a squeeze that in the end push them out of production. The arrows represent the factors constituting the squeeze such as low market price on crops (by author).

Middle farmers are characterized as those who are able to maintain their means of production and at the same time secure a new generation of labor to work with them. Middle farmers can be pushed into the class of poor farmers and the reproduction squeeze if they experience shocks such as a drought, illness in the household or if they in other ways, no longer are able to obtain an even relationship between what they are able to sell and need to buy. Where middle farmers only meet the demands for a simple reproduction, **rich farmers** are able to expand their reproduction, for example by increasing the land to an extent where it goes beyond the capacity of family labor. With this transition and process of employing labor outside family relations, rich peasants in the PCP can undergo a transition from being better-off petty commodity producers to become capitalist farmers. The three classes all establish their commodity production at the *expense* of their neighbors who are poorer farmers than themselves.

The inequality of landholding – often used as the indicator of class differentiation, should not stand alone. The size and scale of farming can also be increased by capital-intensive means – for example how rich farmers often increased their production by renting land from poorer farmers who lacked the capital to work and use the land themselves (Bernstein 1994). Petty commodity producers today also find income-generating activities besides farming as a diversification of their livelihood. For poor farmers, especially those who are about to become (semi-) proletarianized, off-farm work³ is necessary for survival in order to diversify income sources, middle farmers do off-farm work in order to secure savings against a bad harvest or in order to improve tools for production, such as improved technology. They can also use the extra capacity to hire wage labor in peak seasons like harvest. For rich farmers extra income such as investment in crop trading or processing and education for their children can mean future accumulation or extra income to capitalize their farming further (ibid.). Figure 3 illustrates the connections between the influential factors and the three classes.

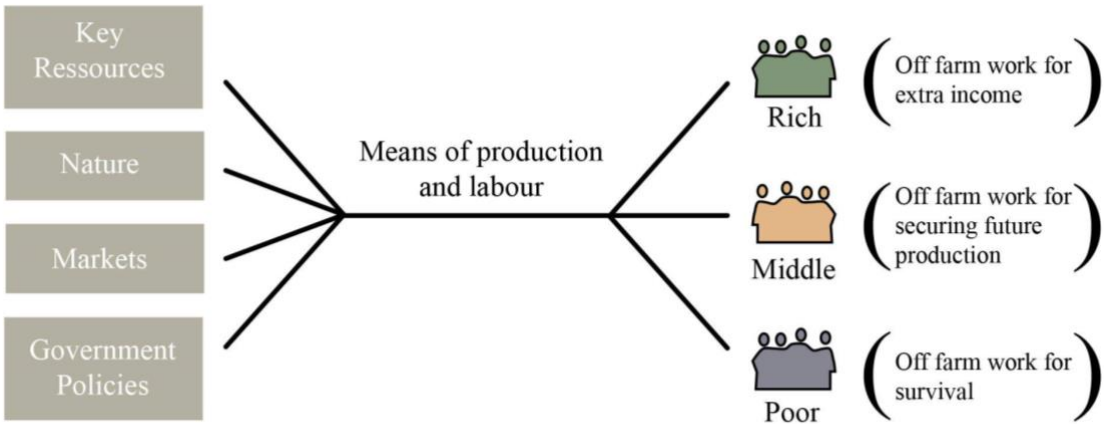


Figure 3: Petty Commodity Production. The figure illustrates the theoretical framework of PCP; how the four factors influence the class differentiation, their means of production and off farm work (by author).

4.3. The combination of class structures and powers of exclusion

In order to understand how the powers of exclusion are structured and plays out in the Ba Tri district, it is necessary to understand who are excluded and what differences that exists between the 16 farmers. The PCP-framework hold a power to explain and understand how climate change, regulations, force and market powers, all supported by legitimation powers, affects the

³ Off-farm work can be wage labor, petty trade and craft production (Bernstein 1994).

farmers in different ways, depending on the class differentiation. As Hall, Hirsch, and Li (2011) points to, exclusion happens all the time but what is interesting is how exclusion plays out in a *certain* context, what it means for *different* groups of people and which powers that are at work in a *specific* case. To understand how the powers in this specific case affects the farmers, the PCP-framework can help to identify the three classes of farmers and thus enable a discussion of the differentiation in exclusion. The three classes that will be identified with the PCP-framework should not be regarded as three independent factors coupled to the power of exclusion framework. Rather, the class formation and differentiation does itself depend on the powers of exclusion. They are highly affected and *dependent* on the five powers of exclusion while these are *independent* from the three classes. While for example there is a great difference in how a poor and rich farmer are affected by the power of climate change, the effects of climate change do not distinguish between classes. The combination of the two frameworks is illustrated in figure 4 and makes it possible to discuss how land exclusion affects different classes.

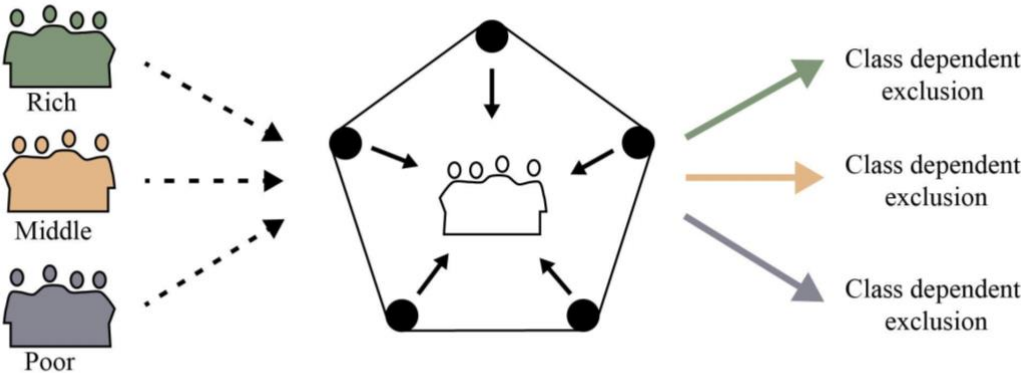


Figure 4: Combination of the two frameworks. In order to understand how exclusion is differentiated between the three classes, it is necessary to investigate how each class is affected by the powers of exclusion (by author).

One could have chosen to look at each farmers individually or gender relations and analyze how the exclusion plays out in this context or at a wider class structure of landless, small farmers and rich farmers as Akram-Lodhi (2010) has identified (see 3. Background). Choosing a framework that focus on class differentiation within PCP is interesting and highly relevant for this case study as the 16 farmers all were part of the ‘small farmers’ class as Akram-Lodhi

(2010) describes. Even though the PCP is a minor part of the production system in Vietnam, it is interesting how such a small part of the production system is permeated by class structures, creating a system where rich farmers benefit at the expense of poor farmers.

5. Analysis

The findings will be presented throughout the analysis. I have chosen to do this to avoid repetitions and to keep the analysis as near to the empirical findings as possible. In appendix 3, a table of facts about each farmer can be found. The following section will analyze the data from the fieldwork, first by identifying the powers of exclusion at play followed by an analysis of the class differentiation between the farmers.

5.1. Powers at Play

I wish to investigate what powers are at play in Ba Tri district and how these powers affect the exclusion of farmers. I will especially examine how climate change is affecting the farmers and whether this power change the terms of who gets excluded or if it rather makes it even harder for the already vulnerable.

This analysis will take part of departure in the presented framework by Hall, Hirsch and Li (2011) and discuss the powers at play that I encountered during my fieldwork in Ba Tri. The powers will be analyzed separately for the sake of the analysis but should not be regarded as separate in reality. This I will return to later. After analyzing the powers at play, I will integrate an analysis of the class dynamics between the farmers.

According to Hall, Hirsch and Li (2011), the four powers as presented in the theory section, are fundamental in understanding farmers' exclusion from land. These are regulation, force, the market and legitimatization. Below, I will present my identification and analysis of the four forces based on the farmer interviews. Furthermore, I will analyze how the power of climate change excludes farmers. In order to analyze the powers at play, the interviews were coded by the definitions of the four powers (see 4.1 Powers of Exclusion) and additionally adding the theme of climate change.

5.1.1. Regulation

Through all 16 interviews, similar changes were mentioned that can be identified as regulatory power. From farmer to farmer it varied whether the regulations had challenged or improved the farmer's situation.

One of the biggest regulations that affected the farmers' access to land, were the Doi Moi reforms in the late 1980s and 1990s. The ability to lease, sell, transfer, exchange and especially inherit land was a central theme in all of the interviews. It is tradition in the Mekong Delta, including the Ba Tri district to inherit the land of your parents and thus the land has been in the family for generations. All of the farmers had inherited or was about to inherit the land, that they farmed and lived on. While for some, this was all the land that they had, six of the farmers had bought more land in the last 15 years on top of what they had inherited and two rented additional land. The access to land meant a great deal for the farmers. Most of them wished to gain access to more land in order to increase their income and profit and secure the inheritance for their children while a few were satisfied with the size of land that they had at their disposal. Instead, they hoped to gain access to more advanced technology. Owning land was essential for survival and just the idea of selling their land seemed absurd to the farmers. Where would they go? What would they do? That was the answers I got, asking whether they could imagine moving. Their access to land was in many situations their livelihood and income. The households that did not have enough land to gain a livable income, all had one or several family members working as laborers at other farms or construction sites in the local area or in one of the bigger cities such as Ben Tre, Can Tho or Ho Chi Minh City.

Several of the farmers also used the ability to lease land – for some in order to gain more land while for others to rent out their land in order to pay back debt or get a small extra income as they were unable to farm the land themselves. As the farmer Nhung explained:

I have been renting out my land for seven years now. The contract runs out this year and if I have the capacity to farm I will farm. But if I don't have enough capacity, I will rent out my land again. I wish to do farming more than rent out the land. We always prefer to control our land and not rent out (Nhung, 08.05.2018).

As she explained, renting out her land was not what she had hoped for but because she did not have the capacity to take care of her land, she had been excluded from it for seven years.

