“Life is chaos now”

Water, modernity and changing landscapes in the Mekong Delta, Vietnam

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Abstract

This study details the effects of climate change and market fluctuations on the rural district of Cu Lao Dung located in the Mekong Delta of southern Vietnam. Using theoretical concepts on modernity, the environment and water from researchers Arjun Appadurai, Tim Ingold and Veronica Strang I study the political ecology of the Delta. Through interviews with farmers I found that climate change and market fluctuations are stalling economic development and significantly worsening already strong migration flows, leading to many people of working age leaving the district. Insufficient government support and dire climate projections means that the problems observed on Cu Lao Dung are only posed to grow worse.

Keywords: Mekong, climate change, modernity, Vietnam, migration, markets, water, landscapes
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Introduction

The Mekong River begins in the Tibetan Plateau, it flows through China, Myanmar, Thailand, Laos and Cambodia, before reaching its delta in the southernmost Vietnam and parts of Cambodia. The river’s basin is one of the most bio-diverse regions in the world and greatly affects the economies of its surrounding countries, in sectors ranging from agriculture and transportation to hydropower. Most of the Delta is situated in Vietnam where the sediments from the annually flooding river have created “the Rice Bowl of Vietnam”. The Mekong Delta province produces 90% of Vietnam’s rice exports and more than 70% of its farm-bred aquacultural products (Garschagen, Diez, Nhan and Kraas, 2012: 84).

In recent years the region has been spoken of as one of the most vulnerable places in the world to the effects of man-made, or anthropogenic, climate change. With most of the Delta less than two metres above sea level, the region is sensitive to both sea level rise, land subsidence and increasing heat. These environmental problems damages homes and agriculture through loss of land and saltwater intrusion into its fields and aquacultural ponds (Le and Chinvanno, 2011:207). People are leaving the region’s most vulnerable provinces at an unprecedented rate, and part of the blame for this exodus is being put on climate change (Kim and Minh, 2017). Simultaneously, the Vietnamese economy continues to grow at one of the fastest rates in the world and the country is modernizing at break-neck speed (World Bank and MPI, 2015:xxv). The Mekong Delta’s political and ecological history has been dramatic and the region’s appearance today is unrecognizable from the way it looked 200 years ago (Biggs, 2010:8).

This paper explores the ways in which climate change is already re-shaping life in the Delta, by speaking with the people who are most exposed to the changing weather and rising waters: the region’s farmers. With the help of an interpreter I have interviewed 19 informants in a small rural district in the Mekong region and five students in an urban setting, as well as two local government representatives. By reading previous research conducted in the region and analysing my own findings through theoretical approaches on water, landscape and modernity presented by anthropologists Veronica Strang, Tim Ingold and Arjun Appadurai, I explore what it is like to inhabit the rapidly changing political ecology of the Mekong Delta. In addition to the aforementioned informants, I also spoke at length with one of the most prominent climate researchers in the area.
Geography, history and demography

The Mekong Delta forms one of Vietnam’s eight provinces and is home to 17.6 million people, 25% of whom live in urban areas (GSO, 2017:25-26). Can Tho is the Mekong Delta’s largest city with its 1.3 million inhabitants and its economic and educational centre. It is situated in the middle of the Delta on the banks of the Hua river, one of the Mekong’s nine branches as it flows into the sea (Birkmann, Garschagen, Vo and Nguyen, 2012: 266). Cu Lao Dung is a rural district in Soc Trang province that consists of an island in the Hau River, with a small coastline towards the South China Sea. Cu Lao Dung is home to 65 000 people, of which 85% are involved in agriculture, 5000 inhabitants live in its largest settlement.

Soc Trang province is one of the Delta-provinces worst afflicted by climate change within the Delta. In the event of a one metre sea level rise, Soc Trang Province will have more than 40% of its current territory under water by 2100 (Kuenzer and Renaud, 2012: 37). Cu Lao
Dung, is projected to be the most severely hit district in Soc Trang Province, with 75% of the island inundated during low tides and 95% during high tides by the year 2100 (Soc Trang and World Bank, 2017:45). Regarding climate change, Vietnam is consistently deemed one of the five most vulnerable nations in the world. This is mainly due to the extreme vulnerability of the Mekong Delta and the Red River Delta (Kuenzer and Renaud, 2012: 37). Vulnerability from climate change causes not only direct and measurable harm against, for example, areas prone to flooding, it also reshapes social and political relations and can cause consequences far beyond initial predictions (Vaughn, 2016). This is worsened by land subsidence caused by over-exploitation of underground water, which in many areas far outpaces the amount of sea level rise. The average annual rate of land subsidence for the Delta is 1.6 cm while the average annual sea level rise stands at 0.2-0.4 cm per year (Erban, Gorelick and Zebker, 2014:6).

The Mekong Delta has a monsoon climate with two seasons: one wet and one dry. More saltwater penetration inland due to intense droughts, combined with extraction of underground water and changing waterflows of the river combined with rising sea levels, seriously damages agriculture. (Moder, Kuenzer, Xu, Leinenkugel and Quyen. 2012:154). On top of that, construction of hydroelectric powerplants in China and Laos results in irregular water levels and a loss of the sediments that have created one of the most fertile agricultural regions on earth (Ibid:152).

In Quagmire Nation-Building and Nature in the Mekong Delta (2010), historian David Biggs paints a picture of the political and ecological history of the Delta from the early 1800s until today. In this effort he describes how the different regimes that have been in control of southern Vietnam for the past 300 years have made attempts at nation-building in the Delta with various successes. As early as the 1750s, the Vietnamese Nguyen dynasty attempted to establish its authority in the region through construction of forts and canals (Biggs, 2010:56). At that time, the majority of the population were Khmer people, the majority population in neighbouring Cambodia. Waves of migration from Vietnam’s central and northern parts changed the ethnic makeup of the region and at the turn of the 20th century the majority ethnic group in all of Vietnam, Kinh people, also constituted a majority in the Mekong Delta. (Biggs, 2010:20).

