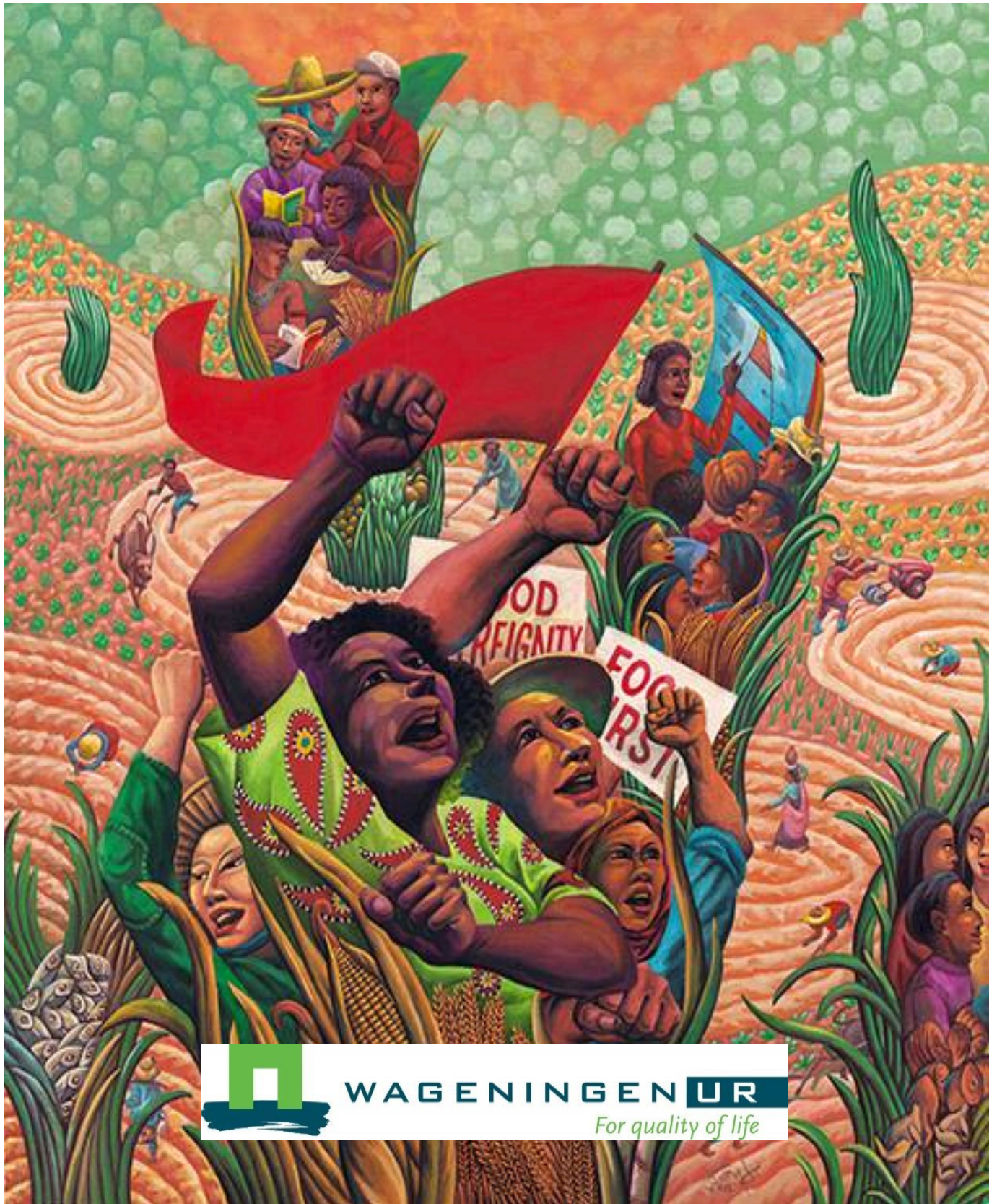


Contesting neoliberal hegemony in a food security's paradigm a case study of agricultural approaches and opposition in the Philippines

MSc thesis
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MSc Thesis

Wageningen University - Department of Social Sciences

Contesting neoliberal hegemony in a food security's paradigm a case study of agricultural approaches and opposition in the Philippines

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Abbreviations

BISSIG	Brotherhood of IRRI Support Services Group
BPI	Bureau Plant Industry
Bt	Bacillus thuringensis
CA	Court of Appeal
DA	Department of Agriculture
DOH	Department Of Health
FAO	Food and Agriculture Organization
FSSP	Food Staples Sufficiency Program
GE	Genetic Engineering
GM	Genetically Modified
GMO	Genetically Modified Organism
HYV	High Yielding Variety
ILO	International Labor Organization
IMF	International Monetary Fund
IPR	Intellectual Property Rights
IRRI	International Rice Research Institute
IT PGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
KMP	Kilusang Magbubukid ng Pilipinas
MASIPAG	Magsasaka at Siyentipiko para sa Pag-unlad ng Agrikultura
NCBP	National Committee on Biosafety of the Philippines
NGO	Non-Governmental Organisation
PANAP	Pesticide Action Network Asia and the Pacific
PGR	Plant Genetic Resources
R&D	Research and Development
RR	Roundup Ready
SEARICE	South-East Asian Regional Initiative for Community Empowerment
TNC	Transnational Company
UPLB	Univerisity of the Philippines Los Baños
WB	World Bank
WTO	World Trade Organization

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Methodology

In the research I have used an inductive-iterative approach. With ‘inductive’ I mean that I started with an issue that had my interest and explored the issue with an open mind to find out where the several leads would take me. I started with data collection instead of with a fixed theory, in this way theory could be emerged out of the data (O’Reilly, 2005: 29). Ofcourse I, as every other researcher, could not step into the field without any preconceptions. And I brought these ideas into the field and was curious how to see it play out. For example I have my own interest and believes in the concept of food sovereignty and I prefer this approach over the neoliberal approach of food security. But I was interested in the issue of Golden Rice and intended to find out the power struggles the the issue was embedded in. During the research I followed-up on the leads that I encountered on, to explore the complex and diverse landscape around. Through being open for the various leads that came at my path, and by using an inductive approach that made me flexible and not in need of a prefixed outlook, I ended up at places very different than I had foreseen and I was able to make an explorative journey through different fields that were constructed and materialized through varies power struggle, as I will show in this thesis.

I used an ‘iterative’ approach in the sense that I always went back and forward between data collection, writing, analyzing and back to data collection. As O’Reilly describes: “... it is a practice of doing research [...] in which data collection, analysis and writing are not discrete phases but inextricably linked” (ibid.: 30). Even in the last week of finishing my thesis I still found myself researching leads and theories, it is a continuous process that can continue even after I have finished this thesis. I was happy to discover this process, because writing my thesis turned out to be not static at all, but instead a very dynamic process in which there were always new developments. The research continued almost until the end, which made it into a very rich and exciting experience for me.

I started with a topic that I was very interested in that was embedded in a web of conflict and contentious power struggles. The topic – Golden Rice in the Philippines – was contested and embedded in many fields. I like the idea of ‘mapping’, however I never came across the term in social science literature, for me it means to explore and expose the various fields and power struggles a social issue lies embedded in. I believe that social issues or never just

issues on its own terms, but are rather always a construct of different realities and interests presented to the mainstream through the dominant paradigm. Instead of zooming into one case or phenomena, I like to zoom in and to zoom out at the same time, and to regularly change positions between this. Like a Prezi presentation in which you can zoom out and oversee the whole, but also zoom in on one singular aspect of it. At the end, these different dimensions are all connected through power struggles and different representations and constructions of the issue. I find it interesting to find out what lies underneath all of that and in this thesis I have made an attempt to find that out.

Since my interests mostly lies in the conflict and the contestation around the issue, I started my research in the network of NGO's that are contesting and countering the GM technology. From there on I moved myself through their links and connections to explore the fields of contestation. By following up the leads and by endorsing myself in the network, I got to explore certain parts of the fields myself, out of which I have constructed the narrative of this thesis.

I have used all kind of data sources, I have used many interviews that I was able to do through the networks I endorsed myself in and the leads I followed up upon. I have also used many conversations, observations and field experiences. Sometimes I used the collected data to bring me further in my research, in my role as researcher or to know which direction to go or which leads to follow, other times I adopted it as data for my written thesis. I have also used countless sources of literature, government reports, policies, articles, papers, books, flyers, brochures, posters, hand-outs, power-points, Acts and regulations, press reports, short movies and documentaries, they have all guided me in this research and stirred the way for me. Only a fraction of the data is directly transferred into this thesis, most of this data has been used to help my along my quest and to make my find some answers and “prove” for this thesis.

Before I took off to the Philippines I was interested in the conflict between the neoliberal food security paradigm and the food sovereignty paradigm. The case I was mostly interested in was the planned introduction and current R&D of Golden Rice in the Philippines, that was met with fierce opposition and escalated in an uprooting of the farm testing field in 2013. An action that stirred up commotion around the world and both “camps”, those of the neoliberal food security camp versus the food sovereignty, fully opposed each other in the heated debate, fighting each other through media, press releases, interviews and mainly, moral judgments. The debate is not new however, already since the introduction of GM crops in the Philippines

in the beginning of the 2000's there have been many opposing voices who contested the introduction and application. Many environmental and farmer-focused NGO's are countering the adoption and express their resistance through various channels. From radical actions such as sabotaging field trials and street demonstrations, to more peaceful opposition such as counter-research, press releases, advocacy, etc.

Long before I left to the Philippines I established contact with several NGO's that have been most prominent and vocal in the issue of Golden Rice. I wanted to do research about the resistance and how the farmers gave meaning to the technology. This proved to be very difficult, I have found a couple of prominent NGO's who were very supportive, but the moment the topic of Golden Rice came up the conversation went quiet. Later on during the process I would find out that the silence around the topic had to do with a couple of reasons, I will embark and elaborate upon these later on in this chapter. I established contact with David Ocampo, advocate and Greenpeace activist who had been the lead pressperson in the protests against Golden Rice and Bt Eggplant – another GM crop – but even he showed reluctance to talk about the issue. But the curious detective in me never resists a challenge, or likes to take “No” for an answer, so I decided to go to the Philippines with the connections I had established so far, which were quite a few already. I imagined that it would be much easier for me when I would be there and get to meet important key-holders in real life. However this approach would later turn out to be fruitful, things turned out to be much more harder than I already inspected. David Ocampo now did not respond to my emails at all anymore, while he had previously promised me to have a meeting once I would have arrived in Manila. Also Chito Medina, the spokesperson and famous publicity figure of Magsasaka at Siyentipiko para sa Pag-unlad ng Agrikultura (MASIPAG:Farmer-Scientist Partnership for Development), was very difficult to get in touch with, however after some persistent flattering and being a bit pushy, he asked me out for dinner before he invited me into his office. Once I got to talk with him in real life, I soon found out that he was deaf, something he wouldn't admit, maybe it was a strategy, but it sure made it impossible for me to get answers to my questions, so I had to do it with the information he shared with me, whenever I could understand what he was telling me. Luckily the other MASIPAG employees were very friendly, helpful and open to talk. They told me that I came at a difficult time because a couple of events had happened. I found out there was a court case filed by MASIPAG and Greenpeace at the Supreme Court, that aimed to ban the use and further experimentation of GM technology. This made the situation of some NGO's more precarious, as they felt that current actions could have an effect on the outcome. Therefore MASIPAG and Greenpeace kept low in order to generate the

least distraction as possible. Their wariness also came forth out of the commotion that the uprooting of the Golden Rice had brought upon them, they had being farmed as “militaristic” and “rebels” by the counter movement of the pro GM movement that had a big say in the debate. Activists were afraid of being criminalized and further repercussions of the actions, even if it was not clear who was actually involved. Later on I learned more about the “battlefield” the NGO and civil society world was in, as I found out that a killing spree had broken out in 2006, killing hundreds of left-wing activists and community workers since that year on. I was not aware of that fact as nobody spoke about it, but it later explained why some of the NGO’s had been very cautious and for sure why I could not get the support of MASIPAG to do my research in their farmers communities that had been associated with the uprooting. This had been my plan for the beginning, but after two weeks I concluded that I had to give up on that plan since it would be impossible to get access into the field without support of key-field agents.

Luckily, I also received a lot of support and cooperation from some other key-informants. Through my thesis supervisor I got in contact with the Filipino professor John Lambino, that set me up with Dean José Camacho of the University of the Philippines Los Baños. Through Dean Camacho I got to interview many UPLB scientists, but even some of them were reluctant to directly talk about GM technology and especially the Golden Rice. They were very helpful in terms of facilitating me in my needs and setting me up with another connections, but some of them also showed surprisingly little knowledge or opinion on the GM topic, even though all the technology came from their own university through their direct cooperation with the International Rice Research Institute (IRRI), that is based on the campus of the UPLB.