Another more local regulation was the construction of the dike. The dike was built in 2006 to prevent saline intrusions into the fields of the farmers. The dike was constructed around 150 meters inland, parallel with the Sông Hàm Luông river, a subdivision of the Mekong River. I talked with ten farmers inside the dike and six farmers outside the dike. When the dike was built, the farmers outside the dike had to transform their rice fields to shrimp ponds due to the intrusion of saltwater while the farmers inside the dike could farm rice, coconuts, bananas, vegetables and grass for livestock.

The discussion of the dike is utterly intertwined with the question of climate change as it is a climate adaptation strategy to prevent saltwater and floods but for now, the dike will be regarded as a regulation power. When the farmers described the problem of salinization, they referred to 'before' and 'after' the dike was built. Even though the dike had helped a great deal making the season with saltwater shorter and somewhat more predictable, it also created a divide in the community. This became clear when the farmers referred to people 'inside' and 'outside' the dike. If you lived inside the dike, you were more secured and could predict (with some deviations) when you would have saltwater in the fields and canals but outside the dike it was quite different. The farmers on the outside were described as the ones who moved because they could not maintain their livelihood. The people outside the dike that had been forced to change to shrimp farming struggled with bad shrimp seasons, debt and many of them wished to gain land inside the dike. One farmer living outside described it as follows:

In the past we got troubles because the saltwater arrived earlier and when the saltwater came earlier than our rice fields got the bad impact. In this area we got six months of freshwater and six months of saltwater so when the government built the dike, inside they had the freshwater and outside we had the saltwater so people inside the dike could farm the rice fields better. The people outside, they just had one choice: to do the shrimp ponds. If the shrimp ponds don't go well they just continue to work with the shrimp ponds because they can't keep the land empty (Trang, 07.05.2018).

Trang further explained how the dike changed her livelihood:

In the past I used my land for the rice fields but after the local government changed the policies and built the dike, I changed from rice field to farm the shrimps. I didn't have enough capacity to build the shrimp pond but because the people around me all did the shrimp ponds I needed to follow because I could not change to another crop or do the rice fields anymore. In the past few years in this area it has not been good to cultivate shrimps because they die a lot. I don't know how to change, I dug very far on my land so I can't change it into another crop. It is impossible to change into another kind of livelihood. To do the rice fields is more stable than the aquaculture. Because when I cultivate shrimps, I am not sure if I will get an income or not. If the shrimps die, I will lose everything. In the past three years the people here cannot get an income because the shrimps are failing. In this season it is better but in the past three years it has been very bad. My house became like this also because of the shrimps (Trang, 07.05.2018).

Trang had to reconstruct her land by digging a great pond in order to cultivate shrimps after the dike was constructed with no other possibility. Because the shrimp farming had failed for the last three years, she had no income to reconstruct and stormproof her house thus leaving her very vulnerable towards shocks such as storms or health issues. Although she still had her land, she was excluded from being able to choose her livelihood and thus the control over her land.

The construction of the dike also forced farmers outside to take loans in order to reconstruct their land and improve it to cultivate shrimps:

It was quite a lot of money I needed in order to transform my land. I had to loan money from the government. At that time, I loaned 50-60 million VND. The last few years, I saved the money and paid back the loan. My son also contributed so it took around 5-6 years to pay it all back (Phuong, 09.05.2018).

This farmer had been able to pay back her loan but that were a rarity amongst the farmers I interviewed. Of the six farmers that lived outside the dike, five of them had to take loans in order to transform their land into shrimp ponds, and only two of them had paid back the loans while the rest had gained an even bigger debt over the last three years due to failed harvests. The farmer Trang explained how the downwards debt spiral started for her:

The government loaned us money but because I don't have a good livelihood, I need to pay the interests. To do that I will borrow the money from outside to pay for the interest. So right now I still have the debt from the government (Trang, 07.05.2018).

Even with growing debt and failed shrimp seasons, the dike was not an unpopular construction for the farmers living outside. While the benefits for the farmers living inside the dike was overtly better, most of the farmers outside the dike agreed that cultivating shrimps was better than rice – mostly because of the market price of those commodities. They did not regard themselves as excluded. Some of them admitted that they were struggling with shrimp farming but for most of them, they explained it as a game of winning and losing and when they won, they won big:

If I win, I get around 3,5 tons of shrimps per season. If I lose, sometimes it is some 100 kg., sometimes we get nothing (Anh, 11.05.2018).

It is possible that the farmers outside the dike were more critical towards the construction than they indicated to me during the interviews. This could be due to the set-up of the interviews where I was escorted to the farmers by several governmental officers and employees at the local People Committee and is an important factor to remember.

5.1.2. Force

The power of force is by Hall, Hirsch and Li (2011) described as exclusion with the use of violence or threat of violence. None of the farmers I talked to mentioned any situations where they had been excluded with the use of violence⁴. If we widen the understanding of force from what Hall, Hirsch and Li suggest, there were in several interviews indications that the farmers felt pressured and forced to make certain changes in order to avoid exclusion.

The transformations that I already mentioned above in relation to the dike can be regarded as a regulation power with elements of force. Building a dike and thus allowing saltwater to intrude the land from the river to the dike was directly forcing the farmers to change livelihood. Furthermore, if they did not have enough capacity to transform by themselves, they were forced to raise loans in the state bank. They had no choice but to transform their fields and none of them mentioned any form of consultation or information meetings prior to the construction of the dike, leaving them excluded from the decision but forced to transform.

⁴ It should be noted that I did not ask directly about this and thus it cannot be ruled out that some of the farmers might had been excluded with the power of force.

5.1.3. The Market

The market's control over farmers' access to land was mainly manifested in prices; price of land, crops, labor and agricultural inputs. The market price of crops and shrimps and thus the possible profit was the main driver for their cultivation choice and use of land. The market power was intertwined with environmental changes that had made it almost impossible for the farmers to grow certain crops. Outside the dike, all six farmers had changed from rice fields to shrimp farming in 2006 and only one had a few coconut trees on the land while four farmers had a little additional livestock for domestic use. As analyzed above, the transformation from rice to shrimps for the six farmers seemed to be mainly enforced by regulatory powers and not induced by market forces. Although the dike plays a great role in this case, the Vietnamese government has for years pushed for a growth in the shrimp industry to enlarge their export. In 2017 the Ministry of Agriculture and Rural Development lanced a national action plan for the shrimp industry development with a shrimp export target of US\$ 10 billion in 2025 (in 2016 it was at US\$ 3,14 billion), pushing for a massive expansion of the shrimp industry (Chanh 2017). The market price of shrimps was a lot higher than for rice thus leaving most of the farmers outside the dike optimistic about the change – even with very high risk, growing debt lurking and regardless of years of failed seasons, the potential earning was so high that they were willing to take the chance.

There was a greater variation in the choice of crop for the ten farmers living inside the dike. The majority had changed away from rice to cultivate coconut trees and livestock (due to environmental changes that I will return to) while only three people had kept parts of their rice fields. Both the market price on rice and coconuts was described as unstable and very low:

Nowadays, the life is more difficult because we rely on the coconuts but the price is so low. Our income from rice is very small after we pay back to the fertilizer store. We mainly rely on the coconuts but the price is low and unstable so we feel very difficult (Duy, 10.05.2018).

This farmer was struggling with gaining enough profit when relying on the market prices and especially due to the price of agricultural inputs such as fertilizer, and described his family's situation as difficult.

Even though Duy still cultivated his land, the market prices had made it hard for him to accumulate his profit while other farmers had discovered crops with a greater market value:

Because people with land around me changed to other crops, I couldn't do the rice field anymore because of the water level. I couldn't keep the water in the rice field so I had to change. Last year I changed to chili and lady finger and I got quite a good income. Last year the chili price was 70-80 per kilogram, I am satisfied with that price (Nguyen, 08.05.2018).

Nguyen was forced to change his crops from rice because of land changes around him but compared to Duy, he had (at least for now) found a crop that gave a good income and enabled him to gain a profit.

All of the farmers had a relatively small production and all sold their outputs to local trading companies. Many of the farmers sold their crops to the trading company who offered the most profitable price while for some, they only sold to one specific company due to indebtedness. It often happened, especially after a failed harvest, that the farmers did not have enough money to buy the necessary agricultural inputs to farm another season, and thus they borrowed money from a trading company or bought agricultural inputs such as baby shrimps, fertilizer, equipment and seeds on credit from the local stores (just like Duy explained above). By the time of harvest, they paid it back if possible:

I sell to the people who works in the local company that trades. The local people here have many choices in who to sell the shrimps to, there are many local companies. But for me, I only sell to one specific company because they support me with money when I need it. So when I have the shrimps, I only sell to one person who loan me money. For example, when I need money to buy the baby shrimps I will borrow money from this local trade company (Trang, 07.05.2018).

Trang owed the local trading company that she got 'support' from over 200 million VND and was bound to accept the price that they decided for her. She was, together with some of the other farmers, enabled and excluded from getting the most profitable price of the market.

The price on land also had a big influence on the farmers. While six of the farmers had been able to buy more land, many of the other farmers wished to gain more land but were not able to, due to high prices. Some farmers hoped to gain more land in order to increase their profit

while others, like Trang, wanted more land in order to leave a proper size of land for her children to secure their future livelihood:

I try to find a lot of land for my daughter and son but right now I am not rich so they only have a small piece of land to build a house on (Trang, 07.05.2018)

The combination of all the market factors such as price of land, crops and agricultural inputs creates a pattern of who is affected and excluded from the market and the access to land. The farmers that I spoke to, who had been able to buy and accumulate their land, production and profit were also the people with easy access to agricultural inputs, no debt and who sold their crops to the highest price offered by the local trading companies. Most of these farmers were living inside the dike. The people struggling with debt and failed harvests wished to buy more land and expand their production but found themselves with a debt so massive – both to the state, trading companies and local money sharks – that renting out their land instead of cultivating it themselves was the most realistic solution.

5.1.4. Legitimation

The power of legitimation is the moral basis used to make exclusions from land. There have been several conflicts over land access and ownership in the Mekong Delta throughout history, often between ethnical groups or enforced by development projects and protection areas. However, from the study area there was no evidence of such conflicts between the farmers or between farmers and government or co-operations. There is a possibility that there were indeed no conflicts in this area, however one cannot ignore the possibility that the farmers did not openly disclose such details due to the interview set-up.