The French established control over large parts of Southeast Asia in the late 19th century, and initiated an intense campaign of dredging canals in the Delta. Tens of thousands of new migrants arrived each year with the promise of land from the colonial government (Biggs, 2010:35). This stands in contrast to the Delta today, which has the second lowest population growth of all Vietnamese regions (Garschagen et al. 2012: 87). Besides that, the Delta was the site of fierce fighting during the First Indochina War against the French Empire (1945-1954).
and during the succeeding Vietnam War, known as the American war by the Vietnamese (Biggs, 2010: 129, 221). Many of the region’s inhabitants have been flocking to the big cities as well, Ho Chi Minh City’s proximity to the Delta makes it the destination of choice for millions of youths from peasant households. The city received 1.6 million new arrivals between 2005 and 2009 alone (Earl, 2014: 17).

**Previous research**

Various works from anthropologist and other social scientists have been studied and cited throughout this essay. As a clear grasp of climate science surrounding the region is necessary, works by natural scientists have been read as well. Danish anthropologist Tine Gammeltoft has conducted fieldwork in Vietnam since the late 1990s. In *Women’s Bodies, Women’s Worries. Health and Family Planning in a Vietnamese Rural Community* (1999), she explores gender relations and reproductive health in rural Vietnam. Swedish anthropologist Cecilia Bergstedt writes about gender and work relations in rural Vietnam in *Cultivating Gender* (2016:7). Eren Zink conducted ethnographic research among climate scientists in Vietnam presented in *Hot Science, High Water* (2013). The Australian anthropologist Philip Taylor has done extensive research on Southern Vietnam and the Mekong Delta, among them are *Fragments of the Present: Searching for Modernity in Vietnam’s South* (2001), on the perception and implementation of modernity in southern Vietnam. Taylor also wrote *The Khmer Lands of Vietnam: Environment, Cosmology and Sovereignty* (2014) on the Mekong Delta’s historical status as an ethnic Khmer stronghold. German sociologist Judith Ehlerl conducted a fieldwork focused on local knowledge and perception of ecology among farmers outside of Can Tho. Her work is chronicled in *Beautiful floods: Environmental Knowledge and Agrarian Change in the Mekong Delta* (2012).

Ehlerl’s research was part of the massive multi-year German-Vietnamese interdisciplinary WISDOM project (Water related Information System for the Development of the Mekong Delta). The project ran for six years and saw the collaboration of, among others, hydrologists, cultural geographers, development researchers and agronomists. The project sought to develop strategies for dealing with challenges posed for the Mekong Delta in the 21st century. The findings of the project are assembled in *The Mekong Delta System* (2013) with Claudia Kuenzer at the German Aerospace Center and Fabrice Renaud, professor of environmental risk/community resilience at the University of Glasgow as editors.
Urban Vietnam has also received considerable attention in Catherine Earl’s *Vietnams New Middle Classes* (2014), which studies the experience of young women in Ho Chi Minh City. Erik Harms (2011), another urban ethnographer, has conducted ethnographic research in a rapidly urbanizing semi-rural district on the outskirts of Ho Chi Minh City. With interest in anthropogenic climate change spiking in all academic fields, anthropologists have started to give more attention to the changing global environment. The anthropological anthologies *Climate Cultures* (Barnes and Dove, 2015) and *The Social Life of Climate Change Models* (Hastrup and Skrydstrup eds, 2013) have been consulted. The anthology *Disentangling Migration and Climate Change* (2013) edited by the German sociologists Thomas Faist and Jeanette Schade, was valuable in understanding migration related to the changing climate.

**Purpose and questions**

The purpose of this essay is to explore in what ways the inhabitants of two communities modern Mekong Delta are experiencing their landscapes and livelihoods, in a time when anthropogenic climate change is remaking the region in which they live. A region that is part of a rapidly modernizing country that experiences the environmental side effects of 200 years of global carbon emissions. The material for this study was gathered through a series of semi-structured interviews with 19 rural inhabitants of the Delta and additional thoughts from five young urban inhabitants. The essay emphasizes the experiences of the rural informants and uses the information gained from the urban group as a supplement to the information gained from the countryside. Complimentary information was obtained from two local government officials and one climate scientist. The findings from these interviews are analysed using theoretical approaches presented by anthropologists Tim Ingold, Veronica Strang and Arjun Appadurai. Further, I place my results in a historical framework to fully contextualize the political ecology of the Delta. To achieve this purpose, I answer the following specific question:

- What challenges are identified as posing risks to the social and economic wellbeing by the residents of two communities of the Mekong Delta in Vietnam?
Theory

I have applied theoretical concepts from three anthropological researchers while describing the political ecology of the Delta. This is done in accordance with anthropologist Harry Wolcott’s (1995:187) assertion that theory may be “joined with the fieldwork anywhere in the research process”, as well as his (Ibid:1995) praise of the application of several different theories used when analysing material obtained during fieldwork.

The environmental anthropologist Tim Ingold has written extensively about how people relate to their environments. In *The Perception of the Environment* (2000), he writes about the construction of *landscapes*, how they are separate from *nature* and what meaning they hold for the people who inhabit them. This approach is also used by Bergstedt (2016) when she studies gender and work in the Vietnamese countryside. Ingold’s approach is useful throughout the essay, since my informants are entirely dependent on predictable weather conditions in the landscape they inhabit. The Mekong Delta is a landscape dominated almost entirely by the natural flows of the water that permeates it. As such, the works of Veronica Strang, one of the foremost anthropological authorities on the cultural meaning of water, are applicable when I write about my own findings. She outlines some of her core theoretical concepts concerning water and meaning in her article *Common Senses* (2005). In particular, Strang’s (2005:93) writing on the ability of water to be both beneficial and detrimental have influenced this study.