By times it was a very frustrating and lonely enterprise as I felt there was much more going on than what was being said. I felt myself surrounded by pro-GMO scientists who showed little knowledge about the full scope of the issue but easily fitted into the discourse of the pro-GMO lobby. I ran into some of pitfalls, I became aware that my approach was biased by my Dutch nationality. I grew tired and out of patience with the personal chitchats that seemed to last forever. I got invited for dinner or lunch, my UPLB informants were extremely cooperative in helping me on my mission as a researcher, by always trying to set me up with other scientists I could talk to that would “know more” about the issues I was interested in. Somehow I hardly ever came to speak with the people that had actual knowledge or opinions about it, with a smile on their face they would always directed to others that could tell me

more about the issue. Only incidentally did they allow me to frame them as my interviewees, who could actually help me in gaining more insights in the discussion, rather than facilitating me in my infrastructural needs as researcher. I think that my initial Dutch approach, firing direct questions straight to the point almost the very minute I sat down, were not exactly helpful in my pursuit. It obviously did not really help building up relations of trust in which they would open up to me. As soon as I became aware of my growing impatience and the way how my intended interviewees, not intended facilitators, smoothly went around my direct questions, showing more personal care than sharing professional insights, I finally realized that the issue might have been much more sensitive as I had anticipated. So I decided to comply, to change my approach, to go along with it, to have coffee, lunch and dinners. I had lengthy conversations about grandchildren, the benefits of home grown vegetables and the beauty of the Netherlands that was “as flat as a pancake” – they always found that funny. I tried to stay out of political questions, and would hide my excitement when they finally spoke about political issues and complications around the GM issue. I started to approach the topic with care, through which I slowly got to know the depths of the field I was involving myself in. Also, I changed my initial positioning as a researcher. In the beginning I did not cover up my own ideas about the issue, outspoken and passionate about issues of power and conflict my personal character is. But that was a vain strategy, which obviously did not work in building up trust between me and my interviewees. So I tried a more naïve role, with no personal opinion but rather as someone who knew very little about the topic and I went along with everything, asking question after question but also learned when to shut up and take a step back. I would also initially present myself as being much more pro-GMO than I was, showing submission to the dominant discourse and narrative. This strategy worked much better and through using this approach, the informants opposing the technology would show this by motivating their positions, directly arguing why they opposed it, which in turn gave me the opportunity to ask more so that they could outline and motivate their positions and the issues at stake. For those who were pro-GMO they didn't feel threatened by me to expose their entire pro-GMO narrative to me and I could cover up critical questions by pretending to be a bit naïve. The interviewees liked it when I was naïve and showed little knowledge, this were often the interviews in which I got the most excessive and detailed information from my informants. In turn this also made it much more tiring for me, because I had to be careful of not stirring the conversation too much into the direction I wanted it to go to, I had to process a lot of information that was less relevant for my research. I applied this strategy mostly in my interviews with the scientists and scholars at the UPLB, but it would remain my starting

position from which I would sense my situation before I involved myself throughout the entire research.

The growing awareness of the sensitivity of my topic also caused me to change my interview style. In the beginning I would always insist on following my questionnaire, but this also turned out to be a vain attempt, as my academic and also prominent activist interviewees showed no interest in my list of questions. They would rather tell me about what they found what were the real important issues, and soon I learned that what they found more important was indeed much valuable as what I had come up with initially. By seeing through their glasses I could get a grasp of the different positions and viewpoints on the matter. Besides, the sensitivity we had to use in the discussion of the matter, was already revealing information by itself.

I stayed at UPLB for about two weeks, a difficult period that taught me a lot but had showed me very little. It had taught me a lot about how to position myself in the field as researcher. It also taught me that neo-liberal approaches towards food security is not a popular subject for discussion, as many of my interviewees had fell silent when we encountered upon fundamental issues and consequences that the paradigm brought with it. This might point to a typical strategy of how neoliberalism operates, I found that the context is being let out much often, there is no story or contextual narrative that goes along with it. Rather, it refers to an open market theory and to how increase in technology supports innovation and therefor – assumed – development. It is a golden bullet, that serves no real answers when they are brought upon in a local and contextual sphere. Rather they refer to abstract economic theories can be laid upon any situation as a blueprint for development, without taking not of empirical evidence that might indicate other outcomes or at least raises question to the “what if’s”. That is what UPLB had taught me, that there’s very little to no room for discussion, that people will frown their eyebrows at me, react with a sigh and lean back into their chair when I challenged them with contexts, question, or empirical evidence that revealed another tale to the story. Therefore, it had also showed me little, because my intention was to get to know more about the workings and the mechanisms of this neoliberal approach towards food security, but no in-depth details or narratives would be revealed to me. The only narrative provided to me was that of an economic textbook, that spoke of stages of modernization and made use of mathematical calculations and assumptions to arrive at a certain goal. With many socio-economic and political elements being left out of it. I often felt like Varoufakis who felt

like talking to deaf mans' ears every time he made a counter argument against the neoliberal Troika.

My “negotiations” with MASIPAG – whose office was near UPLB – had failed in the sense that it had not provided me in my wish to do research about the conflict that “their” communities had been part of. It had been successful in the sense that I had received a lot of data from them, through many conversations with Chito Medina and his co-workers. My time at UPLB had been interesting but mostly difficult, encountering a lot of conflict in my own role as a researcher and as my person. I had learned to make a separation between both, which on professional terms showed to be more fruitful for my research, but in personal terms had made me feel lonely, a bit depressed and even slightly intimidated by some pro-GMO scientists – who I personally felt more inclined to in challenging them than to act somewhat submissive.

Luckily for me, I had also set up contact with the prominent NGO of the South-East Asian Regional Initiative for Community Empowerment (SEARICE), who had received me in a very warm and welcoming way already in my first days on Filipino soil. However I have had a very positive conversation with them, I had put them on the sideline because they did not have connections with the Golden Rice participants. But they had offered me another lead for me to pursue in, which had to do with GM-corn. I had already encountered a lot of stories on Bt corn during my time at UPLB and also MASIPAG had provided me with a lot of information about the issue. Now my first initial plan had to be defined as a failure, this plan B suddenly promised to be very fruitful.

It was a delight to be away of the campus and to be back in the office of SEARICE. Opposite to my experiences at UPLB, I could talk freely with the SEARICE officers about the issue and did not had to divide myself in uncomfortable roles, strategies and positions just to get a conversation going. This probably had to do with the fact that SEARICE is an advocacy NGO with transnational ties, it does not work through direct field action as MASIPAG and Greenpeace do, but is much more policy and advocacy oriented. The NGO does not involve itself in heated conflicts, but takes a more formal role and tries to influence policy without getting its fingers burned. For some reason that I still don't really know but am very grateful for, they offered me field access and connections with some of their agents in the field.

The first idea that they had already offered to me in the beginning, was to do a follow-up on an issue that had sprang up in Mindanao, where Monsanto was trying to sue farmers who had

made an hybrid version out of their GM corn, that offered possibilities to be planted year after year. It was not sure if this development had been intentional by the farmers or if there fields had become contaminated, and that another genetic transformation had happened. It was also not sure how Monsanto would proceed in the matter since it could also mean negative propaganda for the TNC, if it would turn out that the genetic transformations had naturally occurred only ten years after the introduction of GM corn, investing the fields of innocent – until proven guilty – farmers. Mario Maderazo, my main agent at SEARICE, offered to set me up with contact-persons in the field. I fell very excited about the opportunity, but after further inquiry it turned out that the island of Mindanao was a dangerous place for white people as a lot of kidnappings had occurred in the region I would visit. SEARICE couldn't guarantee my safety and however I was passionate about the topic, I felt it could be a little bit too much of a risk especially because I would be travelling alone as Maderazo and I could not plan a visit around the same time. And even under the wing of Filipino's the area was risky for westerners, so I did not feel very compelled to travel through the rural backlands all by myself, through an area I was not familiar with and with growing visions of pirates lurking at me from the bushes while holding a knife between their teeth, ready to kidnap me and exchange me for big bags stacked with golden doubloons. However I must admit that the adventure also appealed to my fantasy, I told myself I was not going to apply myself to cast in a shady version of the Pirates of the Caribbean so Mario, his colleagues and I decided it would be wise to try to find an interesting alternative.

We tracked down other GM-corn areas in the country and then one of the field-coordinators, who was generous enough to join our meeting, remembered one of his connections with a municipal agricultural officer in Pangasinan, one of the main areas that produced GM-corn. According to Mario Maderazo, policy coordinator of SEARICE the province of Pangasinan is very far in GM crop production in comparison to the rest of the country: "Pangasinan is like the seat of GMO production in the Philippines". There have not been any incidences recorded in the province but it would provide me a good research position into the main area of GMO production in the Philippines. In a matter of minutes contact had been establish with the Daisy Villareal, who worked for the local government and was in charge of coordinating agricultural policy implementations in the area. Daisy even offered me lodging and accommodation in her own house and she picked me of from the bus stop in the middle of the pitch black night. My time with Daisy in Pangasinan was very interesting, she facilitated farmers meetings for me and I got to interview some of her colleagues. She would extremely generous and would take me almost everywhere I wanted to go in the short time I was there. I

found myself interviewing GM-corn farmers in 40+C°, no threat from pirates but now serious heatstroke's lurked at me. In chapter VI I describe how the interviews went, also here I noticed that people had difficulties talking about some issues, however all the local government people were surprisingly open about their intentions and ideas. It was more difficult with the farmers, as I could only interview them under the watchful eye of the field officers, who would sometimes "help" the farmers in their answers. I used structured interviews, that made it more easy for me to compare their answers and to draw conclusions later on. I also adapted the circumstances in the answers though, as I felt that some answers were slightly biased or influenced by present – and sometimes interrupting – peers. I have used the peer interruptions and "guidance" also as data in my research. My methods and role as a researcher in the interviews with the farmers and some field agents were again different. The most of my interviewees felt shy about their English, which they would refer to as "nose-bleed" and then the peers would laugh at them when they felt shy. So I had to be very encouraging and I tried to make them feel as comfortable as possible for them to talk with me. Some interviews therefor took very long, tiring both interviewee and me, I had to remain very patient while I still tried to get as much data out of them as possible. Some really loved to talk, those who did the most bragging, while others felt more shy and gave answers in two or three words. I felt happy in the times I had Daisy with me, I had started to trust her, she spoke good English and I recognized some of my own directness in her. She was always sharp and would always translate for me if I asked her too. I had to be a bit careful for her when the interviewees would be more shy, because she would fill in the gaps and overpower them a bit. But she was sensitive for my directions and I noticed that I could encourage people to talk, or to be quiet, by using eye contact on the people that I wanted to speak up.

During my research I joined Daisy to a workshop about ecological agriculture that was offered to the agricultural officers of the province of Pangasinan. Here I came to meet Gil Carandang, the so-called 'Filipino Father of Ecological Agriculture'. The workshop he gave was part of the Ecological Agriculture Act that had been implemented through the Department of Agriculture, in order to promote ecological approaches through the province's agricultural policies. As my time in Pangasinan came to an end, I joined Gil to his Herbana farm in Laguna, another part of Luzon after he invited me to travel with him. I was super happy to have found Gil, as well for my research as for my own personal being. It was lovely to had found someone that was so passionate about ecological agriculture and that had devoted his life to the cause. Gil and I had many conversations, and he would buy beers for us as we travelled through the country by bus. Gil refused to have a structured interview with

me though, he was convinced that I could learn more from him by observing what he did. He was also not very fond of scientific evidence: “The proof is in the pudding” was something he would regularly tell me when I asked for statistics and scientific prove of his approach, referring to his own rich agricultural fields that indeed blossomed in abundance and produced all kind of different crops while it also provided a sanctuary for many insects and small animals.

I felt alive again after I had left the chemical sprays of Pangasinan, going through extreme temperatures that had made me feel suffocated while wrestling myself through tiring interviews. Pangasinan had made me feel a little bit depressed about the state of the world, but travelling with Gil and being at his farm, joining the workshop he presented to visitors and in which he spoke with so much passion and with sparkling eyes, had revived my joy and enlightened my heart again. The climate at his farm was temperate and I could feel nature blossoming at my feet, it was like unpacking a little – or huge – present, one of the many that I had been granted throughout my journey so far. As Gil and I spoke and spoke I would take field notes in my phone or little papers or remember them in my head when I was not able to write them down at the very moment. I also took many pictures of his produce and the workshops, some of them I will show in the relevant section. Eventually Gil asked me to join him to Palawan, where he had one of his latest projects, Bucana farm, obviously an offer I could not refuse.