One interesting narrative I came across several times talking with professors and NGOs, was ‘poor people are lazy’. One international NGO, Heifer, worked in the Ba Tri district establishing a dairy project, where farmers were supported with a couple of dairy cows and thus enabled to get a stable income every day by selling milk to Vinamilk, the largest dairy company in Vietnam. The farmers chosen for this project were middle to rich farmers and Heifer hoped that the project would spin-off and work its way down to the poor farmers. They explained how the poor farmers simply did not have the capacity and resources to be part of the project from the beginning, but at the same time, the project manager told me the following:

I have many times experienced how poor farmers do not want to change their life. They are satisfied with the support from the government and then they become lazy. They receive money and do not want to work anymore, they just want to continue getting support (Project manager, Heifer, 10.05.2018).

This general idea amongst the well-educated was used to legitimize the exclusion of the poorest farmers from development and governmental projects. None of the better-off farmers I talked to directly indicated this narrative but the farmers who gained more land legitimized buying land from poor people with a 'free market' oriented mind-set. There was a general explanation that if you got 'lucky' and won a profit, you had money and capacity to accumulate your land – and everybody had a fair chance of this. If you were poor and unable to accumulate profit and land, you would rent out your land or sell it to try and find your luck another place. Several of the farmers explained how the rich people living in the area bought the land of the poor people who moved away.

Like the Heifer project that was legitimized by a moral claim 'for the cause of development', Hall, Hirsch, and Li (2011) also describe the 'will to improve' claim, often used by governments. The government claims to know how people should live and that they have the right and duty to get them to live this way. From the case study, this was an interesting angle when debating the dike and its consequences. For sure climate adaptation in general was and is very necessary in order to tackle the growing consequences of climate change but the positive effects of the dike had been invoked by dispossessing farmers living outside the dike of choices, income and for some, their land.

On top of the 'will to improve' claim from the governmental side, I found a discourse between the farmers of 'what the state does is always in the people's best interest'. This is, again, hard to verify as I conducted all interviews in the presence of governmental officers, but whether the claim is stated in fear of the consequences of a critical answer or because they actually believed it, it has an interesting moral basis:

The telling that they [other farmers] move because of saltwater is wrong. The government takes very good care of the local people living here. They want to move so they move. If we have problems with saltwater the government support us with freshwater (Nguyen, 08.05.2018).

All of the farmers mentioned the support they got from the government and how thankful they were but at the same time many of the farmers explained how they struggled with enough fresh water for their family, how they had to buy water from companies at a price far above what they had capacity for and how the dike leaked and was not good enough protection to avoid saltwater coming into the fields. One of the ways in which the government was supporting farmers was by encouraging them to take loans from the state bank. Many of the farmers had already done this as discussed above but Hao, who lived just inside the dike, explained this ‘offer’ quite differently:

They [local government] encourage us to loan money but I do not dare to loan when I think about the interest for it. The local government encourage us but I am afraid that I cannot pay it back (Hao, 11.05.2018).

Hao explained how he had been encouraged by the local government to take out a loan multiple times, but the fear of interest rates and ending up in a debt spiral had restrained him from doing it. Instead he lived as frugally as possible while when absolutely necessary, he borrowed money from his children. This was an interesting description of the pressure that can lie in certain encouragements or ‘support’ from authorities. When farmers are offered to take loans, it looks from the outside like they have a choice. The ability to say no. But what happens if they say no? Hao’s children had the resources to support him if necessary but what if one day they do not? The farmer had already been offered to take a loan from the state but refused and I wonder if this ‘support’ can be regarded as a legitimation for the state. A legitimation that makes it acceptable to leave some farmers behind if they refused to play by the rules directed by the state.

The moral basis is central to the justification of particular forms of exclusion and supports different forms of exclusion based on both the power of regulation, market and force. The legitimation involves a wide range of actors, from local farmers to the government and state to global actors such as NGOs. In this case study, the moral claim of ‘the right to land if you have the money to buy it’ is significant while claims such as ‘poor people are lazy’ and the ‘will to improve’ supports a development and strategy where certain farmers were excluded while others gained even more land and greater profit.

As this analysis has shown, there are many factors and power structures at play in Ba Tri district that excludes some and creates certain social relations amongst the farmers. It is as Hall, Hirsch and Li (2011) describe, a ‘double-edge exclusion’ when for example the dike prevented saline intrusions for the farmers inside but at the same time excluded a group of farmers outside the dike, that now were indebted, struggled with their livelihood and were excluded from the positive effects of the dike. The double-edge exclusion is also visible with the Doi Moi reforms that enabled farmers to inherit, sell or lease their land which meant a drastic fall in absolute poverty in Vietnam and for some farmers an accumulation of land and profit but for others, mainly poor farmers meant exclusion and landlessness.

The next section will discuss climate change as a power of exclusion and investigate whether we still can talk about a double-edged exclusion where some gain while others lose, or whether the power of climate change makes it a loser’s game for all.

5.1.5. Climate change

When I chose to discuss climate change as a fifth power of exclusion it must be made clear that this should not be understood as a power separated from the others but instead a power that operates in relation to them. One cannot fully understand in what way the exclusion plays out in Ba Tri district and what it means for the social relations between the farmers without integrating the power of climate change. The changes happening in the delta are enormous and will only become worse in the future. At the same time, it is important to remember that much environmental destruction in the delta has happened *prior* to the present effects of climate change that in many ways also affect the farmers’ current situation. This sector will address the environmental changes created by climate change as a power of exclusion and how the effects challenged and excluded the farmers.

The biggest challenge was salinization. Saltwater in the fields was not a new phenomenon but part of the natural dynamics of the delta. The farmers described two seasons, the dry season and the rainy season, each six months long. That was how it had always been but in the years before the dike was built it had changed to be up to eight months of dry season, which made farmers struggle with harvesting more than one season of rice. After the dike, farmers living inside the dike could harvest two and if lucky, three seasons. Although the dike had helped –

decreasing the months of saltwater to only three months – the changes in the last decades challenged the predictability of the seasons. Sometimes the saltwater arrived earlier than expected and ruined a whole season of rice, and the farmers could do nothing but wait for the rainy season to sow again. This had made all of the farmers change all or parts of their crops in order to adapt to the change:

The saltwater had too much impact on the farm. The trees grew poorly and the rice field was also bad so I decided to do the shrimp pond. The shrimps can adapt with the saltwater. We have done farming on this land for a long time and the saltwater has come more and more deeply into the land and affected the rice fields so I changed to shrimp pond (Phuong, 09.05.2018).

Where some farmers, like Phuong, had been able to change crops rather easily change, others struggled just raising a loan to transform their fields. The changes created new expenses in order to adapt but once the saltwater had penetrated the fields, none of the farmers, no matter size of land could do anything about it except wait – unless they had invested in resistant seeds (none of the farmers interviewed mentioned the use of these). If salinization becomes worse (as predicted) all farmers will feel the impacts but from the interviews, I discovered that the farmers viewed the problem of salinization very differently:

I do not see any serious problem with the environment but some year we got the saltwater in the land that made the coconut fruit small and vegetables die (Linh, 07.05.2018).

When we get the trouble with saltwater we cannot adapt well and the farm gets impacted. When the saltwater comes it destroys everything. And the saltwater is getting worse and worse (Hao, 11.05.2018).

Linh lived inside the dike with much land at her disposal and grew coconuts and shrimps (that are known for being resistant towards saltwater). Hao also lived inside the dike but had very little land and had tried to change his crops several times to find the most resistant ones.

These differences can be connected with economic capacity and land size which I will return to in the next section. While these farmers lived inside the dike, the situation for the farmers outside the dike, as already discussed, looked very different. Having been forced to convert their land into shrimp ponds, which were more resistant to salinization than rice fields or vegetables, you should think that they already had increased their resistance towards climate

change. But from the interviews, I learnt that this was not the case for many of the shrimp farmers. Shrimp farming was unpredictable and none of the farmers I spoke to could explain why it had failed the last three years. Some said it was due to pollution, others that it was due to worms infecting the ponds, white spot syndrome virus⁵ and some talked about the effect of rising temperatures. In general, the farmers did not know why the shrimp farming failed but hoped for better luck in the next season.

One of the big challenges with climate change is to grasp and understand which phenomena can be attributed to climate change and which cannot. Often they are so intertwined and climate change enforces and exacerbates the consequences of other problems. What the farmers in Ba Tri district were struggling with was no exception to this and they were themselves not sure of the causes of their problems. Many of the farmers knew the words such as climate change and global warming but only very few could explain what it actually meant. I discovered that some of the farmers had been participating in ‘climate change’ workshops arranged by the local authorities where they amongst other things were educated in how to choose the best crops for the environmental changes and from here knew of the terms climate change and global warming. Often the environmental problems that the farmers mentioned were not new problems that they had never experienced before but known issues that the last decades had ten-folded.

One of these problems was the lack of fresh water. It was a major struggle throughout the interviews and salinization had for many ruined wells and infiltrated the canals so that the farmers were forced to buy water from companies, local stores, construct concrete tanks to obtain rainwater and use brackish water for personal hygiene:

If there is less rain in the year, the tide goes higher and this area will get problem with saltwater. If the saltwater comes to this land, the trees, the livestock and even the people will get troubles. We also don't have water to take showers. If we use the saltwater to take shower, our skin will be itching. The crops are also impacted [...] I am so afraid of the saltwater. (Duc, 07.09.2018)

⁵A highly fatal and very contagious virus that kills the shrimps in a matter of days in huge areas (Ramos-Carreño et al. 2014).

Access to fresh water was vital for the farmers in order to survive, farm and stay on the land:

I wish for fresh water. The farmers here can change the crops by themselves to improve but we need fresh water. The fresh water is the main thing as the blood in our body. If our body has no blood, we will die. We have a definition in agriculture of the most important resources: The first is water, the second is fertilizer, the third is people care and the last one is the seed. We can change the seed, fertilizer is not really main here but the water is number one, it is very important (Duc, 07.05.2018).