Underlined by the history of the Delta, as well as previous ethnographic works, the *political ecology* of the region needs to be studied to fully comprehend it. Political ecology is not a theory, but rather a transdisciplinary field that puts ecology into a wider perspective; taking history, politics and “the influence of non-local elites” into account (Karlsson, 2015:351). Both French colonialists, historically, and market actors, currently, fit the bill of “non-local elites”. Further, it is instrumental to connect the political ecology of the Delta to modernity, that is to say, the creation of large parts of the modern Delta through canals and drainage over the past 200 years. The current social, economic and agricultural changes are driven by both modernist ideals as well as a sign of the region’s integration into the global economic order. Modernity is usually presumed to include, among other things, industrialization, urbanization, and a consumer society under the auspice of a centralized state (Valade, 2001:9940). The anthropological approach to modernity has been to treat it as a concept that takes different shapes in different cultural milieus “the spread of political and social realities and their production of new techniques, social forms and subjects” (Ong, 2001:9944). Theoretical approaches by Indian anthropologist Arjun Appadurai, who has written on modernity,
globalization and aspiration for the future for inhabitants of the Global South have been utilized in this essay. In *Modernity at Large (1996)* he maps the various flows of ideas, transactions, culture and identity that permeates the globalized world.

I argue that the changes happening in the Delta should be viewed as a manifestation of the *Anthropocene*, the proposed name for the current geological and ecological stage in earth’s history in which humans assert more influence on earth than any natural force. I also draw inspiration from an article by Mark J. Hudson (2014:946), an archaeologist specialised in the history and culture of Japan who describes Asian societies relationship with the *Anthropocene* and man-made environments in an article. As David Biggs (2010: 56) writes “in the delta today, almost every plant and parcel of land is touched by human hands”.

**Methods and limitations**

I initially intended this undergraduate essay to chronicle the attitudes of young adults in the countryside. After difficulties with obtaining an interpreter I started interviewing students in Can Tho, as those interviews could be conducted in English. My objective subsequently changed to instead conduct a comparative study between youths in the city and in the countryside. It then changed even more as I understood that I would not be allowed to choose which informants I spoke to. It was not until one month had passed that I was able to find an interpreter who was willing to accompany me to the rural research site. Regrettably, I noticed at the research site that his English skills were not what I had hoped they were. This problem was overcome by letting a third party listen to the interviews and read my transcripts.

The majority of the research was conducted during two five-day visits to the small island of Cu Lao Dung in the Mekong Delta (see map on page 3). Prior to arriving in Vietnam, I had been put in touch with a climate researcher working for a Vietnamese research company, who directed me towards Cu Lao Dung when I was searching for a district where I could conduct my field work. On the island, I conducted semi-structured interviews with 19 inhabitants, 18 of whom were working age (17 of whom were men) and whose median age was 61. The gender imbalance is regrettable and stems from the fact that the local authorities brought me and my interpreter directly to our informants. Some blame falls on my part as well as I did not protest enough since I did not wish to upset our hosts. As such, many important aspects of rural life in Vietnam are missing from my study, a perspective that has been covered by both Bergstedt (2016) and Gammeltoft (1999). I also interviewed five students in their 20s living in Can Tho. Additionally, I interviewed Mr Ky Quang Vinh, former director of the Climate Change
Coordination Office and one of the leading climate scientists in the region. In Can Tho, I spoke at length with a senior official at the Department of City Planning about the problems facing the city. In Cu Lao Dung, I interviewed a representative for the district People's Committee on questions of demographics, economy and climate change on the island.

The questions were designed using a directed content analysis: I was informed on previous research in the field, but had not settled on a guiding theory (Hsieh and Shannon, 2005: 1281). I was aware that erratic weather, unexpected floods and migration were problems the Delta faced and questions were adapted the questions along those themes. After transcribing the interviews, I used a method known as coding and segmented the texts, that is, reading the interviews several times before marking out reoccurring themes in the text and structuring the essay around those themes (Wutich et al. 2015: 645). The themes were: household economy (livelihood) and debt, rain, heat and flooding, migration and employment, suggestions for the future and finally historical changes and improvements made.

People’s committees are the political authorities responsible on both district and provincial level in Vietnam. To be allowed to conduct research, I had to bring a personal letter from the Department of Anthropology at the Vietnam National University in Hanoi. The letter stated which district I intended to be located in, what sort of people my informants would be and how many days I intended to stay in the district. This letter then had to be presented to the International Office at the province-level People’s Committee in Soc Trang, who in turn informed the lower level district People’s Committee in Cu Lao Dung of my intentions. The People’s Committee in Cu Lao Dung then assigned a low-ranking employee at the committee to accompany me and my interpreter on every interview. Similar strict demands of correct paperwork and open surveillance by the authorities appear in Gammeltofts Women’s bodies women’s worries (1999). Despite the supervision and set-up interviews, I still found the results I obtained in the rural areas much more interesting than the answers I had received in the city. The interviews were almost always conducted in people’s homes and we, usually a trio consisting of me, my interpreter and our supervisor from the committee, were treated as honoured guests. In every home we received coffee, tea or soft drinks when we sat down to conduct the interviews, while we reciprocated bringing each informant coffee and condensed milk. Since my stay in Cu Lao Dung was so short, I never managed to reach the stage described by Gammeltoft (Ibid: 40) where she was allowed to roam the community more freely. That said the report between me, my interpreter and our assigned supervisor was amicable from the first day.
Ethics

Vietnam is an authoritarian one-party state that consistently ranks as one of the least democratic countries in the world (The Economist, 2019). Given our supervision by the local authorities, the first code of conduct from the American Anthropological Association (2012) was firmly in my mind: do no harm. I did not ask questions that could be interpreted as being critical of the ruling Communist Party or government policy, nor did I ask questions about Vietnam’s ethnic minorities as that is a sensitive issue in the country (Human Rights Watch, 2009).

Informed consent was obtained from all my informants before beginning the interviews (AAA, 2012). I told them about the extent of my research and why I was in their particular region, I also asked all of them if I could record our conversations and told them about how the data would be handled. All of the informants consented, it is, however, difficult to say whether they were in a position to say no with the presence of a party official who initiated the meeting. Such problems are also observed by Gammeltoft (1999:41).