He invited me to a dinner with the financiers of the project, a conglomeration of oil companies that financed Gil under their joined CSR program. Later that night I had an interview with the director of the program. Because the farm was very difficult to reach, I was dependent on transport from local organizations that incidentally travelled up to the farm, I only visited the farm twice. It was enough to get a good impression, but obviously not enough to fully immerse myself in the community, something that would had been very interesting to do to get a good grasp of all the challenges and opportunities of the project. Unfortunately, even worse as in Pangasinan, the interviews were very difficult and at sometimes even frustrating. The farmers were very shy, lacked (comprehensive) English and were often overruled by their peers. I also started to feel very bad and guilty about my own role and position in the interview since there was such a big contrast between me and the farmers. It was obvious to me that these farmers were extremely poor and that there I sat down with them, while I typed their answers on my four hundred dollars tablet, carrying a photo camera of at least the same value and I used my expensive smartphone to make

recordings. It made me feel terrible and very bad about myself. I questioned my own role as a researcher, who was I to just sit there and talk with these poor people about their livelihoods? I felt like I was exploiting their poverty for my own gain, their lives were real while I was “just” sitting there to write my thesis, a research that would not even be published or ever become materialized in something “real” for the farmers. I had nothing to offer them, I could do nothing to reciprocate their valuable time that they allowed me to take, shy as they were and impressed by my possessions. I felt awful about myself and my vanity, about my wealth and my intentions. I would probably leave them with no more than false hope and a feeling of desire and possibly even embarrassment. I felt vain that I had the luxury to come all the way down from Amsterdam to their little community somewhere in the jungle of a faraway island of the Philippines, just to be able to write an interesting thesis that would be locked away in a jar somewhere after handing it in, serving no other purpose than me finalizing my Master, all for my own bloody sake. I was also getting frustrated and started to feel guilty about my own frustrations about the farmers lack of good communication. It was incredibly hot and muggy, I felt that I was starting to lose my patience with them and that all kind of negative pre-judgements about their intelligence unwillingly popped-up in my head, that made me feel even more bad about myself. Honestly, at that point I just wanted to give them all my belongings, cancel the research and go home and find a job somewhere to do something “real”. It was hard to remember myself what the heck I was doing there and which purpose it served. I felt like the most selfish and useless person in the world.

As this illustration shows, sometimes the confrontation I encountered during my research was almost too much for me. At some moments it filled me with despair and I felt incredibly idle about my position and my intentions. At the same time, talking with certain organizations and inspiring people as Gil Carandang also gave me a lot of energy and filled me with hope. Even if I couldn't change it through this research, I could learn from it and use it for future post-academic purposes that hopefully can make a difference one day. Further, I always tried to be as open and honest as possible about what I did and what I could and especially could not do in terms of reciprocity. I always payed attention that interviewees didn't expect things from me. The amount of help and support I have had from so many different people and organizations during my research has made me feel incredibly thankful and grateful. I hope to be able to do something in return one day, in whatever kind of way, as long as it supports the goal of creating more just ways for – poor farmers – to produce their crops in a more ecological sound and sustainable way that primarily serves their own livelihood and environments before anyone else's interest and aspirations.

I am not too sure what my window of hope really was, or if I had any at all. I think I had more hope at the start of my research than I had when I was in the midst of it. But what I did find was a lot of inspiration and encouragement, a lot of hope around me of people who saw it differently, who saw opportunity for improvement and for betterment. People who fought and resisted, while they proposed the most beautiful alternatives. I have seen that it is often a matter of resources, what kind of resources does one have to make an impact or to make a change. I have always been aware of how privileged I am and I have always felt obligated to not just to use this privilege for myself, but to share my “surplus of privilege” with those who are not born with that same blessing. I have come to believe that we can make personal choices and changes through which we can benefit others as well. I have become deeply inspired by the communal and natural approach towards organic agriculture, it is approach that I feel that can change the world into a better place. But I have also started to become pessimistic, for I see what kind of powerful forces dictate the world, under the veil of “development institutions” that want to bring prosperity and welfare to the poor. I do not believe this anymore. The suppressing strings of control and exploitation or much to beneficial for the western world to let go of this, yes at the end of my study I have become the realistic cynic that believes that the west thrives on the poverty of the world. I do not believe that we can change “the system” or anything like it, the system does not want to be changed and I believe it is much too powerful to be overthrown. But where does this leave me. It leaves me within my own field of responsibility for my actions and deeds, it reinforces the call and the responsibility that I feel for myself to do it differently. I do not need to change the system, but maybe I can add something positive to the world I live in, just as all the beautiful inspiring people did that I have met. I think it is this cause on its own that should be the aim. Forget the system, forget the government, forget whatever exploiting force tries to keep us low. Let’s remember our own potential, our capacity, our will power, the openness of our hearts and the free gift of friendliness that we encounter upon every day. My call now is to learn how to grow my own food and to pour all the surplus of my privileges into ways to share this knowledge with those who need it. To create a collaborative exchange of knowledge and wisdom in which agricultural practices can be improved, made more sustainable and environmental sound. Maybe we cannot change the system, but I believe we can – and must – attempt to make a positive impact that can spread like an oil stain that grows increasingly bigger as it spreads over its surroundings and unites likeminded people and initiatives while it has the power to transforms communities.

Introduction

Problem statement

This thesis shows how the country has been under the wing of foreign imperialist powers, from the start of the Spanish colonization, to American indirect rule to the current neoliberal hegemony brought on upon by western development institutions. In the last decades, especially since the Green Revolution, the agriculture fields of the Philippines has become the battlefield where different power struggles are being contested. In this thesis I show how those power struggles are materialized into tools of control and how these mechanics are continuously contested by opposing forces. I have encountered various actors that are at play in the agricultural field were this power-struggle takes place in. I define those actors as: the political framework laid out by the government of the Philippines; the hegemony of neoliberal forces through Transnational Corporations' (TNC's) and multinational development institutions such as International Monetary Fund (IMF), World Bank (WB) and the World Trade Organization (WTO); the resistance movement that expresses itself in civil society groups and the national Non-Governmental Organisation (NGO) network through a food sovereignties paradigm; scientists, scholars and researchers from the University of the Philippines Los Baños (UPLB) and finally the farmers and peasants themselves.

While these power-struggles over the Philippine agriculture are at play, the rural population of the Philippines is increasingly impoverished, rural unemployment is on a rise and while food prices increase, farmers lose their control over their own production mechanisms. Nutritious food crops are being replaced for inedible cash crops, fertile grounds are degraded through heavy chemical use and local diets and markets are getting flushed away by cheap fast-food and foreign import. In my thesis I will show how the neoliberal approach to food security is continuously contested by opposing forces, whom I frame under the 'food sovereignty' paradigm. I argue that it is important to categorize both agricultural paradigms as a dichotomy, for I believe that it is only through an antagonistic approach that the neoliberal food security paradigm can be contested and seriously challenged. I hereby follow into the footsteps of Chantal Mouffe, who argues that the only way to avoid the hegemony of neoliberal capitalist domination is by providing space for antagonism through which the democratic debate can thrive, the neoliberal hegemony can be contested and alternatives to the current neoliberal capitalistic hegemony can be proposed.

The relevance of this research is to shed light on how the approach of neoliberal food security finds its way into the rural soil. It offers a way to explore the mechanisms of it and to trace how abstract paradigms materialize in the rural soil and in the lives of farmers and peasants. I explore through which way this paradigm can be challenged and how a government – in this case the government of the Philippines – can, and should, be held accountable for the restructuring forces that it allows in its fields. I argue that the only way for a more fair and sustainable approach in agriculture is by contesting the stringent and oppressing forces the country is held by in its grip, the calling upon the governments responsibilities and its plight towards the welfare of all its citizens, while providing alternative solutions for a more sustainable and just approach to agricultural restructuring. Therefore my research question is:

Main research questions

Through which mechanisms of control did neoliberalism become the hegemonic paradigm in food security in the Philippines, what were the socio-economic effects of this approach and how can the neoliberal hegemony be challenged by a countermovement that offers a more just and sustainable socio-economic agricultural paradigm as alternative?

Research questions:

- Through which ways does the neoliberal paradigm of food security operate and control the agricultural approach towards food security and production in the Philippines?
- What are the socio-economic effects of the neoliberal approach for the rural population of the Philippines?
- Through which counter-voices and movements is the neoliberal hegemonic paradigm contested and what is the role of the government in this?
- What are possible solutions, alternatives and strategies for the current neoliberal hegemonic approach towards food security?

Chapter Outline

In the first chapter I will give a short outline of the historical context of the Philippines, the first chapter starts at the time that the Philippines became colonized and fell under Spanish colonization. Throughout this chapter I will show how foreign hegemonic powers came and went and how this invoked peasant unrest, as the country fell poorer and poorer. It is also an

introduction into how neoliberal powers became adopted and materialized in the countries' economic outlook and agricultural landscape. I show the problems of the rural lands during this time and I will end with exploring how civil society responded and grew under the many oppressing forces it encountered throughout the centuries.

Chapter II will zoom into the Green Revolution that was installed in the Philippines under the Masagana '99 agricultural policy program of Marcos. In this chapter I will show what the Masagana '99 program entailed and how this can be understood as being part of a greater agricultural restructuring policy that swept over Asia as the Green Revolution and was pushed forward by the western development institutions. Besides the agricultural aims, I will also show what kind of political interest, both from the west as from the Philippine government were the driving forces behind the restructuring. Finally I will show the socio-economic effects of the Masagana '99 program, which I refer to as the 'Green Revolution' in this thesis. This chapters serves to show how farmers and peasants came under the sway of neoliberal development policy through mechanisms of control that worked through indebtedness and lack of choice over agricultural production input.

In chapter III I will discuss how the Neoliberal approach towards food security finalized and reinforced itself in the decades after Marcos reign. I will show how it made use of the mechanisms of dependency through the indebted state of the country that Marcos had let the Philippines in. I will show how a second agricultural restructuring, which I call the Gene Revolution, enforced the neoliberal hegemony over the Philippines, by implementing an even more stringent technology package into the countries' agricultural fields through gen-technology. As the neoliberal control over the Philippines approach to agriculture becomes fully implemented in this phase, I will finish this chapter with fully introducing the concept of the Neoliberal Food Security paradigm.

Chapter IV will discuss the importance of an antagonistic approach towards the political issue of food sovereignty, as raised and argued for by Chantal Mouffe. I assess the implications of the neoliberal agricultural restructuring through the contesting voices of the Philippines' NGO and civil society networks. This reveals the detrimental impact of the neoliberal food security paradigm to the socio-economic environment of the Philippines rural land. It also shows a fundamental gap in the governments institutional monitoring and regulation framework and offers a strategy to contest the governments lack in sufficient regulative policy. Finally I show how food sovereignty offers an alternative to the existing state of affairs in the agricultural approach of the Philippines.

Chapter V elaborates on the governments' policy towards food security and it contests the neutral claims of the government towards its agricultural approach. It shows that the government is not a neutral player, giving space for various approaches, but is rather a very active player in endorsing upon a neoliberal approach to food security. I show this by exploring the various voices of UPLB's scholars and researchers and by assessing the governments' policy of the Food Staple Sufficiency Program.

Finally Chapter VI introduces my cases. In my first case I will unravel the active role of the government in the neoliberal food security paradigm through local governments units in Pangasinan. Here I will also show through which networks and actors this approach embeds itself in the agricultural soil. The second case will show another agricultural approach, that of the food sovereignty's paradigm and I explore in which ways this paradigm can function as an alternative for the neoliberal food securities paradigm.

Chapter 1: Historical Background of the Philippines

In this first chapter I will lay out the contextual history of the Philippines in order to provide a clear context of the development of the neoliberal dominance into the current neoliberal hegemony over the country, and the fierce opposition this is encountered by. The timeline starts at the times of the Spanish colonial powers that ruled over the Philippines for hundreds of years until they were defeated by the Filipinos, after which American imperialists took over the reign over the Philippines, be it in a much less direct way as the Spaniards had done. The timeline ends with the resignation of the dictatorship of President Ferdinand Marcos, who left the country heavily indebted to powerful western development institutions and laid the foundations for a neoliberal hegemony to fully exert itself after his departure. Thereafter I will give an impression of the traditional agricultural system before Marcos gave way for agricultural restructuring policies that transformed the country's agriculture and also the rural problems that came along with that. Finally I will sketch an historical outline of the Philippines resistance movements, that knows a long history that travels all the way back to the Spanish conquistadors, until this very present moment. Chapter I serves as a broader contextual historic understanding that is necessary to start with in order to understand how neoliberalism became the dominant paradigm in the agricultural approach towards food security in the Philippines and the contesting forces it encountered upon.