The access to fresh water resources was vital as Duc explained but an increasing population, pollution and the development of hydropower dams were all burdening the already scarce resource. Furthermore, salinization and climate shocks such as droughts increased the lack of fresh water enormously. Almost all farmers mentioned the devastating drought that stroke the Mekong Delta and especially Ben Tre province in 2016. Ben Tre province's rice harvest failed 100% due to salinization. *Everybody* was affected by the drought were the salinization was reported 90 km inland (Minh 2016). There was no fresh water in the wells, people ran out of water in their tanks and many, even with state support, had to buy water to survive:

At the time [2016] I had all the tanks but the saltwater happened over a long period of time so we didn't have enough fresh water. We needed to buy. In the raining season we obtain rainwater to use. It is free. Just only in dry season, we don't have enough freshwater to use. Especially for our two children. We need to buy fresh water. One m³ costs 250.000. It is quite expensive. But the people deliver it from far away, so we accept the price (Anh, 11.05.2018).

While some had the capacity to buy without serious concern, others were forced to take even bigger loans to be able to pay for the vital resource:

I don't have enough drinking water. In 2016 this area got the salinization so I needed to buy drinking water. It costed 125.000 VND per m³. This water was just for people in my family, the livestock I could not care if they had fresh water or not. I borrowed money from my relative to afford it. I will try to get an income from everything I have and pay back. In the last few years when I did not have the cows, I planted the orange and plum on my land but in 2016 they all died. In the past I could still get an income from the orange and plum garden. The most difficult is money – especially in 2016 but we tried hard to live. I borrowed money to survive (Nhung, 08.05.2018).

Some borrowed money in order to cover for their failed harvest, while others had to work in off-farm areas to get food on the table:

Yes, it [saltwater] has changed a lot and become worse. Especially in 2016 and 2017. Those years I could not grow the rice so I worked as a carpenter around Ben Tre province (Huy, 09.05.2018).

Another major environmental problem, excluding several of the farmers interviewed from accessing land, was the problem of river erosion. The problems with erosion were excluding farmers from accessing land with land literally disappearing under their feet. This was not a direct effect of climate change (as coastal erosion often is) but instead due to especially hydropower dams upstream the river, withholding sediments. It is not included in this analysis as exclusion due to climate change but was an issue many of the farmers experienced.

Climate change is definitely a power of exclusion that over the last decades has grown stronger and more powerful. All of the farmers had felt the consequences of climate change but as the next section will make clear, they were affected very differently. Climate change is not an exclusion of all but like the other powers at play, it highly depends on their capacity and access to land.

5.2. Who is excluded?

As the analysis of the exclusion powers indicated, the exclusion is not uniform or affects all farmers in the same way even though the effects of climate change with sea-level rise, lack of freshwater, and unforeseen storms do not distinguish between small or large plots of land or between rich and poor farmers. In order to understand how the powers of exclusion affects the farmers differently, this next section will identify and analyze the class differentiation between the interviewees. This will be done by the PCP-framework to understand the class differentiations. From the coding of the empirical findings, I was able to identify all three kinds of farmers in the PCP; poor, middle and rich in the 16 interviews conducted. These are defined from Bernstein's classification (see 4.2 Petty Commodity Production) that make use of four factors that influence how well the farmers can reproduce their means of production and their labor. The four factors are their access to key resources, the influence of nature, markets and government policies. The classification of each farmer can be found in appendix 3.

5.2.1. The class of poor farmers

Five of the farmers were identified as poor in the PCP where two were so caught up in debt that they were about to stop their production, lose their land and become proletarians instead. Only one farmer and his wife classified as poor lived inside the dike while the rest lived outside the dike.

The reproduction squeeze as Bernstein (2010) describes as being when the farmers were struggling to maintain their means of production were identified with the poor farmers and were often expressed through their debt to the government and private distributors. For many of the farmers, the squeeze was influenced by both low market prices on crops and salinization affecting the land and farming (see figure 5).

Also health issues played a major role in magnifying the squeeze:

In the past, I used to go and harvest the rice fields. In the last 3-5 years I didn't go anymore because my husband is busy taking care of the shrimp pond and no one could take care of my son. So I needed to stay at home. Before I always went to harvest (Anh, 11.05.2018).

This farmer's son had early on in his life got a physical disability that had bound him to a wheelchair and thus in need of constant care. This had made it impossible for Anh to continue working off-farm to reproduce the household's means of production. Combined with the cost of transforming and improving her land and years of failed shrimp seasons, she was now indebted with 470 million VND.

She wished to rent out her land (often the first step before selling it) but a business man had convinced her to enter a partnership with him where she got 40% of the profit (if successful season) and he would take 60%. She did not feel like she was in a position to refuse:

The last two years the debt has become bigger and bigger. At the beginning, I just loaned 80 million VND and it grew bigger and bigger because we failed to get good shrimps. Because I don't have enough money, I wanted to rent out my land. Then I could get some money to pay back my debt because it is a quite big debt but I had no choice and had to invest together with him (Anh, 11.05.2018).

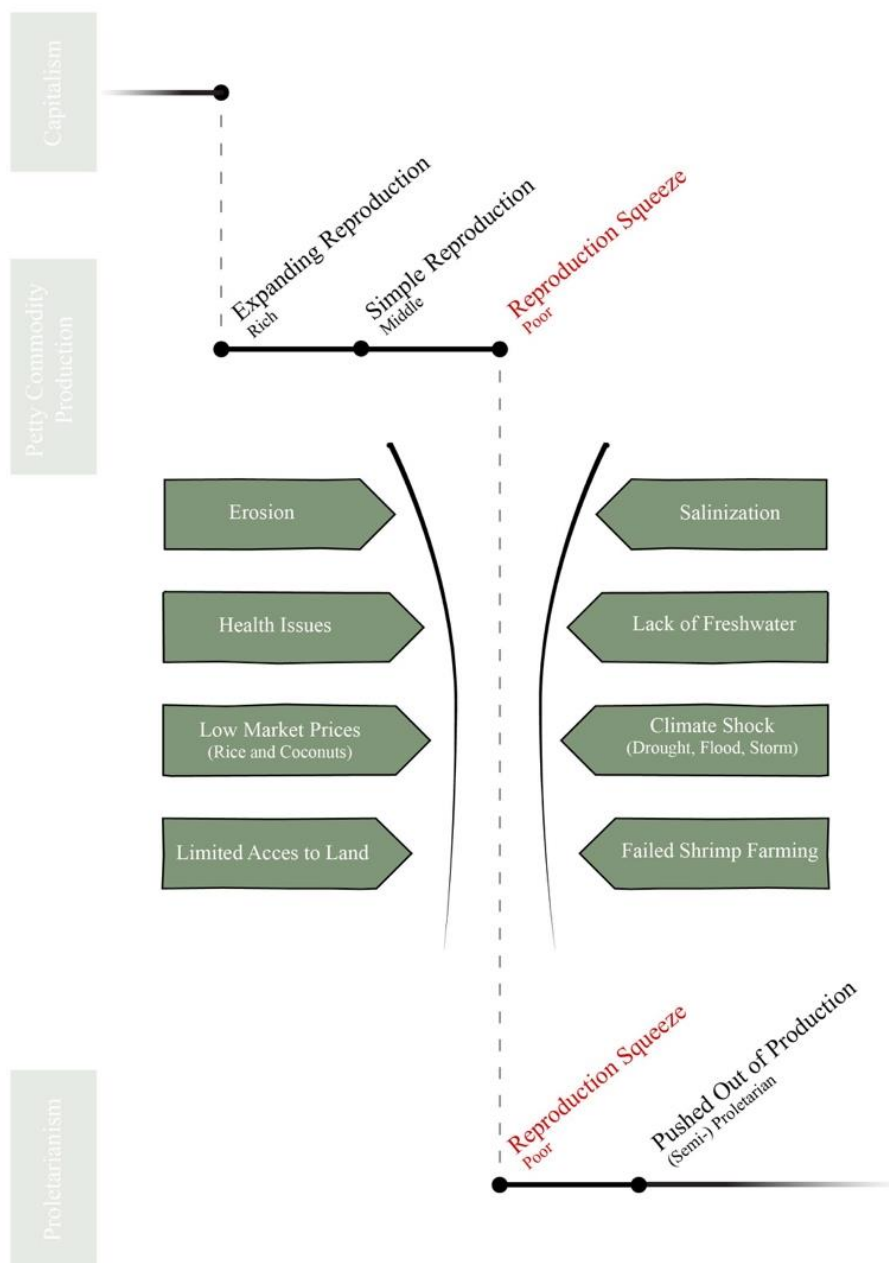


Figure 5: Reproduction squeeze of poor farmers in Ba Tri district (by author).

This farmer can clearly be defined as poor in the PCP even though she has a fair share of land on 7700 m². She has become semi-proletarianized as her livelihood depends on working (on her own land) mainly for her partner. Furthermore, her son's disability had excluded her from off-farm work to gain an important extra income and the household was now stuck in a downwards debt-spiral where they barely could pay the interests of the loans.

Trang described how she for many years had been working off-farm in HCMC:

When we got the trouble with the shrimps, I went to another city to work. I left my housebound and children at home and went to work [...] I worked in the city but the money I earned was not enough to pay the loans, just enough to pay for the interests [...] In the past few years the shrimp hasn't gone well and I went to the city again to work at the hospital. I went there for over 1 year (Trang, 07.05.2018).

Even when working off-farm, Trang could only pay back the interests of her debt and was thus trapped by her debt. Furthermore, she explained how she now no longer could find work in the city because of her age (61 years old). Not all the farmers that I identified as poor in the PCP did off-farm work in order to survive but the ones that did not had a growing debt that made them incapable of changing their livelihood and sustain their reproduction. Nhung explained how her house still had not been painted and had no doors while Minh had an unfinished house on his land while living in a humble, small hut with walls made from banana leaves and no floor or doors. In only two years he had gained a debt of over 200 million VND due to the failed shrimp farming.