The identities of my informants have been kept anonymous and I have chosen only to reveal their age and profession in my analysis. However, any statement my rural informants made, as well as their identities, are already known by the Vietnamese state. The handling of my recordings and transcripts by a third party to improve the translations may have compromised the security of my informants as I have no way of knowing if the third party was an informant for the government or if the information could have been stolen of his computer. Regardless, as I had promised my informants that no third party would listen to the interviews it was a possible of violation of the sixth: Protect and Preserve your records, as the recordings were not handled the way that I had promised my informants (AAA, 2012).
Voices from the countryside

Me and my interpreter drove by motorbike from Can Tho to Cu Lao Dung, an 80-kilometre ride that took 2.5 hours and involved a 15-minutes ferry-ride. Cu Lao Dung has not been a beneficiary of the large influx of tourists into Vietnam arriving since the 1990s (WTTC, 2018). A few island residents told me that I was the first white westerner they had ever laid their eyes on, a novelty that resulted in its fair share of selfies, joking marriage proposals and several questions about my height. According to the representative from the People’s Committee on the island, 85% of the population were involved in agriculture. A recent study conducted on Cu Lao Dung found that 52.1% of the island’s farmland is used for sugarcane cultivation (Phu, Kim-Nhung and Bang, 2018:157-158). Most of the farmers I spoke to had at least one small plot of sugarcane alongside other crops or ponds for aquatic creatures. The aforementioned study on Cu Lao Dung classified the climate risks facing both sugarcane and shrimp farming on the island as high (Ibid:160). The majority of my informants had lived for decades on Cu Lao Dung, many their entire lives, some had never even left the island. Many of them have conducted agriculture there for decades and knew how to compare weather events taking place now to how weather was like 30 years ago.

Changing lives

In 1986, the Doi Moi market reforms were initiated, gradually liberalizing the economy and opening up for foreign investment in the country. With the reforms, the country has changed dramatically and Vietnam now aspires to become a modern industrialized country. In the report Vietnam 2035, published by the World Bank and Vietnamese Ministry of Planning and Investment, the word modern occurs in some form on average on every other page. According to most economic projections, the country is well on its way of achieving that goal. In the most optimistic growth models for the future Vietnam will be a upper-middle-income economy by 2035 (World Bank and MPI, 2015:xxv). The impacts of this modernity are noticeable for my informants. For my urban informants, this modernity is rapidly changing the city in which they live and for the most part they experience these changes as positive. They described new shopping malls opening up, a multitude of coffee shops and the newly developed riverfront. They relished the opportunity to speak English and described a longing for studying and living abroad. In the countryside the changes in the past years had been more mixed in its results, with some clear improvements but many setbacks.
Since the end of the American War, the population in the Delta has doubled. At the same time, agricultural practices have changed allowing intensive farming and Vietnam has gone from being one of the countries with the least fed populations in the region, to a net exporter of food (Biggs, 2010:227-228). This led the quality of life to improve dramatically across the country which was true for Cu Lao Dung as well. Many of my informants reported that the quality of the roads in their district had increased in the past ten years and that the access to electricity had improved as well. The information I obtained from the representative of the district People’s Committee seemed to confirm this view. He stated that the quality of the roads had improved greatly since the island became its own district in 2002. District level statistics in Vietnam must always be viewed with a bit of suspicion (MacLean:2013). However, during our stay on Cu Lao Dung, we travelled a sizeable part of the island by motorbike, and paved roads were the norm rather than the exception. Apart from that, every household we visited, whether they lived in large houses financed by sudden shrimp farm wealth, or more simple structures with thatched roofs and dirt floors, had access to electricity. One man stated that 20 years ago, the access to electricity had been patchy, with only the richer households living close to the electricity poles could access it whereas today most people had access to electricity (interview 18).

Hudson (2014:951) points out that the western view of Asia has been one of societies in harmony with nature, despite the fact that many of the developments that have come to be associated with the Anthropocene had partial beginnings in China and Japan (Ibid:947). The western view of Asia also ignores that Asian societies, like all agrarian and industrial societies, have made large impacts on the nature surrounding them (Ibid:948).

My informants themselves had participated in this shaping of the landscape according to human needs. Three of them had arrived as settlers to the island after reunification, encouraged by the government with the promise of free land. They were thus part of the nation-building effort initiated in the Delta in the late 1700s, helping settle a “new” part of the Delta and make it a more integral part of the nation of Vietnam. (Biggs 2010). Farmers who had lived for a long time on the island described the landscape where they grew up as vastly different from what it resembles today. One man who arrived on the island in the early 1980s described how he was awarded three hectares of land in what was essentially a “wilderness”, a wilderness that he himself helped transform into an agricultural landscape (Interview 13). Another farmer described the island of the past as a place where you had to be watchful so that wild boars and monkeys wouldn’t eat your crops (Interview 4). The parts of the island that we travelled was void of this air of wilderness, on our travels across the island we rarely saw any animals besides
gecko lizards and domesticated dogs. Among the people who had not arrived as settlers, many reported only one or two generations of ancestry on the island.

The agriculture on Cu Lao Dung, and in the region more broadly, has reinvented itself many times in the past decades. The largest change in production during the past 20 years has been the introduction of shrimp farming to Vietnam. With the expansion of shrimp farming, hundreds of small artificial ponds have come to dot the landscape and at quiet moments the propellers, that prevent the water from going stagnant, can be heard. Since the late 1990s, the amount of land area used for shrimp farming has risen dramatically and Vietnam is now one of the five largest global exporters of shrimp (Lanh, 2011:275). One farmer who was not involved in shrimp farming himself stated that there was much money to be gained in converting to aquaculture, but that many had lost their savings as a result of insufficient knowledge of aquacultural practices (nr18). Alongside the rapid improvements to the quality of life in the region, other, more sinister types of change are starting to make themselves known.