1.1.Colonial History

The Philippines knows a long history of occupation and colonization. The archipelago that we currently know as the republic of the Philippines, became unified by the Spanish colonizing powers that settled in the capital of Manila in 1565. The Spanish colonizers established a commercial port in Manila bay, that became the most important trade center in Asia between the 17th and 18th century. Products arriving from all parts of Asia were traded and shipped to Europe and parts of South America. The Spanish occupiers were continually met with several rebellious outbreaks led by the Filipino indigenous people, but it wasn't until the Philippine Revolution in 1896 that the tight grip of the Spanish occupational powers loosened for the first time and the Filipino's claimed their victory over their colonizers. The

Spanish didn't manage to reestablish their strong hold over the peninsula. The outbreak of the Spanish-American war in 1898 signed the demise of the Spanish colonizers, when they lost their power over the Philippines to the Americans after losing the Battle of Manila Bay in 1898. The Filipino's resisted U.S. occupation and instead declared their own independency. After 333 years of occupation, the Philippines finally became independent. Their sense of freedom and independence however did not last for long, when just one year later the Philippine – American war took place. Even though the Filipino resistance army against this new colonizing threat was fierce, after three years of combatting the Americans, the Filipinos lost the war and the self-rule over their country in 1902 (Schirmer and Shalom, 1987: xvi-xviii). The colonization of the Philippines by the Americans didn't last long as the Japanese conquered the Philippines during the Second World War. After the defeat of the Japanese at the end of the Second World War, the Filipinos were finally granted their independency by Washington. Although the Filipino independency was signed, the Americans still had an high domestic economic interest in the Philippines, resulting in a lasting U.S. economic and military domination over the Philippines (ibid.: 1). The rebellious Filipino spirit did not suffer under these neo-colonial power, but rather continued to be inflamed, which created outbursts of violence and rebellion throughout the American domination. During an outbreak of massive students-, peasants- and workers demonstrations in Manila, the U.S. supported president Ferdinand Marcos to install martial law in 1970 as an answer to the continuous civil unrest. But as the Filipinos living standards only declined further, the resistance movements grew stronger and the more oppression it encountered, the harder it fought back (ibid.: 2).

1.2. President Marcos 'New Vision'

The Filipino president Ferdinand Marcos had come into power in 1965 and had ambitious plans to reform the Philippines through his 'New Society' vision. He executed his vision under the wing of the World Bank, IMF and the International Labor Organization (ILO) that borrowed billions of dollars to the Philippines for Marcos to invest in an export-oriented strategy (Sayson, 2006: 55). This strategy focused on improvement of infrastructure, investment in the manufacturing sector and export processing zones and an intense agricultural reform program. When Marcos installed martial law in the 1970's, due to the continuous insurrections that Marcos suppressive regime had further instigated, the U.S. took advantage of this as a chance to push controversial market reforms through structural adjustment programs (ibid.). However Marcos' strategy was export-oriented, he feared the consequences of an open market. He went against the policies and the restructuration of the

World Bank and IMF by using foreign funds to consolidate a protectionist plan in which he introduced stricter non-tariff barriers, supported import-substituting industries and granted high subsidies for agriculture (ibid.: 56). Due to these protections interventions and high subsidies in agriculture, the Philippines became self-sufficient in rice production.

Throughout his reign, Marcos granted important positions to his cronies in the new manufacturing and import-substituting industries that he had, through foreign loans, been investing in. Due to his countless investments in the country, all financed by billion dollar loans mainly provided by the IMF and the World Bank, there was some slight economic growth. But the slight growth was less than anticipated and the little revenues it had produced, quickly evaporated in the hands of Marcos' cronies. The group was given a monopoly over the most significant industries and domestic market (Abinales & Amoroso, 2005: 213). The borrowing of vast sums of money, in the absence of high economic growth, was backed by multilateral agencies such as the World Bank and the IMF (ibid.). The World Bank and IMF stimulated commercial lenders and private investors to have trust in the stability and investment-friendly environment of the country (ibid.). As Abinales and Amoroso state in their book 'State and Society in the Philippines' (2005); "The plunder of the state for the benefit of family and cronies was premised on the constant availability of funds to loot..."(ibid.: 215).

Despite the numerous investments injected into the Filipino economy, all signs eventually predicted the downfall of the Philippine's economy. By 1980 workers wages had declined to less than half their level in 1962. The World Bank saw the rise of unemployment increasing from 15 percent in 1978 to over 24 percent in 1982. It is in this period of time that the Filipino's started to look for work overseas to support their family at home, which would later become one of the biggest export 'products' of the Philippines (ibid.). Prompted by the debt crisis in 1981 and the subsequent recession the economy sped into, the government obtained a World Bank Structural Adjustment Loan that forced open the economy. The conditions served trade liberalization and became the forerunner of a neoliberal regime that would soon become the status quo in economic development programs. The conditions posed by the World Bank were all about: "...lowering of protective tariffs; liberalizing import restrictions; promoting and facilitating exports and investment in export oriented industries; a flexible exchange rate policy to reflect basic market forces and restructuring specific sectors to integrate them into the overall export effort" (Sayson, 2006: 56). However the structural adjustment program managed to restructure the economic system of the Philippines, it didn't

succeed in rescuing the countries' economy nor Marcos' regime from downfall. After two long decades of Marcos' dictatorship he eventually lost support from the United States. After 21 years of rule, Marcos fled the country in 1986 while the U.S. had established and re-enforced their hegemony over the Philippines economy. Marcos left the country heavily indebted with loans adding up to 25 billion to the western development institutions IMF and World Bank.

The institutional arrangements and the countless loans provided by these institutions had made the Philippines tied to the western development agenda's. While under Marcos billions of loans for development policies had been granted, under the new president Corazon Aquino the focus turned 180 degrees and the payback of debts became the countries first priority (Bello, 2008: 452). She enrolled the country in recovery and reform programs of the IMF and World Bank that further liberated the economy through reducing tariffs and lifting import controls and barriers (Abinales & Amoroso, 2005: 233). With the economy in a deadlock, the country opened up its markets further. The economy of the Philippines turned out not to be strong enough to compete with world prices and it soon had to fell back again on the import of food products as rice to feed its citizens. The Philippines changed from a protectionist country wherein billions of dollars of development loans were invested in agricultural production and self-sufficiency, into a country with a heavy reliance on imports brought upon by economical restructuration with a neoliberal agenda incited by the high costs of paying off the foreign debts.

In above pages I have shown how the country became increasingly dependent on western development institutions through a long process of the intensification of loans, leading to increasing indebtedness and dependency on western development institutions. Through the establishment of this structural dependency of the Philippines to the Western powers, the latter was able to shift the Philippine economy from a protectionist economy into a free market economy. The transformation of the country under Marcos was not limited to the country's economy, also the agricultural field was deeply transformed and would never be the same again.

1.3.Traditional Agriculture

The Philippines is one of the countries with the highest productivity potential in Asia in terms of arable land. Roughly about the half of the country's 30 million hectares of land is suitable for agricultural production, of which 13 million hectares is currently devoted to agricultural crops. About 4 million hectare of this crop land is used for the production of rice, which is the main staple food of Filipinos (Layosa, 2007: 16). Hence rice is the most essential production crop and therefor crucial for political stability. It was therefore that Marcos mainly focused on the production and self-sufficiency of rice when he implemented his agrarian reform program.

In the book 'the Great Rice Robbery' (2007), Layosa describes what the traditional farming system in the Philippines looked like. According to Layosa, knowledge and agricultural techniques came from generations long of farmers experiences, transferred from parents to children and was embedded in the specific context of the farming environment. Farmers usually had a single rice cropping per year whereby they mainly planted traditional varieties, used organic fertilizers and weeded the land by hand. It was common to use organic fertilizers that were made from their land, such as rice straw (ash) and horse and carabao manure. The production of rice entailed more than just plain production, it was a communal activity and executed manually through the 'bayanihan' spirit, that strengthened communal ties. There was the choice of over 3000 traditional, indigenous varieties of rice seeds alone, each of them applicable to certain conditions of production; resistance to specific pests and diseases or for the good taste of it. Because of their specific applicability to specific conditions, they did not require intensive inputs and produced relatively stable outputs. Also, the farmers collected the seeds from their mature crops to use for the next cropping season. Farmers picked a variety of seeds to plant, as a way to ensure themselves of a good harvest in case of unforeseen circumstances during the growth period. In the early part of the 20st century the varieties yielded around not more as 16 cavan per hectare, but this increased to the mid of the century to about 20 to 30 cavan per hectare. This had to do with improved varieties and also because of the expansion of irrigated areas and the construction of irrigation canals. (Layosa, 2007: 16-23).

1.4. Social problems on the Rural Lands

Peasant unrest was high when agricultural restructuring under Marcos' New Vision started transforming the countryside in an attempt to soften up peasant unrest. There was a problem with high concentration of land ownership and an high occurrence of poverty amongst the peasant population. Landlessness and exploitation of poor peasants through share tenancy had a negative effect on the rural economy and lives of poor farmers (ibid.: 19). The agricultural problems that existed before the New Vision had to do with the United States' high demand for traditional export crops such as sugar and coconut. The expansion of the production of these export crops in order to meet the U.S. demand came at the expense of rice land and therefor the cost of rice increased. Small rice farmers did not benefitted from the increased rice prices for their plots were too small to compete against competitors lower prices. The productivity of rice was also stagnant because there was no rural infrastructure and almost no access to credit. Because of the American demand for sugar and coconut, the rice and white maize production declined and the Philippines had to start importing staples while the rural poor became unemployed and pushed off their land (Abinales & Amoroso, 2005: 193). This was one of the most stringent reasons for Marcos to invest and subsidize the production of rice, for the country to become self-sufficient and civil unrest to be softened. In the next paragraph I will show the history of civil protest in the Philippines, to provide a broader understanding of the context wherein counter voices have been developed and expressed.

1.5 Historical background NGO's Philippines

The Philippines knows a long history of civil society organizations. The first civil society organizations came up in the late 19th century as a resistance movement against the Spanish occupations. There were several organizations, the 'Propaganda Movement' was led by Filipino intellectuals and pushed for reforms and equal rights for the native Filipinos. Another organization was the Cofradia de San Jose, a peasant movement that fought for Filipino independence and for improvement of the rural areas (Asian Development Bank, 2007: 2) . The resistance movements were quite powerful, in 1898 the Philippine revolutionary army defeated their Spanish colonizers in 1898. Unfortunately, the Philippine independence did not last long, several months later Spain ceded the Philippines to the Americans in the 'Treaty of Paris', and the Philippines fell under colonial rule again (ibid.). But this time, the colonizers were not as oppressive to the civil society movements at their

predecessor and in 1906 the Philippine Corporation Law was signed that explicitly recognized NGOs and subsidized some of them. Between the 1920's and the 1930's hundreds of farmer credit cooperatives were born with government support. The new law could not pacify the Philippine culture of resistance though and growing dissatisfaction among peasants about poverty in the rural areas led to an increasing growth of memberships in the communist Congress of Labor Organizations (CLO)(*ibid.*). As a reaction to this many other organizations broadened their scope into Philippine rural development work through setting up cooperatives, credit unions and agricultural teaching schemes. This pro-civil society current came to an end when Marcos became president. In his 'New Society' there was no tolerance for civil society organizations and NGO's. But as his dictatorship became increasingly suppressive towards civil, human and political rights, civil society activist fled underground. Some joined the armed struggle of the National Democratic Front or affiliated with university or religious institutions. The harder the oppression, the stronger the suppressed became and by 1986 Marcos' regime was overthrown by the 'People Power' revolution. Under Marcos dictatorship the relationship between civil society organizations and poor communities had only become more tight. Because of the proven power of the civil society organizations and NGO's, they were taken more serious by the governments after Marcos'. Some organizations came to work together with the government on poverty and welfare programs. Political leaders understood the importance of the support of the NGO's, that had become representative for the Filipino people in various shapes. President Fidel Ramos (1992 – 1998) was the first one that actively sought the cooperation of NGO's and implemented a number of new social justice laws in the Philippines juridical system with the help of NGO's and civil society organizations. NGO's and civil society organizations became increasingly professionalized and institutionalized and became a serious career option for university scholars (*ibid.*: 3). With the help of the Ramos' administration the NGO community had become very powerful and had set the institutional framework for the NGO's and civil society organizations through which it could direct its influence. It had become one of the most influential players in government policies and could not be ignored anymore.

Succeeding administrations after Ramos often sought the support of the NGO community to rise in power, but did not always kept their promises. Joseph Estrada's administration, Ramos' successor, turned out to be very disappointing by not sticking to the poverty reduction agenda that he had promised during his presidential campaign. He also limited freedom of press and was accused of corruption, cronyism, poor economic performance and foreign investment regulations (*ibid.*). After Estrada Gloria Macapagal-Arroyo come to

power in 2001 with strong support from civil society. The relationship between the NGO community and the government came under threat when Arroyo declared a state of emergency in February 2006. There were raised concerns of a threat to civil liberties and these concerns became real when hundreds of people associated with activism, community work or left-wing organizations got murdered in the following six years. An investigation ran by the United Nations determined that the military was directly or indirectly involved in a significant amount of killings (ibid.). Whether the political climate was suppressive or supportive towards civil society organizations and NGO's, by 2007 the civil society groups had range up to 500 thousand and between 3 and 5 thousand NGO's. The history of the civil society network and NGO's in the Philippines shows that these groups have always been very powerful in the Philippines, and have not been able to be defeated. On the other hand, the NGO community has never been able to truly trust the government and has always had to be on its guard in regard to their position in the political power field. They were loved and hated at the same time, target of backstabbing and appraisal.