None of the poor farmers could imagine selling their land and move away. This was simply not an opportunity and as Trang explained, the debt actually kept them on their land (at least for now), until other factors such as health issues would pressure the situation to the extreme:

The people around here they don't move to another place. Inhere to move to another place, we don't know where we would go? If we want to move, we need to have money and find a job to work in another place. So here the people are as me. I have a debt so I need to work hard and pay back the money. I don't know where I would go to find the money and we cannot find enough money to pay back the loan. Just some people they got trouble with their health so they have to sell their land but if you don't have any land, it is very hard to live. At least we need to have money to live. If somebody got trouble with their health they need to sell their land to get money (Trang, 07.05.2018).

5.2.2. Are the poor class excluded?

The class of poor farmers has been identified above but how are they affected by the powers of exclusion? Returning to figure 4, we need to take a closer look at the middle section and how the specific class was affected by the powers in order to understand their exclusion. The poor farmers were living outside the dike and had experienced exclusion from the power of

regulation as the dike was built. Furthermore, the Doi Moi reforms gave the poor farmers the opportunity to accumulate land but none of them had been able to do so. Instead one of the farmers was forced to rent out her land in order to survive. They all wanted access to more land *inside* the dike but none of them could pay the market price. Many of the farmers were in debt to a specific local trading company that made them unable to experience the free market powers but instead bound to accept the crop price from the one, they were indebted to. The market power threatened to exclude the poor farmers and hence pushing them out of production. The power of climate change was also threatening to exclude the poor farmers as they did not have the capacity to adjust and adapt to the changes but instead pushed them further into a downward debt spiral. The data and analysis highlights a clear tendency that the powers of exclusion were affecting the class of poor farmers in highly negative ways and that many of them were on the stepping stones to partly or full exclusion from their land.

5.2.3. The class of middle farmers

Nine farmers were identified as middle in the PCP and were able to maintain their means of production but even in this class there were differences in their situation. While some were upper-middle farmers and on their way to become rich, others were struggling with environmental changes and debt and could barely maintain their means of production anymore, on the edge of entering a reproduction squeeze.

Several of the nine farmers explained how they once had had debt and struggled with survival and through many years worked their way upwards and were now able to maintain their means of production together with securing a new generation of labor to work at the farm. As Van explained to me, he and his household had struggled much from 1983 to 1996 where they did not have enough rice to eat. Since then he had accumulated land, both sons had got an education and he had been able to change crops without raising a loan:

Before we decided to change crops we saved enough money to live until we would get an income from the field. We have prepared well for that to make sure we can wait (Van, 10.05.2018).

But not all had worked their way upwards. Some farmers were feeling the pressure of a growing reproduction squeeze:

In here our life is sometime difficult, sometime it is ok. Sometime we go out to work and go to get more income and wait for the good season where we expect to get much money. In the past it was easier to live than now. In the past if we wanted to get food, we just needed to go to the canal and catch fish - we could get a lot of fish. Now every morning we need to go to the market to buy food (Duy, 10.05.2018).

This farmer was struggling to maintain his livelihood but even though Duy had a small debt and no one in the household did off-farm work, he had still managed to secure the next generation, dividing land between his 10 children and still be able to farm himself. Ouynh had also experienced better times and struggled with the environmental changes but explained how the off-farm work of her son was used for education, not for survival:

This year I tried more to improve the shrimp farm but it is not really good now. In the past the shrimp farm was good, we had money to feed the livestock and cows but now we don't have a good income so my son need to go to work in the community to get more income for his children to go to school (Ouynh, 09.05.2018)

Furthermore, Ouynh explained how the saltwater had made it more difficult to gain a good income even though she owned 1 ha of land because the salinization had forced her to change from rice to vegetables.

The farmers that were identified as middle but still had debt had (opposite to the poor farmers) raised a loan to send their children to school or university, and in that way invested in the next generation. When the farmers worked off-farm, many of them used it to buy fertilizer and renew their crops if harvest should fail and some had even accumulated land. They had a safety net but it was obvious that especially the environmental changes were experienced differently. For some their safety net was strong and they felt able to adapt with the changes while for others, such as Ouynh and Duy, the changes started to eat holes in their safety net that most likely only will grow bigger in the future.

5.2.4. Are the middle class excluded?

The middle class farmers were more diverse in terms of how the powers affected their access to land and capital. Some of them had used the land reforms to accumulate land and achieve a better income. Many of the middle farmers expressed concerns about the unstable market price on coconuts and rice together with the high price on fertilizers. The power of the market with the unstable prices and high competition were excluding some of the middle farmers while

others had been able to adjust and maintain their production. The power of climate change was a determining factor for some of the farmers that struggled with exclusion. Salinization had forced them to change crop systems but where some could afford it, others could not. The middle farmers were somewhat experiencing an exclusion, especially from the market and climate change but in comparison to the poor farmers, most of the middle farmers had been able to secure the next generation of laborers and secure a future production.

5.2.5. The class of rich farmers

The two farmers that are classified as rich petty commodity producers were on their way to become capitalist producers where being their own labor was no longer needed, thus leaving the PCP.

Khanh owned 1,5 ha of land while Linh owned 1,1 ha and rented 1 ha for shrimp farming, in total controlling 2,1 ha of land, and they both lived inside the dike. This was by far the two farmers with most land at their disposal. They had both been able to expand their land and were on their way to employ labor outside the family more permanently. As Khanh explained:

I expect that I in the future can buy more land to do coconut farming and enjoy my age. More land and more farm is a more stable life. Also if we have more cows, we can hire people to milk them, so we don't need to work (Khanh, 08.05.2018).

Khanh did not work off-farm but had still been able to change his crops when salinization had become too troublesome. It had costed him 32 million VND, which he had at his disposal and loans had been unnecessary. Furthermore, he had been able to send his children to school and university, obtaining advanced machinery to process rice and expected to accumulate his land further in near future. Interestingly, he was part of the Heifer dairy project that he had high hopes would increase his income although the project was only in its initial stage as the cows were not yet producing milk.

Like some of the middle commodity producers, Linh had for many years struggled maintaining the means of production:

In 1980 my life is very difficult, I just started to sale something to get money but I tried to save money and then buy land to do more farm. We did not inherit too much land from our parent. When we just had the small land we needed to work for other people, do business to get more income (Linh, 07.05.2018).

Since 1980 she had worked her way up, accumulating profit and land and was now able to rent two shrimp ponds outside the dike, each 5000 m² together with owning two houses inside the dike. I am not aware of the specific circumstances under which she rented the ponds but most likely it was from poor farmers struggling with their own production. In this way, Linh had expanded her production on the expense of poorer farmers.

Linh did, opposite to Khanh, not experience the environmental changes as a serious problem but was aware that some households were struggling. She only hired people seasonally to improve her land, which many of the middle farmers also did. This was not unusual even if the household's capacity was limited and where Khanh was likely to become a capitalist farmer sooner, Linh had already divided land for her children and had the capacity to have two houses and renting additional land.

5.2.6. Are the rich class excluded?

The rich class of farmers had been able to accumulate land since the land reforms and the regulations had worked at their advance. Furthermore, one rented land outside the dike, also taking advantage of the land reforms. Both were living inside the dike, experiencing the positive effects of the dike and had the capacity to change to more resistant crops towards salinization. The liberalization of the market had benefitted the rich farmers as they, without debt to local trading companies, could sell their products at the most profitable price and hire labor to work for them in peak seasons. The effects of climate change were holding the biggest threat of exclusion for the rich farmers but even though they noticed the salinization, drought and lack of fresh water, they were able to adapt and continue their production. The class of rich farmers were the least excluded of the three classes in PCP.

5.3. Conclusion of analysis

The analysis was based on the two frameworks by Hall, Hirsch, and Li (2011) and Bernstein (1994) and identified firstly, the present of four of the five powers of exclusion in Ba Tri district and secondly, how the powers affected the farmers differently considering the class

differentiation within PCP. The power of force was not at work in this case while the power of regulation, on the other hand, definitely had its advantages for the rich farmers and some of the middle farmers, where the ability to sell or rent out land had created a structure that forced the poor farmers to make use of the regulations – hence lease or sell their land – when no other choice seemed available. The dike has had very different effect for the farmers – many of the poor farmers became poor due to debt surrounding the cultivation of shrimps outside the dike, while farmers inside (mostly middle and rich farmers) had been able to change their crops and somewhat secure themselves against salinization. Roughly, this regulation power had excluded the ones outside the dike and enhancing the chances of accumulation for the farmers inside. The market power also worked in advanced for the middle and rich farmers as they had been able to secure themselves against price falls. The longer ‘down’ the reproduction squeeze, the poor farmers found themselves, the stronger the push towards exclusion became. My original hypothesis was highly based on the importance of access to land and the size of land at the farmers’ disposal but with the analysis, it has become evident that while the access to land had a big influence, it was not the determining factor for exclusion. For a few of the farmers, it would make a considerable difference if they got access to more land but looking at the poor and middle class of farmers, many of the farmers identified as poor, owned more land than the middle farmers (see Appendix 3). The access to land needs to be understood in a context with the power of climate change, the capacity and know how to adapt together with geographical placement (inside/outside the dike), health issues and access to markets and distributors.

6. Discussion

The analysis suggests that a class differentiation does exist in the Ba Tri district where both poor, middle and rich farmers were identified. Furthermore, it implies that climate change should be regarded as a main power of exclusion that is highly important to include when trying to understand why and which farmers become excluded. In this section I wish to discuss the interrelation between the powers of exclusion, how the interrelation has created what I call ‘the exclusion from development’ and how one should understand climate change in a context with the other powers.

6.1. The Interrelation between the Powers of Exclusion

Three of the four main powers were identified in the analysis together with the fifth power of climate change. As the power of force was not evident in the case study area, this will be disregarded in the following discussion. Even though the powers were analyzed separately, it is important to discuss them in relation to one another as they overlap and complement each other. Regulation powers in form of the Doi Moi reforms and thus the possibility of selling, leasing and renting land affected the market powers such as the price on land. Furthermore, when the government chose to push for a boom in shrimp farming and the possible profit from increasing the export, this automatically affected the market price on shrimps, the agricultural inputs and the farmers' interest in transforming their crop system.