Rain, heat and flooding

The global economic system in which Vietnam has been able to drastically increase its wealth and greatly improve the lives of its population, also leads to the carbon emissions that are causing many of the ecological changes currently taking place in the Delta. The energy driving the global economy is mostly derived from fossil fuels causing massive carbon emissions, the very same global economy in which Vietnam is increasingly willing to participate. Hudson (2014: 944) writes that “the b-side of the record of modernity is the long-playing tune of the Anthropocene”. There may be few places on earth where this is truer than in the Delta. For many social scientists studying the Delta, the paradoxes it reveals about modernity are too large to ignore. Taylor (2001) describes the complex relationship the southern part of Vietnam has had with modernity ever since re-unification. Ehlerl and Biggs touch on the paradox inherent in this relationship, where a largely man-made region suffers the consequences of man-made climate change. The fact that the Delta is home to 17.6 million people, living largely on drained swamp land, could almost be seen as hubris. That is to say, it is only possible for the Delta to support large-scale agriculture and several large cities because the area was drained using modern technology.

Every single person I spoke to on the island had noticed a change in the climate in recent years, be it from rising floods, increased heat or dramatic rainfalls and its accompanying winds. The livelihood of every working age adult had been affected by the changing weather and flood
patterns, whether or not they were farmers, fishermen or bricklayers. One woman who ran a small shop said that all of her customers had experienced poor crops as a result of the weather (nr 2). Water forms the basis of the rural inhabitant’s relationship with the landscape and the changes they mentioned were mostly related to amount and qualities of the water. Flooding is a natural part of life in the Delta, the annual floods bringing sediments to the fields and thus being the reason that the region is considered the Rice Basket of Vietnam (Ehlert, 2012, p19). However, the once largely predictable cycle that the floods used to follow has started to change. It is often remarked that the Mekong Delta is a region in which life is entirely dominated by the relationship between its inhabitants and water (Ehlert, 2012: 5).

Veronica Strang writes that water is the most significant part of the environment as it “lends itself to an analysis of the relationship between human experience and the construction of meaning” (Strang, 2005: 93). Strang further writes that “water always contains the potential to be benign or harmful. […] the safety of interactions with it depends upon sufficient human control of the engagement” (Strang, 2005:112-113). In Cu Lao Dung today, water is increasingly seen as a menace, haunting the community through its unwelcome and irregular appearances. A shrimp farmer I spoke to had his crop partially ruined when the seawater broke through the large dam meant to hold it at bay (nr1). With the flood control infrastructure being destroyed or overrun by the very water it is supposed to keep out, the locals are losing control and as a result, their relationship with the water that surrounds them is changing. Water, which was previously seen as helpful has started to take on a new meaning, partially as a result of increased floods and erratic rains. But also, because the amount of bad water that the locals are exposed to, has increased substantially. In addition, it is also a result of increased pollution from pesticides deteriorating the quality of the water in the rivers (nr 3).

One man told me that it is not unusual for people to lose half their crops due to flooding (nr 14). The main way in which water is turning harmful, however, is by higher floods and longer parts of the year where saltwater dominates. While saltwater flooding has always been a part of the regular seasonal change in the coastal provinces, with designs for infrastructure to prevent salinity intrusion going as far back as the French, it has gotten worse in recent decades. (Biggs, 2010:96). The salinity intrusion grows in tandem with the ever longer dry season, as the lower water levels in the floods combines with the rising sea-water. The water balance is changing, many spoke of saltwater now being present for more than half the year, where previously it had only persisted for 6 months (nr 11, nr 18). With poorer water quality of the rivers, households are increasingly turning water from underground aquifers, both to procure water for cooking, but also for a larger part of the year, for irrigation of their crops (nr 13, nr 5).
extraction risks increasing the rate of land subsidence and thus make even larger quantities of saltwater enter the fields (Erban, Gorelick and Zebker, 2014).

When asked about past life on the island, most informants in some way returned to theme of weather even if that was not explicitly asked. They described clean water and rivers where it was possible to swim, as well as a reliable climate where it was easy to conduct agriculture (nr 3). The farmers in Cu Lao Dung have gone from a world in which nature is reliable and forming a constant background to their daily lives that rarely made itself known, to taking a larger role and imposing itself on the lives of the villagers. Villagers who in some cases had helped turn the place where they lived from wilderness into the man-made landscape that it is today. I observed a clear nostalgia for the weather of the past among the people I spoke to. Ehlert (2012:116) describes the insecurity of her informants when the knowledge that they possess of nature, often acquired over generations, is suddenly made irrelevant by the changing weather. A sentiment echoed throughout almost every single interview I conducted: nature was no longer deemed trustworthy. Crucially, they have observed these changes creeping up on them during the past 20 years. As such most of them were working as farmers when the climate was still considered stable. Their memory of weather’s past is not the result of exaggerations from childhood memories but the comparison between two different lived realities of working the soil. A past life where the only crop grown on the island was rice (nr 8).

Along with the worsening droughts, the rains, too, are increasingly seen as unpredictable, one older man spoke of how the rains and storms in 2017 had been the worst ones he had ever experienced (nr 8). With the patterns between the dry and rain seasons changing, this led to both a longer dry season which gave the seawater more opportunities to invade the fields and damage the soil making it harder to grow most crops (nr 13).

The increasing floods are also forcing the islanders to further alter the constructed landscape by building their protective dams higher and higher. Constructing and repairing dams is a recurring part of life for the farmers in Cu Lao Dung and the farmers have to spend an increasing amount of time each year to do so compared to earlier. One man spoke of how he adds 30 cm of clay to his dam each year to adapt to the dams surrounding his fields. His home on the banks of a small river, facing a dam constructed out of clay and bamboo that was slowly removing what little sunlight was let into his front porch, as he was adding more and more clay each year (nr 15). A man in his late 60s told me how the flood in the end of September 2018 was the worst one he had every experienced. His field laid next to a big dam holding back the flood and one early morning the water overflowed the dam and broke through, lingering for days in his fields and damaging much of his crop (nr 6). The local authorities seem to prepare the farmers in some
ways for the coming changes: in an interview with a party representative, he stated that they receive help with funding from the provincial as well as national government. One elderly sugarcane farmer reported receiving 30% of the value of his crops when it was lost during a particularly bad bout of saltwater intrusion (nr13). Other farmers stated that the households that were worse off in the villages received some sort of compensation when their crops suffered weather related damages. These claims are hard to verify without larger studies, it is unlikely that my informants would criticize government policy during our supervised interviews.