1.6 Conclusion: Creation of indebtedness and dependency

In this chapter I have shown how the Philippines have developed itself under decennia of occupation, in one form or the other, since 1565. Centuries of occupation and oppression never succeeded to soften the opposition of the Filipino's, but rather motivated the growth of a resistance movement, demonstrating its power whenever it could hit, as in the Philippine Revolution in 1896 when it overthrew the Spaniards after centuries of dominion. After the Spanish were conquered, the Philippines were turned over in American hands. Although the U.S. did not fill the role as the active colonizers of how the Spanish had ruled the country, they applied other political and economic mechanisms over the country to exercise their power and control over the Philippines. In this chapter I have showed that they did this by introducing an array of economic restructuring over the Philippines, especially under the times of Marcos' presidency. Both Marcos and the U.S. benefitted from the martial law that Marcos installed, facilitating both powers to push through restructuring policies especially over the Philippines rural land, as well as over the countries' economy. I also showed how Marcos' regime did not coincide entirely with the wishes and desires of the dominant American forces, as Marcos had always tried to maintain a protectionist approach towards the countries' economic and agricultural system. At the moment that Marcos had resigned from presidency, the Americans moved quickly by restructuring the country into a neoliberal open market policy, that meant the demise for the countries self-sufficiency in terms of rice

production. The structure that provided the American powers to do this had already been implemented through a growing debt that the Philippines owed to the multinational development institutions such as IMF and the World Bank. I have argued that it is through these structures of indebtedness that the country lost its last sovereignty and say over the countries' economic policy and became increasingly controlled by the western hegemonic powers.

Besides the political-economic historic framework, I have also indicated the traditional agricultural production system before agricultural restructuring was implemented. The rural problems that already existed intensified under the U.S. high demand of certain crops. And the country started to import staples to compensate for their decreased staple production. This led to further social problems, as it impoverished farmers and pushed them off of their lands, increasing social unrest. This chapter also showed the resistance movement in the Philippines, that has proven to be strong and resilient and able to grow when it was under attack. The civil society and NGO movement has always been able to contest the hegemonic forces that laid over the Philippine landscape, indifferent to the flag they were swayed under. However the opposition has been under threat time and time again, it seems to be that through centuries of experience it has learned when to rise and when to duck, or how to slip through the crooks and crannies when the opposition was being suppressed. No matter how hard the oppression, the movement never gave up on its people, for it is the people.

This chapter has been an introductory chapter, meant to provide a brief historical outline of the Philippines. This contextual background is important for the following chapters to come, in which I will show how the western development institutions gained increasing power over the Philippines, leading the way for deep restructuring in the Philippines agricultural and economic system. In the following chapter I will zoom into the agriculture restructuring of the Philippines, that was indicted under Marcos' New Vision and arose under the wing of the Green Revolution, an agricultural interventionist policy that swayed over Asia and where the Philippines fell part of. I will also provide space for contesting voices, coming from international critical scholars but also from national farmer movements themselves, who had to undergo the restructuring and live to tell their side of the tale. Chapter III will pick up from where we left in terms of the neoliberal restructuring and its effects for the countries' political economic agricultural outlook.

Chapter II Green Revolution

In the previous chapter I have showed how the Philippines political system fell under the control of western hegemonic powers through structures of indebtedness and dependency. In this chapter I will show that the second step was to control the agricultural lands and food production to shape it to the benefit of the western rulers. I will show how they did this by the introduction of a technological production package that became mandatory for farmers to use and produce under the Masagana '99 program, that became implemented under martial law. The package indebted farmers through credit programs while the technique also forced the farmers to use increasing amounts of inputs in order to maintain high yielding produce. The farmers fell in a downward spiral in which they became increasingly indebted and struggled for their survival, while losing their own – traditional – means of production. The “success” of the Green Revolution is therefore contested and I argue that its main success laid in implementing tools of power and control in the rural lands, instead of being successful in bringing welfare to the farmers livelihoods.

The Green Revolution worked in twofold, in one way it was a political move, from Marcos as from the U.S. to reinforce control and hegemony over the country that they felt was being threatened by the rise of the communist movement in South East Asia. The Green Revolution was a way to soften up the farmers unrest in the rural hinterlands. On the other hand it was a means to reform the agricultural lands by bringing in powerful tools of control over the rural lands and food production. However the Green Revolution was introduced as a way to increase yields and farmers well-being, in reality it had a detrimental effect on various aspects of the farmers lives that had adopted the program. Also farmers who did not adopt the program were negatively impacted, because they were not able to compete with the farmers who had adopted the technique. I will show how the farmers social- economic problems increased further under the sway of the Green Revolution and made them dependent on external inputs which increased there dependency and poverty on the same time.

In this chapter I will introduce and analyze the Green Revolution through alternative voices, from foreign activist scholars as from Filipino peasants and farmers' groups. They assess the success and failure of the Philippines through a local contextual framework, that looks at socio-economic aspects, changes in farm production and the effect on the environment.

2.1. Introduction to Green Revolution

The Green Revolution started off with the introduction of the International Rice Research Institution (IRRI) in the Philippines under Marcos' rule in 1960. The establishment of the IRRI in the Philippines introduced a scientific and industrial approach in agricultural production. The Green Revolution was based on an ideology that promoted the large scale distribution of modern agricultural technology with a production package that offered chemicals and hybrid seed plant varieties (Daño, 2006: 7). It promised to fight poverty and to defeat hunger in the underdeveloped agricultural backlands of South-East Asia. The mechanics of the Green Revolution were installed in 1973 through Marcos' Masagana '99 program. 'Masagana' means 'bountiful' in Tagalog and '99' was a reference to the average production target of cavans per hectare. The Masagana '99 Program was directed at an increase in productivity on the existing rice land, in order to open up new lands for the production of export crops like sugar and coconut that were demanded by foreign investors, mainly of American origin. (Abinales & Amoroso, 2005: 195). It offered an all-inclusive rice production package for farmers that they could afford through credit programs supported by the government. The package introduced synthetic chemical inputs in the form of fertilizer, herbicides and pesticides. It also offered the choice between ten different hybrid High Yielding Varieties (HYV's) of rice, that were developed in the laboratory of IRRI and its predecessor in the United States. According to the farm and peasant group Kilusang Magbubukid ng Pilipinas (KMP, 1999) the purchasing of the chemical input was mandatory and strengthened the political power of Marcos over the countryside. The mandatory use of chemical input was also beneficial for the TNC's who raked in the profits of chemical import as the sales were increasing (ibid.: 6) According to KMP it was "...therefor not surprising that Marcos' agricultural policy was enthusiastically supported by the World Bank and its affiliates" (ibid.). This suggests that the Masagana '99 was a possibility for the western powers to implement their desired means of production through the marketing of their own products.

2.2. Political Agenda of Green Revolution

The Green Revolution had more than just one agenda. Not only was it seen as a way to improve agricultural yields, to create staple self-sufficiency in rice production and to give the agricultural backland a technological boost, it was also used for an array of other interests.

The Green Revolution was used as a political tool by both the United States and for the Marcos regime. Through centuries of colonialism and occupation, the Philippines had grown

into a culture of resistance and struggle. The interest of the United States was twofold, on the one hand it was a perfect way to ensure political hegemony over the Philippines in terms of opposing global powers between the rise of communism in Asian countries that the capitalist western powers perceived as a threat. On the other hand, the United States had an economic interest in implementing modern agriculture technologies that worked through mechanisms of control, to tie the Asian farmers to the American chemical input market and to get a grip over the Philippine agriculture production market.

The Green Revolution was also a solid way for the Philippines to control the farmers, by making them dependent on the agricultural production techniques in which they lost their own sovereignty over their self-chosen farming techniques. The farmers lost their control over seeds, inputs and farming techniques such as dependency on irrigation, means of production such as land and access to markets. Also, it was a perfect opportunity for Marcos and his cronies to assure their own business interest they had in agricultural export crops (KMP, 2007: 3).

2.2.1. Green Revolution as political tool for the U.S.

According to the KMP the introduction of the Green Revolution carried an hegemonic intent from the United States, in which it aimed to secure its corporate interests in Asia:

“U.S. corporations wanted new markets for their products, new investment opportunities for their surplus capital, and more favorable trade relations with the Asian neo-colonies. ‘Modernization’ of Asian agriculture was essential to the US to create an environment where foreign investment and export-oriented production were to generate growth (2007: 4)”.

The Green Revolution was more than just implemented under the wing of economical hegemony. It was also seen as an important tool to preserve and reinforce American political influence over Asia, as the country fell under the increasing influence of a communist sway that came from China. Vandana Shiva (1989) states that:

“Alarmed by growing peasant unrest in the newly independent countries of Asia, agencies like the World Bank, the Rockefeller Foundations, the US Agency for International Development and others looked towards the intensification of agriculture as a means of ‘stabilizing’ the countryside – and in particular of defusing the call for a wider redistribution of land and other resources. Above all, the US wished to avoid other Asian countries’ following in the revolutionary footsteps of China...(1989)”.

A statement made by the Rockefeller Foundation in 1951 confirms the special attention this U.S. driven hegemonic intent had towards the Philippines:

“There was a special problem in the Philippines in regard to the relations of hunger and the appeal of communism, and that there was perhaps a special responsibility on the part of the United States government to do something about agriculture in the Philippines. (1997: 30)”

The establishment of IRRI by the Rockefeller and the Ford Foundation, facilitated the IMF and the World Bank in restructuring the Philippine economy. At the same, the Green Revolution also became a means for Marcos and his cronies to concentrate their power in the countryside and strengthen their business interest (KMP, 2007: 4). It is therefore that it must be taken into account that the interests to implement the Green Revolution in the Philippines, were not just restricted to the intention to raise agricultural productivity. It was also a way to establish and reinforce political and economic hegemony over the Philippines, which was as beneficial for the American agenda as for Marcos’ regime. It is important to note that thus the interests did not merely came out of the interest in improving the Philippine agricultural system, but that there was an array of other political and economic interests at stake as well. It was a way for the U.S. to reinforce their hegemony over the Philippines, that was threatened by a communist sway over South East Asia that was appealing to the Filipino farmers resistance movement.

2.3. Defining Factors Success or Failure of Green Revolution

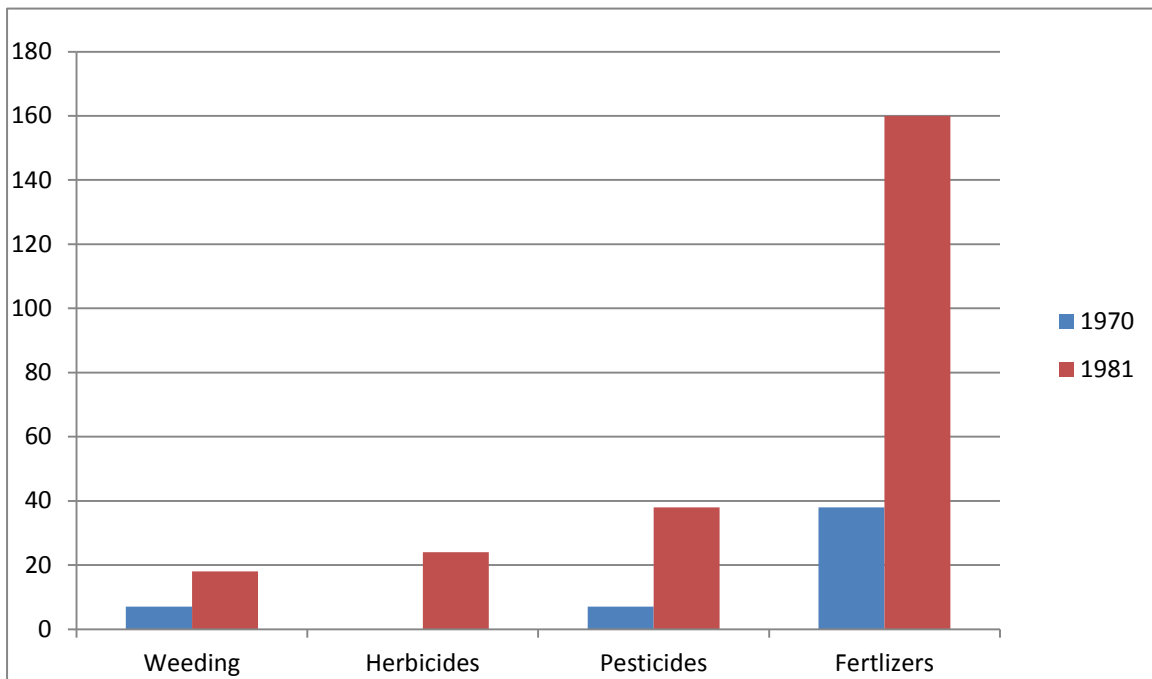
The effects of the Green Revolution are contested and controversial. Some scientist groups see the Green Revolution as a success and point to how the Philippines reached self-sufficiency in rice by 1977. The introduced hybrid varieties also out-yielded the traditional varieties by 30% (KMP, 1999: 11). But besides the success stories of the Green Revolution, there is also a plethora of other voices that analyze the success and failure of the Green Revolution in through other variables then the solemn increase in crop-yielding. Henk Hobbelink, co-founder of the non-profit organization GRAIN that supports small farmers worldwide, argues that a wider variety of factors must be used to define the success or failure of the Green Revolution. Hobbelink argues in his book ‘Biotechnology and the Future of World Agriculture’ (1991) that the real impact of the Green Revolution takes place at the local level, in the farmers reality. Hobbelink suggests that besides the factor of national crop-yield production statistics, also other factors that come from the immediate socio-economic context should be taken into account in the assessment of the success or failure of the Green

Revolution (Hobbelink, 1991: 13). When the local sphere is accounted for, a variety of different factors can be found that are not reflected in the one-sided yield statistics. These statistics overlook a substantial part of production that is important at the local level. If the assessment is done by approaching it through the local level, it becomes visible that the increased yields caused by the new production program did not come by itself but came at a variety of costs that are not being accounted for. Four factors are added to the assessment: 1.: the 'real farm income', that weighs the price of production inputs to the increase yields, also called 'net income'; 2: the production of farm byproducts also referred to as 'the hidden harvest' by Hobbelink; 3: the socio-economic effect that the farmers fell indebted through the credit provision schemes and the further implications for this and 4: the degradation of the rural environment that further increased the negative effects of the three aforementioned aspects.