6.1.1. The Exclusion from Development

The Heifer dairy project is interesting to dive into when discussing the interrelation between the powers. Heifer's project is based on increasing farmers' access to the market through dairy production but is still highly influenced by regulation powers. The development project's coherence with the market powers is a 'signature move' of neo-liberal policies (Hall, Hirsch, and Li 2011) and the moral basis, hence the legitimation of the project, is founded in the discourse of the 'will to improve' and 'the cause of development'. According Hall, Hirsch, and Li (2011), with a development project follows a high risk of creating what they call 'intimate exclusion' (p.145). Intimate exclusion is the practices that enable some farmers to accumulate land and capital at the expense of their kin and neighbors, which in this case was happening through distributing development handouts – free inputs in form of the dairy cows – to households that already had a competitive advantage. As the project was still in the start-up phase when I visited, with the farmers awaiting the cows to start producing milk, whether the intimate exclusion will actually happen is left unknown. It was clear though that the farmers chosen for the project had competitive advantages and were identified as upper-middle or rich farmers in the PCP. If successful, the dairy project will increase their capacity to accumulate both land (if they wish for more) and capital, while others (notable already poor farmers) will become excluded. I was told that while the middle and rich farmers would accumulate their dairy production, the demand for grass to feed the cows would rise, given the poor farmers a chance to reorganize their production and thus be part of the production. As Hall, Hirsch, and Li (2011) argue, 'the discourse of development that bets on the strong in order to secure

economic growth has supplied an important mode of legitimation for processes of class formation at the village level' (p.166). The Heifer project is thus with a promise of economic growth, using the power of market and legitimation to exclude the poorest from the development handouts, leaving them in a position where they are not able to either accumulate or sustain their means of production and hence sustain the differentiated class formation in Ba Tri.

6.1.2. The Interrelation with the Power of Climate Change

The moral basis of regulation and market, and thus the interrelation with the legitimation power, has been discussed throughout the thesis but what is the moral basis for the power of climate change? As climate change is not a purely social category, I wish to discuss whether we can still argue that it is founded in moral basis.

Climate change is mainly the consequence of burning fossil fuels for decades. The exponential growth in emissions, dating back to the Industrial Revolution was done with an eye on economic growth and development (Malm 2016). Now, when the consequences of years of emissions are upon us in a highly unequal world system, benefiting some parts of the world and leaving other parts behind, climate change seems to have become a legitimation power in itself. The dike that was identified as a regulatory power, a construction imposed by the government, was built exactly *because of* climate change. Dikes is nowhere near a new type of construction in the Mekong Delta which in the last 100 years has been transformed by canals, dikes and sluices to control water flow and increase agricultural production (Olson and Morton 2018). But what happens when climate change (besides being a very real power of exclusion in itself) becomes a legitimation power? None of the farmers opposed the construction in 2006 and very few did it in the interviews even though the dike clearly had pushed many of the farmers living outside the dike further into a reproduction squeeze, excluding them from accumulating land and capital. The farmers, both inside and outside the dike, did not consider it as an excluding construction, but as a necessary protection against the effects of climate change, that they were told about by radio stations, social media and workshops – all controlled by the state. Why should the farmers oppose the dike when the alternative would mean that the whole area would struggle with salinization and every harvest would be threatened by failure? The role of the dike is not an either or debate but shows exactly the intertwined and complicated structures

when trying to understand the effects of climate change – and the other powers of exclusion. Exclusion for some often means opportunity for others. The dike gave farmers lucky enough to live inside a protection from salinization and the opportunity for more growing seasons but also farmers on the outside regarded the dike and the cultivation of shrimps as an opportunity for a ‘golden ticket’. If they won⁶ a season, they would gain a great profit but if they lost (which had been the case the last three years), they were squeezed further out of production.

One of the research questions for this thesis was how **the effects of climate change, isolated and in combination with other factors, influence farmers’ exclusion from land in Ba Tri district** in Ba Tri district. While many of the factors under the power of climate change were environmental, these environmental factors also influenced the social categories and power structures. When a drought hits, the pressure on already scarce water resources is intensified. When the shrimp farming fails for the third year in a row, the rising temperature might have affected this but it also calls attention to the push for an intensification of shrimp farming, polluted water and the lack of technical skills amongst the farmers. Climate change *has* influenced the exclusion of farmers in Ba Tri district but on different levels where the class structure played a significant role. The farmers with a big capacity and (for some) good access to land were also the ones able to cope with the obstacles. They had the capacity to access resistant crop types and ability to transform their land without ending up indebted and they could rely on income from their children with university degrees. This class differentiation in the Mekong Delta has been present for decades now but how has and will climate change affects this? Climate change is a rising power but environmental, social and economic problems in the delta are not new. As important as it is to incorporate the power of climate change into this thesis in order to understand the exclusion, it is equally important to remember all the problems that existed prior to the rising sea-level, salinization and droughts. The term ‘Vietnam’s rice bowl’ tells a lot about the intense effort that the government has imposed since the reforms to develop a huge commercialized agricultural industry, latest with a betting on aquaculture for export-led growth. Vietnam has moved to a post-socialist era and its path ‘to follow the development state model has increased exponentially their dependence on the liberal world order in which neoliberal governmentality has been a distinct feature for the last few decades’ (Thiem 2015, p.87) and this has both had consequences for the environment and enhanced the

⁶ Win or lose was expressions many of the farmers used then describing a good or bad season.

class differentiation. The effects of climate change are not environmental changes affecting all people the same way but needs to be understood in a historical, political and social context.

6.2. A Suitable Alternative?

Vietnam has a long history influenced by colonial rule and a long battle over socialism and it is only a few decades ago that a capitalist and commercialized agricultural development emerged throughout the whole country. Today the state still has great control over the economic sector and thus market power and regulatory power are intertwined. It is not only in the (somewhat) communist one-state Vietnam that the state intervenes in markets and shape the economic activity. As Hall, Hirsch, and Li (2011) explains, the ‘natural’ operation of market forces in a context of competition should not be overstated: ‘in all actually existing capitalisms, states intervene to set conditions in which selected groups are enabled to prosper and others are dispossessed’ (p.10-11). The market power is underpinned by regulation, force and legitimation and land becomes saleable only under certain conditions created by other powers. For all the farmers, the market power had a great influence on them but as discussed above, where the market structure and the growing effects of climate change meant an accumulation by both land and capital for the rich and some middle farmers, the very same conditions excluded the poor farmers from land and capital – especially by means of debt. The farmers that obviously had experienced dispossession and exclusion from a rising market economy were still surprisingly pro-market and pro-private property. This is a general trend that can be found in Vietnam where overwhelming support for the market can be found – in 2014, 95% of Vietnamese said that most people are better off in a free market economy (Pew Research Center 2014). The support towards neo-liberal policies by the very people dispossessed by these is interesting. Why do poor farmers support a system that dispossess and excludes them? With a free market and private land ownership follows a devotion to individualism. The farmers and their households were on their own in their search for expansion of reproduction and accumulation of land and capital. They explained during the interviews, how they hope for good luck in the next season so they could win a great harvest and thus rise on the steps of PCP. Furthermore, the historical development of southern Vietnam is most likely having a great influence on the farmers’ mentality towards a market economy. Already before the Doi Moi reforms and the development of a ‘post-socialist’ Vietnam, farmers in the Mekong Delta were attached to private property and market relations due to the regional historical development (see 2. Background). The

country's brutal war history followed by a decade of communist rule that ended in massive failure with a food crisis and a population in deep poverty also poses the question: what would be a realistic alternative to a capitalist market economy? This discussion lies beyond the scope of the thesis as it has focused on the powers of exclusion and class formation in PCP *within* the current political structures of Vietnam in context with its historical development. That said, an alternative might very well be needed as inequality is rising with Vietnam's development and turn towards neo-liberal policies and that, as this case study has shown, the effects of climate change affects people in unequal ways, dispossessing the already dispossessed.

6.3. Reflections on the use of the frameworks

I chose to combine the two frameworks as I wished to investigate how the powers of exclusion affected farmers differently – in this case by examining the different classes. It succeeded as I had hoped but with that said, by using the PCP-framework, other social differences were ignored such as gender relations, race, ethnicity and religion which is important to remember. Especially the gender inequalities would have been interesting to intersect as six of the farmers interviewed were women. Incorporating these differences would might have given another image of who were excluded and other reasons of why. Furthermore, the coding of the empirical data dividing the farmers into classes (poor, middle, rich) and identifying the powers of exclusion was done by me only. My monopoly of interpretation on the empirical data has been influenced by observations and experiences during the fieldwork together with my interpretation of the theoretical framework. Likewise, I chose only to adapt and analyze the corner stones of Hall, Hirsch and Li's (2011) framework together with climate change and thus somewhat simplify the analysis. That means that other powers of exclusion very likely has been excluded themselves from the analysis. As the main focus was on the 'new' power of climate change, I believe adding more powers would have made it too complex to intersect in the limited time and space of this thesis. That said, I believe it has been very fruitful to apply and combine the two frameworks to get a detailed analysis designed for the case study which has provided great explanatory power to understand how the exclusion and class differentiation is connected.

7. Conclusion

The aim of the thesis was to investigate how the effects of climate change affected the inequality and exclusion amongst small-scale farmers in the Ba Tri district in the Mekong Delta. In order to investigate this, firstly the different powers affecting the exclusion were identified and secondly, a class differentiation amongst the farmers, all identified as petty commodity producers, were examined.

By applying the framework of powers of exclusion, I was able to answer *how the effects of climate change, isolated and in combination with other factors, influence farmers' exclusion from land in Ba Tri district in the Mekong Delta*. Investigating the effects of climate change isolated from other factors showed how the farmers in Ba Tri district were all aware and to some degree effected by the changes. The most predominant challenge was salinization, affecting the farmers' crops, their access to wells and canals for fresh water and how the problem of salinization was exaggerating when disasters such as the drought in 2016 hit. The dike built in 2006 divided the farmers inside and outside the dike; the farmers inside were able to choose their own crops while the farmers outside were forced to cultivate shrimps in the salty water and many of them were trapped in debt due to three years of failed harvest. Using the framework of powers of exclusion helped to understand and analyze how the effects of climate change influenced farmers' *exclusion*, it was necessary to map out how the power of regulation, market, legitimation and climate change all were intertwined and influenced by one another. I found that the effects of climate change were excluding some farmers in Ba Tri district. Climate change was identified as a power of exclusion that over the last decades had grown stronger and more powerful but that it influenced the farmers' exclusion in highly differentiated ways. The effects of climate change were not an exclusion of all but differentiated depending on the farmer's access to capital and land.