Climate change is in no way a secret, one older farmer reported hearing about it on the state television, where an invited scientist had explained how badly affected the Delta would be by 2050. The man was in his early 60s and by his own estimation he would have around 10 years left to live, as such he told me that he did not worry about his own future but for that of his children (nr 19). Ingold opposes the dualism of portraying parts of the landscape which are man-made as inherently different from parts that are “natural”. (Ingold, 2000:199). He writes that “the landscape is never complete […] it is perpetually under construction” (Ingold, 2000:199). That is to say, it is through dwelling and living in a landscape that human beings continue to shape and build it. With increasing sea level rise the landscape in Cu Lao Dung cannot be said to be under construction in any which way, be it by the forces of nature or man. Rather, what is happening on the shores of southern Vietnam is the destruction and unmaking of a landscape. Thus, if the landscape is to be viewed in the same light as the body according to form rather than function (Ingold, 2000:193). Namely that the landscape, just as the body is the way that beings and nature inhabit the world. If the island of Cu Lao Dung is to be seen as a body, then it is body that is sick and getting sicker.

With the advent of shrimp farms their relationship with water changed even further, now hundreds of smaller lakes dot the landscape moving the water even closer. One of the more morbid findings of the interviews was the prevalence of flooded graves on the properties of some of my informants (nr 1). Many on the island had their parents’ tombs close to their homes and as such, they are flooded along with the rest of the property. The Vietnamese Mekong Delta must be understood as a built environment and not as a pristine wilderness, suddenly ravaged by the maelstrom of climate change. Rather, climate change is just a more indirect way of human forces shaping the ecology of the Delta. Climate change is not the only global process causing disruption on the island, as the reliance on crops and aquatic creatures grown for exports proves to be built on as solid a foundation as the hollowed-out ground of the Delta itself.
Household economy and debt

Predicting the unreliable weather is one thing, predicting the unreliable markets is another. Another global force causing insecurity in the region is the international commodities market, the crops and aquatic creatures grown in the Mekong Delta stand for most of Vietnam’s aqua-and agricultural exports (Garschagen et al, 2012:84). Farmers in the region rely not only on stable weather, but also on stable prices for their crops, since their products are sold on an international market. While climate change poses many dire problems, an equally important trouble for the farmers of Cu Lao Dung are the drops that have occurred in the price of sugarcane. In 2015, the global price of sugar fell drastically, partially as a result of a large harvest in Brazil and has yet to recover, (Ficene, 2015). The local government official I spoke with confirmed that the past three years had been disastrous for the production of sugarcane on the island, with prices plummeting between 2015 and 2017 causing economic hardship for many families.

Very few farmers are reliant on a single crop for their livelihood, rather they grow a combination of crops. Most of the farmers I spoke to grew a combination of sugarcane and shrimp or fish, while some grew a combination of other vegetables and sugarcane. Out of 15 people who relied in some way on agriculture to earn a living, only two people did not grow sugarcane. All informants I interviewed who were involved in agriculture mentioned the falling sugarcane prices. One informant told me how his sugarcane farm used to reward him with large profits based on the amount of work he put into running his farm (nr 6). Now, however, the price of sugarcane was at incredibly low levels with one kg fetching 2-300 VND (around 10 Swedish Öre) and the level of work involved in maintaining the sugarcane fields becoming ever greater due to the erratic weather. Three different informants stated that the current price of sugarcane meant that farmers with larger fields were losing more money than farmers with smaller ones. In the financescapes described by Appadurai (1996:34) money moves quickly across the world, creating massive changes for people who are far removed from the original financial transactions. The farmers are part of a global commodities in which they, arguably, have the least control of anyone involved.

As a result of the price drops, many farmers were rapidly losing a large amount of money. Debt was a reoccurring theme throughout the interviews and farmers had been forced to loan, often from neighbours, to cover their loss of income. Though they were understandably more willing to speak about a general economic malaise afflicting their neighbours, most also spoke in some manor about personally losing money. “Because of such a low price, so the life is much
difficult” was the somewhat rough translation of how one farmer in his 60s described his situation. He had recently started partially growing shrimp and was planning on converting the last of his sugarcane field into yet another shrimp pond. However, one bad shrimp harvest and losses he sustained from the previous sugarcane harvests meant that he was barely breaking even and was relying on remissions sent from his children in Ho Chi Minh City (nr 8).

With households losing more and more money, the debts also increased. The debts were reported as a contributing reason to why farmers in the area chose to leave. My second informant stated that the combination of lower prices and worsening weather was the reason why some farmers could not pay off their loans and were forced to migrate out of the district for work (nr 2). She also stated that many of the loans were made from their fellow neighbours. Climate change is a threat multiplier, few issues can be blamed solely on the changing climate, however, when harvests are decreasing in size due to increasing salinity in the soil sudden events may have a worse impact than they would have had without climate change. Sudden drops in the prices of sugarcane and coconuts may have occurred before, but combined with the fact that soil salinization is also decreasing the quality and size of the harvests the effects are made worse.

Market forces and climate change often intertwine in cruel and sometimes darkly expected ways. When entire households decide to leave the area and sell their plot of land the climate can sometimes put up one final obstacle. One man told me that if the plot of land, is in a particularly exposed are the salt-water may damage the soil so as to make it worthless. Thus, robbing families of their final resort (nr 3). Fighting against the twin global forces of climate change and the market is a near impossible task ask many of the island’s residents, particularly its young, are leaving their homes in large numbers.
Consequences and proposed solutions

Migration and employment opportunities

One of the students I spoke to in Can Tho described moving to the city from the countryside as an “escape”. Life there, she believed, was backwards, ridden with drunkenness, laziness and poverty (Can Tho 2). Another student, when asked about the future of the countryside, said that life there was unlikely to ever change due to the mentality of the people living there. “There is not future here” said one middle aged woman (nr 2). Most of my informants were older men who had lived for a long time in Cu Lao Dung and had either no intention of moving or very limited resources to do so. Many of their children, however had moved to the larger cities or to agricultural provinces demanding manpower for coffee or cashew harvesting.