1. The Real Farm Income

However the net yields temporarily increased and managed to make the Philippines self-sufficient in rice during Marcos reign, it could not increase real farm income because the costs of the inputs removed the intended profits in rice farming. The increase in yield between 1970 and 1981 was just temporarily and could only be maintained by a continuous increase in the application of inputs. The cost of manual weeding doubled, the introduction of herbicides became 10% of all input costs and the use of pesticides and fertilizers more than tripled. The costs for input increased over 358% in eleven years' time, outweighing the profit delivered by increase in rice yields facilitated through the new production techniques (ibid.). Due to the increase in input expenses, the farmers income dropped with 52% between 1970 and 1981 (ibid.)

The next figure shows the enormous increase of input between 1970 and 1981 (Hobbelink 1991):



2. Indebtedness

Indebtedness also became another big problem for the farm communities. Hobbelink blames the increase in farmers indebtedness on the falling income in combination with the increasing dependency for external inputs (1991: 12). While the net income of the farmers declined, the farmers now also had to pay off the trader for the loans. Poor farmers who could not pay off the loans had to sell their lands to the traders and enter into a life of nomadic farm work in order to support their families' livelihood. This in combination with increased mechanization made it increasingly difficult to find jobs in agriculture and rural unemployment became a bigger problem, causing an increase in poverty in the rural hinterlands (Layosa, 2007: 22).

3. The Hidden Harvest

Traditional farming often uses multi-cropping farming systems, whereby several different crops are being produced next to the main crop. This multi-cropping system provides the farmer not only with the cash-crop to be sold at the market, but also with other food-crops facilitating the farmer and its family with a diverse diet to feed their household. Vandana Shiva, an academic environmental activist, emphasizes this point in her book "Staying Alive: Women, Ecology and Development" (1989):

"In the context of diverse outputs from the farm, the HYVs were not really high yielding even under the best conditions. They appeared high yielding because a

whole system of cropping that provided diverse food to man, animals and the earth was reduced to the output of a single crop”(ibid.: 24).

Shiva indicates that the increased yields produced by the HYV's came at the cost of other crops and beneficial outputs produced by the traditional farming system, merging all various outputs into the single yield of the HYV. In this way, other crops and farm outputs produced through the traditional system are being overlooked and neglected. While the practice of multi-cropping, whereby the farmers grow several crops at the same time, has "...proved to be a highly efficient and sustainable way of producing food and a whole series of other products" (Hobbelink, 1991: 13). Hobbelink calls the loss of these beneficial farm outputs 'the hidden harvest', because the loss of the beneficial farming byproducts are often not included when the yield of the single HYV crop is measured (ibid.: 14). The main of these other beneficial products are food resources that added a welcome variety of nutrients into the diets of the farmers. Traditional rice paddy fields brought a diversity of protein rich food into the farmers kitchen such as additional plants that, under the Green Revolution sentiment, were suddenly seen as weeds that needed to be exterminated through chemical toxins in the form of herbicides and pesticides.

4. Environmental Degradation

The use of chemicals intoxicated the farm environment, and destroyed another important protein source for farmers such as snails, birds, frogs and fish that used to thrive in the farmers' fields. Shiva stresses how traditional farming practices evolve around a complex and balanced system that is embedded in the specific environment of the farm. This system ties plant and animal production together with soil and water management. According to Shiva these balanced systems are disturbed by the Green Revolutions focus on single high yielding cropping through chemical inputs. Which resulted in "...productivity collapses, soil degradation and over-exploitation of water and mineral resources" (ibid.: 13). Asian farmer- and civil society movements call upon the same issues that are raised by Hobbelink and Shiva.

2.3.1. Effects of the Green Revolution and Criticism

In "The Great Rice Robbery; A handbook on the impact of IRRI in Asia" (2007) the Pesticide Action Network Asia and the Pacific (PANAP) also criticizes the Green Revolution, by assessing the local realities for the farmers over the single factor of increased single-crop yield. In the handbook, the KMP and Patricio M. Layosa, the acting president of the Brotherhood of IRRI Support Services Group (BISSIG), assesses the other effects of the

Green Revolution and come with some of the same findings as Hobbelink and some more. I will briefly mention the other concerns that these groups illustrate: a.: social economic effects; b.: health effects; c.: environmental degradation; d.: crop biodiversity loss. These concerns are more often inflicted with modern agricultural intensification schemes and are just as often neglected by assessments that praise the success of the Green Revolution and other modern technological approaches towards agriculture.

a. Social economic effects

The critique of the KMP on the negative effects on the Green Revolution on farmers is fierce and unforgiving:

“It had brought intensification of problems to farmers, proportionate to the degree of structural problems in their rural societies. The gains of GR were selective and biased for the bigger farmers and landlords. The consequences for the poorer farmers had been dire and profound, in terms of increased indebtedness and poverty. In many instances, Green Revolution had led to the weakening if not obliteration of community traditions and culture that were so closely tied to agriculture. Local agricultural knowledge had been replaced by a dependence on external inputs, losing thereby the indigenous capacities of small farmers to plan his farm work and cope with natural stresses. The impact of GR across Asia had also led to consequent displacement of farmers and farm workers from their land and life-giving resources, such as rural to urban migration (KMP, 2007: 1).

The KMP emphasizes how structural social problems only grew deeper into the livelihoods of the Filipino farmers through the Green Revolution. Inequality between rich and poor farmers increased, traditional knowledge disappeared and farmers became dependent on the external inputs. The displacement of farmers was caused by the mechanization of agriculture. Rich farmers who could afford modern machinery grew richer because they could work the land more efficient, but at the same time this was counter-productive for poorer farmers who could not compete and for tenants who became replaced by machinery. In this way the poverty gap increased further because farmers lost their lands, income and livelihoods (Layosa, 2007: 23).

Indebtedness became the other big problem for the farm communities. The use of the technological package became compulsory and was mainly purchased through credit packages provisioned by local government and traders. Layosa argues that this trapped the farmers into indebtedness (Layosa, 2007: 20).

b. Health effects

The health effects that came forth out of the Green Revolution are twofold. On the one hand there's an increasing nutritional deficiency caused by the transition from a multi-cropping system to a mono-cropping system. As already explained, a multi-cropping system offered the farmers a wide variety of food resources from their own field. Layosa indicates that deficiencies of micronutrients such as iron, zinc and vitamin A became prominent because of the loss of variety in the farmers field and therefor diets (ibid.). On the other hand, farmers became intoxicated by the use of chemicals, Layosa states that most farmers are not being educated or informed about the toxicity of the chemicals they use, and what kind of protective measures they can take against it (Layosa, 2007: 24). Pesticide poisonings occur often, however the statistics about this range from 375.000 to 25 million workers who suffer from pesticide poisoning, and between 10.000 to 200.000 people per year who die of pesticide poisoning. These numbers are extracted by the KMP from research institutions and NGO's such as Oxfam and the World Health Organization (KMP, 2007: 9). More direct numbers are given by Cosca, Lu and del Mundo (2010: 158), they indicate that over the period of 1980 to 1987 there has been 4031 cases of acute pesticide poisoning been recorded in Filipino hospitals in which 603 cases resulted in death. It is important to note here that these figures are just the top of the iceberg for they only include the acute pesticide poisoning cases of people that are actually being hospitalized. The figures of people who are poisoned but not being admitted in an hospital or being poisoned in a non-acute form but in chronic and long-term way resulting in diseases such as cancer, birth defects or sterility are not included, for they are much more difficult to assess (KMP, 2007: 9). It may be clear though that pesticide poisoning non the less is a very real threat to farmers, often caused by inadequate information and lack of protective measures (PANAP, 2010: 59).

c. Environmental degradation

The use of chemical input has led to polluted waterways, killing fish, insects and other wildlife that lived in and around the agricultural fields (Layosa, 2007: 25). Besides the degradation of fresh water also problems with soil fertility became an increasing problem in the Philippines caused by the newly adopted chemical inputs. This resulted in a decrease of yields because the soil microorganisms were weakened and soil structure became eroded, resulting in a decrease in yields and intensification of chemical input use (KMP, 2007: 10). The mono-cropping system also resulted in an increase of pest resistance and pest outbreaks (ibid.: 8-10).

d. Crop biodiversity loss

One of the biggest problems that came out of the Green Revolution was a massive loss of crop varieties. Before the Green Revolution just for rice alone there were over 3000 different traditional varieties. Most of them resistant to pests and diseases and defined by good taste. They also didn't require irrigation or intensive inputs and the farmers could use their own seeds for the next planting season. The farmers chose the seeds that were most suitable to the specific circumstances of their land (Layosa, 2007: 18). The HYV's on the other hand didn't offer this broad range of choice with their production being dependent on irrigated land, fertilizers, pesticides, herbicides and other inputs. Instead of the thousands of varieties that the farmers could initially choose from, the package only offered ten varieties. 93% percent of irrigated lowlands were planted with HYV's by 1982. HYV's replaced thousands of rice varieties in the Philippine rice lands (ibid.:20). Farms without access to sufficient water supply were therefor left out (ibid.: 19-20). The thousands of traditional rice varieties were replaced by the ten HYV's, eradicating the indigenous varieties. Thousands of these different varieties are kept in gene-banks managed by IRRI, but are inaccessible for farmers nowadays (ibid.:23).

In this chapter so far we have seen how the Masagana '99 program through which the Green Revolution was installed, did not succeed in benefitting most farmers. Previous paragraphs show a variety of negative outcomes of the Green Revolution. To summarize: the socio-economic effects were mainly loss in land, loss in income, loss in employment, loss in choice over seeds, loss of health and severe indebtedness to traders. The second by-effect was the detrimental impact on the environment that only further increased the negative spell over the farmers through the loss of beneficial edible outputs – the hidden harvest – and loss in soil fertility. All of this led to a loss of independency over the own production and food provision of the farmers. The farmers grew dependent on the chemical input, on the HYV seeds and on the traders loans. The fact that the farmers became indebted to the traders while their net benefits decreased became a vicious circle that was hard or – almost – impossible to escape without external support.

2.4. Conclusion: No turning back

However the Green Revolution did succeed in creating temporal rice self-sufficiency, this was just temporarily, created through high subsidies instead of through a structural change in the Philippine agriculture in which it could become self-sufficient through its own efficiency instead of becoming dependent on external inputs. The Green Revolution didn't

help the farmers in being more sovereign and self-sufficient. Rather, similarly to the economic agricultural system they were part of, they fell dependent on externalities that dictated how and what they produced and how they could sell it through control mechanisms of indebtedness implemented under Masagana '99.

After the adoption and implementation of the package it became increasingly difficult to turn back to traditional ways of farming. Where the farmers previously had been more independent in terms of deciding over their own produce and input, they now fell dependent on what the traders dictated them to produce and for how much to sell their produce. The farmers became indebted whereby they often lost their lands, the use of chemical inputs destroyed the soil fertility, leaving them with no other immediate option as to increase the use of fertilizers, causing even more soil erosion. In the meanwhile also most of the traditional seed varieties had become inaccessible for the farmers. The farmers became tied to the traders through loans and indebtedness. Farmers also became more dependent on the market for their own food consumption as well as for their agricultural inputs.