By answering *in what way a class differentiation is constructed among the small-scale farmers and how this class structure influences the farmers' exclusion from land*, I was able to identify the differentiation identified in answering the first research question. By using the framework of petty commodity production, I found that a class differentiation was present where poor, middle and rich farmers were identified. I found that the class structure highly influenced the farmers' exclusion from land as the rich and somewhat middle farmers had a better capacity to

adapt and avoid exclusion. Moreover, not only did the classes affect the farmers' exclusion but the three classes were highly dependent on the powers of exclusion. It was necessary to combine the two frameworks in order to understand how the powers of exclusion were affecting the three classes of farmers in different ways. Combining the frameworks proposed that the degree to which the powers of exclusion influenced the exclusion of the three classes depended on many different factors, where their access to land was very significant but just as important was the access to capital, their debt relations and how well the farmer was able to reproduce his or hers means of production.

The conclusion of this thesis is that there is no simple answer to how climate change affected the farmers in Ba Tri district. The thesis has suggested that even though the effects of climate change environmentally affected the area of Ba Tri district more or less the same, the effects were not felt the same for the farmers. It is a complex answer where many factors have to be incorporated. To understand the effects of climate change in relation to class differentiations and exclusion, one needs to understand the specific history, the local and regional environmental conditions and very importantly, the current and historical development of social and political structures. This thesis showed how the poor farmers were the class that were most likely to be excluded from land – both by the effects of climate change, the market power, the regulations imposed by the Vietnamese state and by an emerging moral basis founded in individual responsibility.

This thesis has contributed to the understanding of exclusion processes in the Mekong Delta amongst small-scale farmers and highlighted how climate change has to be incorporated when trying to understand these processes. Furthermore, I hope that the models combined and used in this thesis can help to enhance the understanding of how exclusion affects classes in different ways and how a focus on this differentiation is crucial in order to understand exclusion.

For future work, it would be interesting and fruitful to expand the research and work with a larger empirical dataset. Furthermore, in order to gain a deeper understanding of the reproduction squeeze, it would be very interesting to expand the interviewees to incorporate landless people who has been squeezed out of production. This could give a better insight into how climate change works as a power of exclusion.

8. Literature

- Akram-Lodhi, A. Haroon. 2005. "Vietnam's Agriculture: Processes of Rich Peasant Accumulation and Mechanisms of Social Differentiation." *Journal of Agrarian Change* 5 (1):73-116.
- Akram-Lodhi, A. Haroon. 2010. "Review Essay: Land, Labour and Agrarian Transition in Vietnam." *Journal of Agrarian Change* 10 (4):pp.564-580.
- Anthony, Edward J., Guillaume Brunier, Manon Besset, Marc Goichot, Philippe Dussouillez, and Van Lap Nguyen. 2015. "Linking rapid erosion of the Mekong River delta to human activities." *Scientific Reports* 5:14745.
- Ben Tre Provincial People's Committee. 2015. Brief Report: Updating action plan to respond to climate change in Ben Tre province. National Target Program Office to Respond to Climate Change: From personal communication with governmental officer.
- Bernstein, Henry. 1977. "Notes on Capital and Peasantry." *Review of African Political Economy* (10):60-73.
- Bernstein, Henry. 1986. "CAPITALISM AND PETTY COMMODITY PRODUCTION." *Social Analysis: The International Journal of Social and Cultural Practice* 20:11-28.
- Bernstein, Henry. 1994. "Chapter 3: AGRARIAN CLASSES IN CAPITALIST DEVELOPMENT." In *Capitalism & Development* p. 40-71. Taylor & Francis Ltd / Books.
- Bernstein, Henry. 2010. *Class Dynamics of Agrarian Change*. Sterling: Stylus Publishing.
- Brinkmann, Svend, and Steinar Kvale. 2005. "Confronting the ethics of qualitative research." *Journal of Constructivist Psychology* 18 (2):157-181.
- CARE. 2009. "In search of shelter: mapping the effects of climate change on human migration." https://www.ciesin.columbia.edu/documents/clim-migr-report-june09_final.pdf.
- Chanh, Trung. 2017. "Uncertainty mounts on US \$10 billion shrimp export goal." *The Saigon Times*, 27.03.2017. Accessed 12.08.2018. [http://english.thesaigontimes.vn/53110/uncertainty-mounts-on-us\\$10-billion-shrimp-export-goal.html](http://english.thesaigontimes.vn/53110/uncertainty-mounts-on-us$10-billion-shrimp-export-goal.html).
- Forsyth, Tim. 2001. "Critical realism and political ecology." In *After postmodernism: an introduction to critical realism*, edited by J. Lopez and G. Potter, pp. 146-154. London, UK: Athlone Press.

- General Statistics Office of Viet Nam. 2016. "11. Health, Culutre, Sport and Living standard." General Statistics Office of Viet Nam accessed 28.03.2018.
<http://www.gso.gov.vn/SLTKE/pxweb/en/11. Health, Culture, Sport and Living standard/?rxid=5a7f4db4-634a-4023-a3dd-c018a7cf951d>.
- Giosan, Liviu, James Syvitski, Stefan Constantinescu, and John Day. 2014. "COMMENT: Climate change: Protect the world's deltas." *Nature* 516:pp.31-33.
- Goodman, David, and Michael Redclift. 1985. "CAPITALISM, PETTY COMMODITY PRODUCTION AND THE FARM ENTERPRISE." *Sociologia Ruralis* 25 (3/4):231.
- Gorman, Timothy. 2014. "Moral Economy and the Upper Peasant: The Dynamics of Land Privatization in the Mekong Delta." *Journal of Agrarian Change* 14 (4):pp.501-521.
- Hak, Danet, Kazuo Nadaoka, Lawrence Patrick Bernado, Vo Le Phu, Nguyen Hong Quan, To Quang Toan, Nguyen Hieu Trung, Duong Van Ni, and Van Pham Dang Tri. 2016. "Spatio-temporal variations of sea level around the Mekong Delta: their causes and consequences on the coastal environment." *Hydrological Research Letters* 10 (2):60-66.
- Hall, Derek, Philip Hirsch, and Tania Murray Li. 2011. *Powers of Exclusion. Land dilemmas in Southeast Asia*. Singapore: NUS Press.
- Huu Nguyen, Hoang, Paul Dargusch, Patrick Moss, and Da Binh Tran. 2016. "A review of the drivers of 200 years of wetland degradation in the Mekong Delta of Vietnam." *Regional Environmental Change* 16 (8):2303-2315.
- Isaksen, Robert. 2016. "Reclaming Rational Theory Choice as Central: A Critique of Methodological Applications of Critical Realism." *Journal of Critical Realism* 15 (3):245-262.
- Kvale, Steinar, and Svend Brinkmann. 2009. *InterViews : learning the craft of qualitative research interviewing*: Los Angeles : Sage Publications, cop. 2009
 2. ed. Non-fiction.
- Lam, Nguyen Tran. 2017. "Even It Up: how to tackle inequality in Vietnam.". Oxfam International. <https://www.oxfam.org/en/research/even-it-how-tackle-inequality-vietnam>.
- Larson, Christina. 2016. "Mekong megadrought erodes food security." *Science*, April 6. Accessed 27.03.18. <http://www.sciencemag.org/news/2016/04/mekong-megadrought-erodes-food-security>.

- Lenin, Vladimir Ilyich. 1964. "The Development of Capitalism in Russia: The Process of the Formation of a Home Market for Large-Scale Industry." In *Collected Works: Volume 3*. Moscow: Progress Publishers. Original edition, 1899.
- Madison, D. Soyini. 2012. *Critical Ethnography: Method, Ethics, and Performance*. 2nd ed: SAGE.
- Malm, Andreas. 2016. *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*. London: Verso.
- Minh, Ho Binh. 2016. "Delta drought gives glimpse into bleak future for mighty Mekong." *Reuters*, April 17. Accessed 27.03.18. <https://www.reuters.com/article/us-drought-mekong/delta-drought-gives-glimpse-into-bleak-future-for-mighty-mekong-idUSKCN0XE00N>.
- Nicholls, R.J., P.P. Wong, V.R. Burkett, J.O. Codignotto, J.E. Hay, R.F. McLean, S. Ragoonaden, and C.D. Woodroffe. 2007. "Coastal systems and low-lying areas." In *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by O.F. Canziani M.L. Parry, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, pp. 315-356. Cambridge, UK: Cambridge University Press.
- Olson, Kenneth R., and Lois Wright Morton. 2018. "Polders, dikes, canals, rice, and aquaculture in the Mekong Delta." *Journal of Soil and Water Conservation* July/August 2018 vol. 73 no. 4 83A-89A 73 (4):83A-89A.
- Pew Research Center. 2014. "Emerging and Developing Economies Much More Optimistic than Rich Countries about the Future." accessed 20.08.2018. <http://www.pewglobal.org/2014/10/09/emerging-and-developing-economies-much-more-optimistic-than-rich-countries-about-the-future/-free-market-seen-as-best-despite-inequality>.
- Pham, Duy Nghia. 2016. "From Marx to Market: The Debates on the Economic System in Vietnam's Revised Constitution." *Asian Journal of Comparative Law* 11 (2):263.
- Quang Tuyen, Nguyen. 2014. "Livelihood Diversification Strategies of Khmer and Kinh Farmers in the Mekong Delta since the 1993 Land Law." *Global Journal of Human-Social Science Research*.
- Ramos-Carreño, Santiago, Ricardo Valencia-Yáñez, Francisco Correa-Sandoval, Noé Ruíz-García, Fernando Díaz-Herrera, and Ivone Giffard-Mena. 2014. "White spot syndrome

- virus (WSSV) infection in shrimp (*Litopenaeus vannamei*) exposed to low and high salinity." *Archives of Virology* 159 (9):2213-2222.
- Smajgl, A., T. Q. Toan, D. K. Nhan, J. Ward, N. H. Trung, L. Q. Tri, V. P. D. Tri, and P. T. Vu. 2015. "Responding to rising sea levels in the Mekong Delta." *Nature Climate Change* 5:167.
- The National Assembly. 2013. Vietnam Land Law 2013. In *Law No. 45/2013/QH13*. available at <http://vietnamlawenglish.blogspot.com/2013/11/vietnam-land-law-2013-law-no-452013qh13.html>.
- Thiem, Bui Hai. 2015. "In Search of a Post-Socialist Mode of Governmentality." *Asian Journal of Social Science* 43:80-102.
- Turner, D.W. 2010. "Qualitative Interview Design: A Practical Guide for Novice Investigators." *The Qualitative Report* 15 (3):754-760.
- Wong, P.P., I.J. Losada, J.-P. Gattuso, J. Hinkel, A. Khattabi, K.L. McInnes, Y. Saito, and A. Sallenger. 2014. Coastal systems and low-lying areas. In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by C.B. Field, V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White. Cambridge, United Kingdom and New York, NY, USA.
- World Bank. 2017. "The World Bank in Vietnam." Last Modified 13.04.2017, accessed 27.03.2018. <http://www.worldbank.org/en/country/vietnam/overview>.