Out of 15 informants who had working age children, 11 of them had at least one child who worked in another district or abroad. This number could be higher still due to the strict laws concerning registration and internal migration. Some of my informants may have been reluctant to admit more children of theirs were working in the city than was officially acknowledged. One man, whose adult sons all worked away from home, acknowledged that there were more push factors associated with CLD than there were pull factors associated with Ho Chi Minh City (nr 4). Ho Chi Minh City is the economic capital of Vietnam and its appeal as the single largest labour market in the southern part of the country is hard to overstate. Despite the perils they currently face, three of my informants were adamant in their resistance to leaving, also insisting that their children return home and take care of the farm once they got old enough (nr 6,8 and 12). Others, less so simply stating the future was too hard to predict, while not expressing too much sadness about the prospect of being forced to leave their homes in the future (nr 10). The migration from the poor rural areas of the Mekong Delta has been ongoing for decades, for people living in these districts the lure of higher paying jobs and a higher degree of independence has always had a certain allure. Sociologists and migration researchers Thomas Faist and Jeanette Schade (2013: 15) write that that the categories of labour and climate migration might hide that the mechanisms behind those migrations are in many cases quite similar. That is to say, outward bound migration can be specific to certain villages and depend to a large extent on how many people manage to persuade their relatives and friends to come with them to another region to work.

The effects of an earlier wave of migration can continue to be felt long into the future with the predecessors establishing a culture of migration in a region (Faist and Schade, 2013:13).
Thus, the large differences in the villager’s estimation of how many people had migrated could be down to large differences on a village level, concerning both the impacts of climate change and the culture of migration. In our stay on Cu Lao Dung, we travelled between different parts of the island, sometimes there could be a 20-minute motorbike ride between one informant and the next. Estimations varied as to how many people were actually leaving to work elsewhere, with one informant stating that 1/3 of the village had moved elsewhere to work (nr 18) and another stating that 80% of working age adults were leaving (nr 19). They all agreed that the weather made a significant impact for the worse. Changes to the agriculture is also making people leave, shrimp farming for example is not very labour-intensive and thus does not provide many employment opportunities. As the authors write, it is nearly impossible to separate the climate as a sole reason as to why the population of a certain area choose to migrate (Thomas and Schade, 2013:13).

If people continue to move voluntarily, the destinations for some will be the provincial capitals but the destination for the majority of people leaving their homes will be Ho Chi Minh City. The problem of individuals leaving their climate afflicted homes only to find a place to live in a mega-city that is no less safe from the dangers of climate change has been observed by researchers of migration (Schade and Thomas 2013:13). The urban, non-agrarian, economic sectors in the Delta itself are unable to offer employment at the needed level (Garschagen et al: 84). Ho Chi Minh City itself suffers from its low-lying location and parts of it are projected to be under water in the coming decades. One informant spoke of how a combination of bad harvests and falling prices are forcing many farmers to give up their farms, either through leasing it to other farmers or leaving them in the hands of their parents (nr 8). Other informants mentioned that many people simply leave the farms behind with no one to take care of them.

Some informants also implied that their neighbours had acquired waste amounts of debt as a result of the changing conditions and had moved to the city to get away from their lenders. While migration today is driven by a large combination of factors, it seems likely that the climate will come to play an increasingly large role in the coming years and decades. According to Mr. Ky, the goals set up in the 2015 Paris Climate Agreement will not be enough to avoid a future in which the Mekong Delta is inundated. He proposes that the Vietnamese government should start drawing up plans for a large-scale migration from the Delta.

The Vietnamese government is in fact already relocating households in the Mekong Delta, with mixed results. In one Mekong district, 19 560 households were to be moved from areas vulnerable to river erosion (Schade, 2013:190). Many of the households that were expected to move were landless and subsiding on odd jobs provided by the richer nearby neighbourhoods.
Leaving their homes in exchange for a government loan would mean leaving their social networks and what little reliable income they had. Thus, many chose to stay despite the fact that they would be offered better homes if they moved. The government relocating people has a long history in the Mekong, including schemes by the French colonial authorities in the 1930s, the Republic of Vietnam in the 1950s and the United States military’s “strategic hamlets” during the American War (Biggs, 2010:162). This phenomenon can be observed in Cu Lao Dung as well, in recent years 150 families have been relocated to make room for dam construction (interview with committee official). Given the results associated with moving people away from their homes in Vietnam due to climate concerns, it makes sense that I was not put in front of those people when I conducted my interviews.

Mr. Ky also stated that the migration occurring today is not primarily driven by climate change but rather by the same push and pull factors that have characterized urbanization since the beginning of the industrial revolution. During harvest time, the lack of available workers was also driving up salaries, forcing the farmers to lose even more money harvesting crops for which they would get paid next to nothing. One man reported that after a storm had made his sugarcane bend down, he simply told his hired workers that they could keep all the sugarcane for themselves rather than him paying any salary (nr 18). Even with crop failures and collapsing prices, many older farmers were adamant in their belief, that youths from the area currently working elsewhere had to fulfil their family duties and return to run the farm once their parents became too old.

It is impossible to pinpoint climate change as the sole reason why people are migrating from Cu Lao Dung. A range of problems involving the insecure nature of farming, a lack of job opportunities and zero prospects for a higher education are all drivers of this change. Climate change exacerbates most of these problems, locking the island in a vicious circle. Only 30% of graduating high school students stay and work on the island with the rest migrating to provinces and cities offering better employment opportunities (interview with government official). According to the answers obtained during the interviews these destinations are often, the provincial capital of Soc Trang City, Ho Chi Minh City and other agricultural provinces where work is more plentiful.
Suggestion box

When analysing the three main problems facing the island: climate change, unstable crop prices and increased migration, its elderly residents offered many potential remedies. One of the suggestions was that a construction of factories on the island would be needed to help keep the labour force on the island. One man stated that, since the island residents would need a lower salary than the ones currently offered in the cities, the factories could become quite profitable. He also stated that people today needed to be more flexible because “life is chaos now” (nr 4). Food processing plants closer to the sugarcane fields and shrimp ponds would also bring about less costs involving industry middlemen.