In the mainstream statistics about the Green Revolution these various costs and losses are often not counted in, painting a much better picture useful for the promotion of modern technological methods. The attention is mostly drawn to the yield and production of the single rice crop. By looking at the other variables derived from the local context, a more fair account can be given, not only for the effects of the Green Revolution, but also to farming production in general. No matter how dominant and transformative the sway of the Green Revolution has been for the Philippines, contesting voices have always been quick – and precise – to counter the narrative of the “success” of the Green Revolution. The Green Revolution in the Philippines brought temporal rice self-sufficiency to the country, have shown that this came at the cost of a plethora of other effects that affected the farmers who had adopted the new program. These costs are highlighted by the contesting voices of those who approach the effects on what it meant for the farmers and peasants and the further implications of the agricultural environment. The analysis of Hobbelink corresponds to the analysis of the KMP. They both argue there was an increase of indebtedness and a decrease in real farm income which widened the poverty gap even further and caused poor farmers to lose their lands. Beneficial farm by-products, the hidden harvest as Hobbelink refers to, decreased and so did crop biodiversity. These things only worsened through the effect of the environmental degradation that the chemical inputs had induced over the farmlands and the surroundings. The effects I have described would become resembling for other modern agricultural

interventions that followed up after the Green Revolution. I will refer to these in chapter IV, after I provide a closer look at the neoliberal current that came to dominate the idea of food security in the Philippines in the coming chapter.

Chapter III: Neoliberal Current over Food Security

In chapter I showed how the structures of neoliberalism has been implemented in the Philippines through forces of indebtedness and dependency on the multinational development institutions. After Marcos fled the Philippines, the neoliberal hegemony of the west over the Philippines could finally fully blossom, the last obstacles had been erased now Marcos was not in charge anymore. In this chapter I will show how neoliberalism came to full fruition in the Philippines in the decades after Marcos, and how the Philippines were restructured in order to be increasingly dependent on the international market for their food and input provisions, which led to grave neglect for the countries' self-sufficiency in food production. It also gave way for a second agrarian revolution that I refer to as the 'Gene Revolution'. The Gene Revolution worked through the same power structures and strategies as I have showed in the Green Revolution, but with an even more powerful technological packages that consisted of gen-technology, that tightened the strings of indebtedness and dependency even further. In this way the new technological package can be seen as a sort of an upgrade for the HYV's, this time deepening the ties even further and enforcing the neoliberal hegemony over the country. One important difference with this gen-technological package over the HYV's is that the gen-technology has been marketed directly by the TNC's, while it also found its way through government' structures as also seen during the Green Revolution. I will argue that the deeper implementation of neoliberalism tightened the strings of control of the western imperial powers over the Philippines, leading to a second agricultural revolution, which I refer to as the Gene Revolution.

3.1. Neoliberalism Entering the Philippines

After Marcos reign the Philippines plunged into a deep crisis. The agricultural system fell from an highly subsidized Masagana '99 program – wherein it had succeed to become rice self-sufficient – into a system in which all subsidies were retreated overnight. While Marcos had injected the Philippine agriculture with billions of dollars' worth of subsidies, new policies were implemented by the World Bank and the IMF which merely focused on paying off debts. Marcos left the country with over 25 billion dollar in debt, all sanctioned by the IMF and World Bank who had facilitated an almost unlimited access of loans to the Philippines under Marcos' reign (Bello, 2008: 452). Because of the indebted state of the

country, Corazon Aquino, the new president of the Philippines, was not left with a choice other than to go along with the new policies, forced upon by the western development programs. Similarly as how the farmers became dependent through mechanisms of control that the Green Revolution had laid upon them through loan structures and indebtedness, the Philippines came under the spell of neoliberal restructuring programs through its indebted state. The new neoliberal agenda had already been laid-out before Aquino took over by indebting the Philippines in such a fundamental way that they had no choice but to partake in the new economic neoliberal restructuring current.

The push for free trade in agriculture around the 1980's was not something the Philippines exclusively fell prey to. Instead it was a bigger global movement that heavily influenced many economic and agricultural policies worldwide. It mainly influenced agricultural production and imports and exports. Due to neoliberal readjustments, the Philippines opened itself to the foreign markets and was forced to stop the agricultural subsidies that had sustained self-sufficiency in rice in previous years. The Philippines fell dependent on importing rice and other food products to feed the country. Many scholars argue that the neoliberal program has been the main reason for the food crisis in 2008 and for the high dependency of development countries on importing food. Walden Bello is a Filipino scholar who served as a member of the House of Representatives of the Philippines and has been a fierce defender of farmers sovereignty rights for many years. According to Bello, the food crisis of 2008 was manufactured by the free trade model that was brought upon by the new neoliberal wind that swayed over the country. I will use the analysis of Bello to show the chain of events happening in the Philippines brought upon by the imposition of neoliberal structures.

Bello has published many articles about the current state of the food crisis and agricultural system of the Philippines. In his paper 'How to Manufacture a Global Food Crisis' (2008) Bello raises and answers the question why former self-sufficient rice-consuming countries have become dependent on imports. He shows how the Philippines "...provides a grim example of how neoliberal economic restructuring transforms a country from a net food exporter to a net food importer" (ibid.: 451). Bello argues that the rise of an unequal global food system was the result of the dominant neoliberal paradigm, which he defines as:

Neoliberalism is a perspective that champions the market as the prime regulator of economic activity and seeks to limit the intervention of the state in economic life

to a minimum. Neoliberalism in recent times has become identified with economics, given its hegemony as a paradigm within the discipline, that is, it's excluding of other perspectives as legitimate ways of doing economics. (Bello, 2009b)

After Marcos fled, the Philippines became the world's largest rice importer. The country had not only been rice self-sufficient, but it had also become a net-exporter. After Marcos, the cutting of government investments prevailed. The World Bank and IMF pressured Aquino to make repayment of foreign debts a priority while at the same time it gave another loan that entailed another set of neoliberal restructuring. Bello sees no cure in this policy and mentions how Aquino was warned by the country's top economist that "...the search for a recovery program that is consistent with a debt repayment program schedule determined by our creditors is a futile one" (ibid.). Despite this warning she pushed the recovery program, only to witness the prediction of the economists turning into reality. The country's capital expenditures fell from 26 to 16 percent between 1980 and 1994 and agricultural budget spending fell by half (ibid.: 452).

According to Bello, the idea behind the restructuring program was to create space for the private sector to energize the countryside. However instead, the countryside degraded quickly and foreign investors did not manage to reenergize the countryside. Irrigation channels eroded due to a lack of maintenance, while most of the HYV seeds that the farmers had become dependent on relied on this. There was also a lack of proper infrastructure, only 17 percent of the roads were paved without a sign of political ambition for improvements (ibid.). The yields in rice fell far below the rice yields of some neighboring countries such as Vietnam, China and Thailand, each of the countries had invested in rice self-sufficiency and export. The draw-back of the state in terms of farmer and peasant support had become destructive for them since they had become dependent on state supported packages and investments during Marcos regime and the Masagana '99. Therefore, agriculture in the Philippines collapsed and rural poverty increased further.

The cutback in agricultural programs was followed by further trade liberalization when the country joined the World Trade Organization (WTO) in 1995. By joining the WTO the country entered the free market and had to further eliminate all quotas on agricultural imports except for those on rice. The agreement on quantitative restrictions on rice import expires in 2017. At the time that the Philippines joined the WTO, the production was already weakened through the neoliberal structural adjustment programs that were imposed over the Philippines. The import quantities of rice almost ten folded in only three years' time after the country

joined the WTO, from 263,000 tons in 1995 to 2,1 million ton in 1998. In the period before joining the WTO, the Philippines had been promised by the World Bank handlers that losses in traditional crops would be compensated by a new export industry of ‘high value added’ crops, but these promises failed to materialize. Also the promise of new job opportunities in agriculture could not be kept, instead, agricultural employment would rather drop from 11.2 million in 1994 to 10.8 million in 2001 (ibid.: 452). While the growth in agricultural production was lacking, agricultural production in neighboring countries rose and they were able to export staple products such as rice and corn for lower prices, due to high domestic subsidy and national agriculture investment programs.

The neoliberal reforms had been based on free market principles that promised that the market would balance itself by economic principles such as comparative advantage. But at the same time, the western countries who had insisted on a reliance on the free market principles, they didn’t want to commit to a level-playing field themselves but instead highly subsidized their own agricultural production. Even though the agricultural development was stagnating and going downhill, the country was not allowed to intervene, given the strict dictations of the WTO neoliberal agreements they had signed for. Evidently, the Philippines could not compete with the U.S. and the E.U, which soon overflowed the Filipino market with highly subsidized cheap corn and other food crops. Filipino corn farmers became demotivated by the unfair competition they couldn’t keep up with, which caused a reduce in corn land of 20 percent loss between 1993 and 2000 (ibid.).

According to Bello, the initial goal set up by the western development institutions had not been to make developing countries more self-sufficient in their produce, but rather more dependent. He cites the US Agriculture Secretary John Block in the year 1986, the year that Marcos and Aquino had switched power. Block is already very clear in its intentions concerning foreign agricultural policies:

“The idea that developing countries should feed themselves is an anachronism from a bygone era. They could better ensure their food security by relying on US agricultural products in most cases at lower cost” (ibid.).

This shows that the idea of self-sufficiency for developing countries was not at all motivated by the western powers. Rather, the idea of reliance on the – western – market became part of the status quo in the neoliberal policy for agricultural development. And indeed within just a year after this statement, the Philippines fell dependent on the importation of rice. Block did not mention that the ‘lower costs’ of US products had to do with the massive subsidies on

their agricultural produce, therefore highly distorting the level playing field between developed and developing countries. The amount of subsidies in the US and EU give this away, according to Bello who claims that: “Since the late 1990s, subsidies have accounted for 40 percent of the value of agricultural production in the European Union and 25 percent in the United States” (ibid.). This is a clear indication of the unfair competition between developed countries who kept their prices artificially low, going against their own neoliberal paradigm of “free market”, activist scholars Fred Magdoff and Brian Tokar see the free market as a myth:

“The Washington Consensus, an ideology developed by the advanced capitalist countries, especially the United States, continues to promote the myths of ‘free markets’ and ‘free trade.’ The dogma holds that if restrictions on markets are eliminated, both within a country and between countries, market forces will work their magic and efficiently allocate resources”. (Magdoff, Tokar, 2010: 17)

While developing countries were forced to submit to the principles of the free market and lifted their protectionist barriers accordingly, the reluctance of developing countries to practice their preach caused an uneven balance in the market, one that the Philippines could not compete against. Bello argues that a “...globalized capitalist industrial agriculture...” had been the result of the neoliberal policies:

“Before the global economic collapse that began in the middle of 2007, agricultural systems throughout the world were being rapidly incorporated into an integrated system in which export-oriented production of meat and grain was dominated by large industrial farms [...] and where technology is continually upgraded by advances in genetic engineering from firms such as Monsanto” (Bello, 2009)

By integrating the Philippine agricultural system into the larger system in which market mechanisms were the dominant force, one of the main goals of the WTO’s agreement to “...open up markets in developing countries so they could absorb surplus production in the North” (ibid) had succeeded. Magdoff and Tokar also argue that the myth of the ‘free market’ has made it easier for western agribusiness TNC’s like Monsanto, Syngenta, Cargill and DuPont to gain global competitive advantage, which has brought economic hardship to low income countries (2010: 15). Genetic engineering through Trans-National Companies (TNC’s) as Monsanto, Syngenta and Bayer, had come to play an important role in the Philippines since the introduction of Genetically Modified Organisms (GMO’s) in 2003. Vandana Shiva sees the rise of TNC’s that are involved in gen-technology as a way to control countries and agricultural systems. She argues how TNC’s, facilitated by the neoliberal sway,

use agricultural tools of control to (re-)organize economies while fighting a war with its oppressed citizens:

“The global corporate economy based on the idea of limitless growth has become a permanent war economy against the planet and people. The means are instruments of war; coercive free trade treaties used to organize economies on the basis of trade wars; and technologies of production based on violence and control, such as toxins, genetic engineering, geo-engineering, and nano-technologies”. (Shiva, 2013: 3)

Shiva hereby poses how modern techniques such as gen-technology are instruments of war, used by neoliberal hegemony structures to function as tools of control. Gen-technology as tool of control, brings in a second dimension of tools of control. So far I have argued that indebtedness was a tool of control to implement stringent restructuring according to the neoliberal paradigm, I argue that the introduction of gen-technology is a second tool of control, through similar workings as the HYV's from the past, but with even deeper ties of control and a downwards cycle of dependence. In the next paragraph I will introduce the most prominent gen-technology of the Philippines, that soon after its introduction came to control the Filipino farmers and tenants in several different ways.

3.2 GM corn commercialization in the Philippines

Genetically Modified (GM) corn is introduced on the Philippine market since 2003 and has known a staggering rise in adoption since then (USDA Foreign Agriculture Services, 2015). GM corn is the third mostly planted crop in the Philippines. The country used to plant mostly white hybrid corn as food and cash crops, but made an increasing shift towards yellow GM corn since the introduction. Yellow GM corn is not suitable for human consumption but produced as feed crop for the country's livestock and poultry sector (MASIPAG, 2013: 13). GM corn was introduced into the country through Monsanto, Pioneer, Syngenta and Bayer. These are the four massive players in pushing gen-technology in the Philippines (ibid.: 33).