9. Appendix 1: Letter of Request

Dear Can Tho University,

I am writing as the supervisor for Mathilde Heldt Rønnow, a Danish master student with a bachelor in Geography and Geoinformatics, currently studying Human Ecology at Lund University.

She is currently conducting her master thesis, and this letter is a request to Can Tho University to assist her with her upcoming fieldwork in the Mekong Delta that will become the primary data for her thesis.

Mathilde is researching the vulnerability of farm households living in the Vietnamese Mekong Delta towards sea level rise and saline intrusion in connection to climate change. She wishes to investigate what determines the vulnerability, how it affects livelihood and labour opportunities and how farm households cope with, and possibly adapt to, the changes.

With a background in geography, Mathilde has for long worked with the geo-physical dimensions of vulnerability towards climate change and finds that a socio-economic and personal dimension often is lacking. She finds the intersection between the geo-physical and social dimension crucial and wish to explore this interlink and 'on-the-ground' experience with this fieldwork.

Outline details of activities in Vietnam

Mathilde will be travelling to Vietnam around April 16th 2018 and will stay for 2-3 weeks. The research is highly qualitative and she wish to gain access to a community or district in the Mekong Delta that are struggling with saline intrusions and possibly are affected by sea-level rise. Ideally she would like to interview around 15 farm households from the same area but households with different access to land (landless to land-rich) and different socio-economic status as she wishes to gain an understanding of what factors that determines vulnerability. Furthermore, she hopes to interview local authorities on the adaptation methods implemented in the area and how they understand and deal with vulnerability.

Last but not least, Mathilde would appreciate recommendations of one or two professors at Can Tho University, possibly from The Mekong Delta Development Research Institute and/or the DRAGON institute, that she can contact and hopefully interview in order to get specific inputs on development and climate challenges currently happening in the Mekong Delta.

A draft of the questionnaires to use for interviewing households can be found in Appendix 1.

Request for support from Can Tho University

The first and foremost request, that I hope Can Tho University can assist Mathilde with, is the support and assistance to obtain a permission to conduct research and interviews with households from local authorities.

Furthermore, she has been looking into provinces that could be relevant for her as a case area and found following provinces interesting.

1. Ben Tre: facing severe challenges with saline intrusions and drought. She would like to visit one or several communities where households are trying to fight the saltwater in various ways.
2. Bac Lieu: facing challenges with saline intrusions and has as an adaptation method started constructing high-tech shrimp farms. Possibly, she would like to research how this project affects different households' vulnerability if in any way at all.

We are very interested in inputs from you if there are areas, you previously have conducted research in or areas, you have ongoing research in, that could be relevant for this research and furthermore, recommendations for specific communities and areas within the province that Mathilde could visit.

In addition, as Mathilde is in the need of a translator, we would appreciate to be put in contact with a student association or alike to find a student with good english skills and previous experience with field work, that would be interested in assisting her. The time spent will be appreciated with an honorarium.

We appreciate you take your time looking at the research. Mathilde will gladly elaborate further if needed and please let us know if you need any additional information.

We are looking very much forward to hear from you.

Kind Regards

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10. Appendix 2: Questionnaire

Questionnaire for interview with farm-households

Background

- How long have you lived here?
 - Where did you live before?
- What do you do for a living?
 - Have you always worked with XX?
 - If not, what before?
- Are you a member of the farmers' union?
- How many are you in the household?
 - What do they do for a living?
- Do you own this land?
 - If no, who owns it?
 - If yes, how much land do you own (ha)?
 - How did you come to own it?
 - Have you over the last years gained more or less land?
 - Have there been changes that have affected your access to land?
- If farming: What crops do you grow?
- Do you hire people to work on your farm?
- Do you sell the crops?
 - If yes, where and to whom?
- Do you have other sources of income?
- Do you sometimes work in non-farm areas?
 - Like processing of food, construction or renting out your land to others?

Current environmental challenges

- What has been the main environmental changes during the time, you have lived here?
- Why are these specifically challenging?
- How have these changes impacted your daily life?
- What is your experience with saltwater intrusions?
 - When was the first time, you experienced saltwater in your fields?
 - Do you know why this happened/happens?
 - How has this affected your fields and crops?
- Do you experience that the saline intrusions happen more and more?
- Have you changed your cropping system due to environmental changes?
- Have you experienced times or situations where it has been hard to gain clean drinking water?
 - If yes, what have you done in these situations?

- Have you experienced situations where it was hard to provide for yourself/your family?
 - If yes, what have you done in these situations?
- What do you think causes the changes in weather/environment?

Solutions

- What do you do to prevent saltwater intrusions in your fields/land?
- Have things been done in the community to prevent saltwater in the fields?
- Have you been encouraged/guided to change certain strategies to better cope with the changes?
 - If yes, from whom?
- How much time have you used on adapting to the changes?
- Has the challenges and changes costed you money? Land?
- Would you like to expand your land?
- Do you know of people who have been forced to leave, lease or sell their land do to environmental changes?
 - What has happened to them?

Future

- What will you do if the saltwater intrusions become worse?
E.g. change crops, livelihood strategy or move.
 - How would you feel about that?
- Can you imagine living somewhere else?
- Are you worried about your children's future?
- If you could change anything about your situation, what would it be?
 - Why?

11. Appendix 3: Farmers Information

| No. | Name (man/woman) | *Age | **No. household | Land size (m ²) | Inside/outside dike | Cultivation | Debt (mio. VND) | Class in PCP | ***Place of interview | Date of interview |
|-----|---------------------|------|--------------------|--------------------------------|-----------------------------------|---|---------------------------------|-----------------|--------------------------|----------------------|
| 1 | Duc (m) | 60 | 6 | 6000-7000 | Inside | Rice, coconuts, livestock | - | Middle | 1 | 07.05.2018 |
| 2 | Linh (w) | +60 | 5 | 3000 + rent 1.0000 | Inside + renting land outside | Coconuts, shrimps, livestock, fruits | - | Rich | 1 | 07.05.2018 |
| 3 | Trang (w) | 61 | 11 (7) | 4000 | Outside | Shrimps | 165 | Poor | 1 | 07.05.2018 |
| 4 | Nguyen (m) | 65 | 4 (2) | 6900 | Inside | Coconuts, shrimps, livestock, chili and ladyfingers | - | Middle | 1 | 08.05.2018 |
| 5 | Hoang (m) | +60 | 8 (3) | 1.5000 | Inside | Cocnuts, banana | - | Middle | 1 | 08.05.2018 |
| 6 | Nhung (w) | +50 | 3 (4) | 3000 + rent out 1000 | Inside + rent out land outside | Livestock, coconuts | 40 | Poor | 1 | 08.05.2018 |
| 7 | Phuong (w) | +45 | 8 (6) | 5000 | Outside | Shrimps, livestock for own consumption | 50 – paid back after 6 years | Middle | 2 | 09.05.2018 |
| 8 | Huy (m) | +50 | 8 (5) | 1.3300 | 6300 outside 7000 inside | Coconuts (inside), shrimps, livestock | 50 | Middle | 2 | 09.05.2018 |
| 9 | Minh (m) | 51 | 1 | Around 5000 | Outside | Shrimps, few coconuts | >200 | Poor | 2 | 09.05.2018 |

| | | | | | | | | | | |
|-----------|-----------|-----|-------|------------------------------------|---------|--|---|--------|---|------------|
| 10 | Quynh (w) | 60 | 8 (6) | 8000 + rent 2000 | Inside | Shrimps, vegetables, coconuts, livestock | Borrowed from children – amount unknown | Middle | 2 | 09.05.2018 |
| 11 | Tuan (m) | 50 | 4 | 6400 | Inside | Coconuts, livestock | Has not paid back workers hired to change crop system | Middle | 2 | 09.05.2018 |
| 12 | Van (m) | 51 | 4 (2) | 4800 | Inside | Coconuts, dairy cows | - | Middle | 2 | 10.05.2018 |
| 13 | Khanh (m) | 60 | 6 (3) | 1.5000 | Inside | Coconuts, rice, dairy cows, livestock | - | Rich | 2 | 10.05.2018 |
| 14 | Duy (m) | 71 | 6 | 3900 | Inside | Rice, coconuts, livestock | 2 | Middle | 2 | 10.05.2018 |
| 15 | Anh (w) | +40 | 4 | 7700 (sharing with siblings) | Outside | Shrimps, livestock for own consumption | 470 | Poor | 2 | 11.05.2018 |
| 16 | Hao (m) | 70 | 7 (2) | 2200 | Inside | Coconuts, bananas, guava, rabbits | - | Poor | 2 | 11.05.2018 |

All interviewees were presented as head of household to me.

* The +age is my estimate of the farmer's age. The rest is what they told me but whether it is the exact age is uncertain.

** First number is the total number of household with children living elsewhere and (number) is the current number of people living in the house.

*** 1: Giong Sao hamlet, Ba Tri district, Ben Tre Province. 2: Giong Trom hamlet, Ba Tri district, Ben Tre province