I began each interview by letting my informants know that I in no way represented any organization or governmental department in Sweden or in any other country. Nevertheless, many of the people I spoke to finished the interviews by appealing for help, help from NGOs, help from foreign governments, help with investments and help with mitigating efforts to counter the extreme weather (nr 8). My informants never seemed desperate, and these appeals could have surely been made before the onset of higher flooding and irregular weather patterns made life on the island even harder. But they were honest and realized that what is being done now is not enough, be it for lack of government resources, an inefficient bureaucracy or lacking specialist knowledge. Many of the farmers were not only asking for help with reliable weather reports and dam construction but also government subsidies for maintaining stable crop prices (nr 3, nr 5). The weather was out of their hands and all they could do was hope and pray for more reliable rains. They knew, however, that the government could plausibly do something about the markets but they were not the winners in the same sense as the urban students.

The suggestions laid out by my informants in the city were more modest in scope; they wanted less gridlock traffic, less air pollution and more trees planted in the city. Belief in the future was much larger in the city than it was in the countryside, all the students I spoke to projected a bright future for their country. Some were worried about corruption and environmental issues, but no one seemed to be filled with existential dread for the climate of the future. The farmers I spoke to weren’t necessarily the losers of Vietnam’s engagement with the outside world, but they were not the winners in the same sense as the urban students. Appadurai speaks of the capacity to aspire where the rich, due to their multitude of experiences
are more likely to aspire for larger things than their poor counterparts (Appadurai, 2013:188). While the students in Can Tho generally wished for working for an international firm in Ho Chi Minh City or studying the aspirations that the elderly residents of Cu Lao Dung set up for their children were more modest in scope. The poor, Appadurai (2013:189) writes, “have a more brittle horizon of aspiration”.

Mr. Ky spoke of how coordinated measures towards climate change in different regions of the Mekong Delta are difficult to achieve. Due to conflicting jurisdictions of the 13 provincial authorities of the Delta, any sort of combined effort is extraordinarily difficult to achieve and laws need to be passed by the Vietnamese National Assembly to tackle the problem. This view is seconded by the World Bank and the Vietnamese Ministry of Planning and Investment, who describe cooperation between various organization, ministries and provincial authorities on planning efforts to counter climate change as difficult (World Bank and MPI:263). Mr. Ky also spoke of the necessity to build proper infrastructure surrounding the entire coastline of southern Vietnam. Today, various embankments and flood protection infrastructure surrounds parts of the Ca Mau peninsula but not much else. In Cu Lao Dung, the government did help pay for the larger embankments, but costs for dams surrounding individual fields and homes mostly had to be covered by the villagers themselves.

Some informants were not as openly pessimistic in their outlook on the future as others. Whether or not the few optimistic answers on the future of the island were based on a sincere belief in progress, the persuasion of government propaganda or the supervised nature of our meetings, I will never know. I do know that the solutions they were hoping for would most likely not come. According to all available climate projections for the Mekong Delta region, large parts of the island simply will not exist in a matter of decades, if these people are lucky, they will not live to see that day. Any improvements on roads, electricity or employment will literally be washed away. A Stanford study on the future of the global economy under climate change found that Vietnam’s GDP per capita will be 88% lower by 2100 than it would have been without the effects of climate change (Burke, Hsiang and Miguel, 2015). What can be observed in along the coasts in the southernmost of Vietnam today is, arguably, the beginning of that process. The convergence of climactic and market forces with disastrous results recognized by the informants themselves. Perhaps out of fear for political repercussions, most were reluctant to prophesize about the future, simply stating that they don’t know about the future, that life now is about working hard to try and resolve the issues at hand.
Conclusion

The purpose of this essay was to explore the changing landscapes and livelihoods of the Mekong Delta in Vietnam. To fulfil this purpose the question: *what challenges are identified as posing a risk to the social and economic wellbeing by the residents of two communities of the Mekong Delta in Vietnam?* was composed. Two main challenges were identified by my informants: a dramatic change in weather patterns and very unstable market prices for their crops. The Mekong Delta is undergoing dramatic economic, social and environmental changes. While a clear benefactor of the modernizing effort connected to the economic growth of the last three decades, there are many sides to this process. While improved infrastructure in the shape of better roads and more reliable electricity has been good for the residents of Cu Lao Dung, many of the consequences of the modern world are not serving them well.

The farmers grow their crops for a global market, where money moves quickly, and are, as such, caught up in the global *financescape*, as described by Arjun Appadurai. Poverty and debt increases as a result of a plummeting value of sugarcane, the island’s main cash crop. The downside to the modern era of a global economic growth that leaves behind massive carbon emissions takes a clearer form in the Delta than almost anywhere else on earth. The relationship between the rural inhabitants and their landscape is changing at a fast pace as saltwater and heatwaves kill or severely damage their crops. This causes the figurative body of the landscape, as Ingold would put it, to become sicker and sicker. Above all, the relationship with water, which in one way or another determines the livelihood of all residents of the Delta, is changing fast. Because the water is deemed uncontrollable it is also increasingly seen as a negative force that destroys, rather than nurtures, rural life. The market and climate are together causing more people, predominantly young ones, to leave their homes and search for work in the city. If they will be able to return to their home district as their parents grow older is uncertain, with both current conditions and future projections saying that life will get harder, not easier on the island.

The elderly residents of Cu Lao Dung have many practical suggestions for how life in the district could be improved, with many advocating market subsides, investments from abroad or the involvement of foreign NGOs. Young students in the Delta’s largest city wish for other things, above all else, a chance to study and work outside of Vietnam. For other districts in the Mekong Delta, and in deltas across the world, the situation in Cu Lao Dung is a harbinger of things to come. For the younger Vietnamese who studied at university or found a decent job in the city, life may appear bright. For the older rural residents, however, there does not appear to be much of a silver lining.
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