There are currently three varieties of GM-corn in the Philippines. The first one that was introduced in 2003 is Bt-corn, which is an abbreviation of the soil bacteria *Bacillus thuringensis* that creates a lethal poison that kills specific insects. This poison is been put into plant DNA so that every cell of the plant creates the toxin. In its natural form, the Bt toxin has a safety catch on it which keeps it inactive and is only removed when it gets inside of the alkaline stomach of the Asiatic Corn Borer or other insects that are sensitive to the toxin. It destroys the stomach lining of the insect and kills it. The GM variety however has been

modified in such a way that it no longer has the safety catch, which makes it harmful for all organisms that consumes it. The Bt-gene is also incorporated in eggplant and rice and targeted for commercialization by 2013 in the Philippines (ibid.: 15). Bt-corn came into commercialization in 2003, when 10,769 hectares of Bt-corn was planted. This reached its peak at 2007 with 122,593 hectare from where it decreased to 21,007 hectares in 2011.

The second variety is RR corn which is an abbreviation for Roundup Ready corn. The genes of the RR corn are modified in such a way that the corn survives herbicide spraying that contains glyphosate such as Roundup Ready. While other plants are killed by the Roundup Ready, the corn is not hindered by it (Greenpeace, 2013: 9). RR corn is introduced in 2006, reached its peak in 2007 with 120,023 hectares of RR corn production and fell to 15,038 hectares in 2011.

The third variety is stacked corn, meaning that it has both genetic modifications in it. Sometimes this is also being referred to as Bt/RR corn. The stacked variety was introduced in the same year as RR corn in 2006 but has not seen its peak yet. The production started off with 4,580 of hectare and rose to a staggering 643,808 hectare in 2011, amply compensating for the decrease in the other two GM corn varieties. Until now it is mainly the stacked variety of corn that is being used in production (MASIPAG 2013: 15). Due to the rapid expansion of the GM corn areas, the country ranked 13th in position of ‘mega-producers’ of GM crops in the world (ibid.: 18).

The following table shows the three provinces in which the GM corn is being cultivated and the increase and decrease of the cultivation of the three different GM Corn technologies.

Area of GM Corn Cultivated in the Philippine Island Groups 2003 – 2011 (ha)

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bt Corn									
LUZON	10,158	48,516	43,735	85,702	103,438	68,301	38,507	37,115	19,331
VISAYAS	24	534	445	405	2,551	298	0	0	0
MINDANA	587	10,706	5,829	10,693	16,604	13,053	9,516	3,120	1,874
Total	10,769	59,756	50,009	96,800	122,593	81,652	48,023	40,235	21,205
RR Corn									
LUZON	0	0	0	11,685	54,509	5,471	3,518	642	4,295
VISAYAS	0	0	0	4,2424	8,295	4,571	2,790	0	800
MINDANA	0	0	0	10,384	56,589	41,443	40,501	8,048	9,943
Total	0	0	0	26,493	120,023	51,485	46,809	8,690	15,038

Stacked (Bt/RR)									
LUZON	0	0	0	3,879	59,346	158,520	183,771	373,079	452,730
VISAYAS	0	0	0	232	2,472	7,074	8,006	5,366	17,011
MINDANA	0	0	0	469	9,641	48,844	40,618	115,153	173,924
Total	0	0	0	4,580	71,279	214,438	232,395	493,598	643,665
GRAND TOTAL	10,769	59,756	50,009	127,873	313,895	347,575	327,776	542,522	679,908

Source: White Corn in the Philippines – Greenpeace (2013)

Gen-technology is pushed through western TNC's that have market control and free entrance in the Philippine agriculture. The technology is seen as a way to increase food security through increasing yields and it promotes to be the solution against pests. As the table shows, gen-technology of yellow corn proves to be the replacement for the use and production of HYV's. Therefore I argue we can speak of a second agricultural revolution, i.e., the Gene Revolution. Except for the difference between the intrinsic technology of HYV's and GMO's, many of the mechanisms of the techniques and implementations are similar as witnessed during the Green Revolution. In the next chapter I will show how the Gene Revolution is criticized and contested by Filipino counterforces that promote more environmentally and socially sustainable alternatives to the current hegemonic paradigm. For now, it is important to introduce the concept of neoliberal food-security, since this approach came out of the neoliberal market structures as described above. Through distinguishing the neoliberal paradigm towards food security with the alternative and contesting paradigm of 'food sovereignty', we can lay bare how different paradigms bring other approaches forward towards the question of how to produce food and who's interests it should serve and currently serves.

3.3 Neoliberal Food Security Paradigm

In the book 'The Politics of Food: the Global Conflict between Food Security and Food Sovereignty' (2010), William D. Schanbacher distinguishes between two different paradigms in relation to food security. He poses the neoliberal 'food security' paradigm on the one hand, and the alternative 'food sovereignty' paradigm on the other. The distinction that he makes can be better understood by the neoliberal currents that influenced the approach towards the question 'how to feed the world', as raised by the WTO and FAO (FAO, 2009: 2). As I have previously showed, the question of food security had been answered through a deep neoliberal reform program, and the concept of 'food security' became embedded in this neoliberal approach. The deeper the restructuring tentacles of the neoliberal approach towards

food security got the country in its grip, the fiercer the food sovereignty movement contested its global take over in the agricultural lands of developing countries. Schanbacher describes 'food security' as a global food regime that came up after the decolonization of developing countries through local, national and international relations. In the previous paragraph I have showed how this developed in the Philippines correspondingly. He argues how the rise of development institutions such as the IMF, World Bank and the World Trade Organization (WTO) came to approach food security "...through economic policies including trade liberalization, privatization, deregulation of national industry, and the opening of economic markets"(ibid.: viii). Schanbacher sees food security as being run by these western development institutions and he calls the collaboration between these institutions the 'Global Food Regime'. Their guiding principle as a solution to poverty and achieving food security is via economic growth and market mechanisms, as we have seen in similar ways in the case of the Philippines. In this chapter I have so far showed that these structures are exactly the detrimental forces of the sway of neoliberalism that the Philippines fell under. Therefore I refer to this approach as neoliberal food security.

3.4 Conclusion

In this chapter I have showed how the neoliberal food security paradigm gained a tight grip over the Philippine economy and agriculture through mechanisms of indebtedness and dependency. Together with the introduction of gen-technology, I argue that these are the main tools of power of the neoliberal paradigm to push through agricultural restructuring to secure its own benefits, namely, control over the market and agricultural production. In this chapter I have also showed under which idea the push for neoliberal food security had been promoted. This came under the promotion of the idea that the free market can provide in food security for the Philippines, without a further urge for the Philippines to develop a strong and resilient agricultural system for the provisioning of their foodcrops. At the same time, gen-technology has been introduced in the Philippines under the promise of agricultural development. The fairytale of neoliberal trade and food security has not proved to bring welfare to the Philippines, but has rather proved to be a way for the western powers to imply their own power structures of control over the country, dictating their agricultural produce, imports and structure. Specific ways of control have also materialized in agricultural inputs such as – GM – seeds and additional inputs. In the next chapter I will show how this has become a weapon of control that has been introduced through the Gene Revolution. After that I will show the contesting of these structures through the counter movement of food

sovereignty which counters the neoliberal food security paradigm and proposes ecological and socially sustainable alternatives towards food consumption and production.

Chapter IV: Neoliberal Food Security versus Food Sovereignty

In this chapter I will show how the neoliberal food security paradigm imposes restructuration in the farmers field. I zoom in further on the mechanisms of control imposed through gen-technology that is being introduced through TNC's that find their way into the market and the governments' structure. I explore this mechanism through three different NGO's, that are leading drivers in the Philippines in terms of contesting these controlling mechanisms, implemented by neoliberal food security. The NGO's themselves propose a different solution to an agricultural system, which is the food sovereignty paradigm. Food sovereignty is a movement that came into existence to counter the workings of the neoliberal food security hegemony. It promotes farmers rights all over the world and insists on food sovereignty for farmers and consumers worldwide. I will introduce this concept after I have showed the mechanisms of the neoliberal food security paradigm in the Philippines. In this chapter I argue that it is essential to approach both paradigms as separate and as an antagonism

4.1 Antagonistic approach towards neoliberal food security versus food sovereignty

William Schanbacher argues that "...a critical analysis of the [neoliberal] food security and food sovereignty model reveals fundamental antagonisms between the way hunger and malnutrition are conceived within these two constructs"(2010: ix). I argue that it is useful to use the concepts of food security and food sovereignty as a dichotomy to analyze current agricultural sways. In my analysis I use the two paradigms as antagonisms that both influence the Philippine agricultural field through different approaches. However aspects of both paradigms are embedded in the Philippine agricultural paradigm, they are enacted distinguishably and both paradigms are separately traceable through the Philippines political agricultural structure all the way until it reaches the farmers field. I treat the two opposing paradigms as antagonism, because it enables me to track down both paradigms in the political agriculture field and to analyze through which kind of power structures it influences agriculture in the Philippines. By doing this, I follow the lead of political scientist Chantal Mouffe, who argues in her book 'On the Political'(2005) that "...the only way to avoid the hegemony of one single hyperpower" (ibid.: 7) is to "...not to overcome them [antagonisms] through consensus but to construct them in a way that it energizes the democratic

confrontation” (ibid.: 6). Mouffe argues further that “...a pluralist liberal democratic society does not deny the existence of conflicts but rather provides them the institutions allowing them to be expressed in adversarial form...”. To Mouffe one of the main essences of a functioning democracy is debate about possible alternatives, consensus is necessary, but it must be accompanied by dissent. As in this chapter we will take a further look at the adoption of gen-technology in the Philippines, it will not be difficult to come to the conclusion that alternative voices brought in through the food sovereignty paradigm are being left out of the political debate and are especially excluded from the associated institutions, as far as these exist. According to Mouffe, this is a dangerous situation and an immediate threat for the “democratic” political system of the Philippines. Mouffe argues that the main obstacle to the implementation of an antagonistic politics comes from the fact that “...we are witnessing the unchallenged hegemony of neo-liberalism with its claim that there is no alternative to the existing order” (ibid.: 31). She continues:

“If we take ‘liberty and equality for all’ as the ‘ethico-political’ principles of liberal democracy, it is clear that the problem with our societies is not their proclaimed ideals but the fact that those ideals are not put into practice. So the task for the left is not to reject them, with the argument, that they are a sham, a cover for capitalist domination, but to fight for their effective implementation. And this ofcourse cannot be done without challenging the current neo-liberal mode of capitalist regulation” (ibid.: 32)

I argue that it has become increasingly difficult for the Philippine politics to resist against the neoliberal hegemony because of its hegemonic control through tools of power as indebtedness and dependency. Through the deep indebtedness and dependency of the Philippines on the western development institutions they are unable to enact a full functioning democratic politics, for this can threaten the neoliberal sway over the Philippines, a fact that the western development institutions cannot afford because it will directly threaten their interests over the Philippine market. Therefore, the Philippine political system is held in a deadlock and shows signs of paralysis to enact as the liberal democratic body it claims to be. As the Philippine government is not only being taken out of the power-field through the belief that there is no alternative to the neoliberal system, it has also been invested by the western hegemonic neoliberal parasites that use the Philippine political structure as a vessel to spread out its arms over the entire Philippines.

Only two other powerful actors have remained to challenge and contest the western neoliberal hegemonic powers. This is the NGO and civil society community and the House of

Justice. In this chapter I will show how the NGO and civil society community, through the paradigm of food sovereignty, counters and contests the paradigm of neoliberal food security that holds the Philippines in a paralyzing grip. Also, I will argue and show the importance of a functioning regulating framework through which agricultural interventions such as tools of control as GMO's should be monitored and how that lacks in the current system. Only through countering the current paradigm, by contesting it and criticizing it, it becomes possible to share light on the workings and mechanisms of it. Therefore the civil society and NGO network is of tremendous importance in times when government is lacking to create a healthy environment for opposing and oppressed voices to be heard. I argue and will show in which way they contest the current neoliberal approach to food security and what this reveals about the workings and effects of the neoliberal approach over the Philippines. By doing this, it will be clear that the current neoliberal paradigm of food security reveals the same restructuration forces as I have previously showed in the Green Revolution implemented under the wing of the Masagana '99 program. Therefore I approach this second wave of restructuration as the Gene Revolution.

4.2. SEARICE: Advocates for Farmers Rights and Control over Resources

SEARICE is a Philippine' NGO, established in 1977, based in Quezon city and operates in several Asian countries. Throughout these countries they have partnerships with civil society organizations, academic research institutions and local government units. It promotes community-based conservation and development and sustainable use of Plant Genetic Resources(PGR). SEARICE advocates for free access to PGR in order for farmers to be free in what they wish to produce and to keep the genetic varieties accessible for all.

Plant Genetic Resources (PGR) or simply seeds, is where humanity sources its food, fuel, medicine, shelter and clothes. While PGR descend from previous generations and from specific farming communities that cultured and nurtured seeds, PGR have been shared widely and are now considered part of the global commons. Recent developments in agriculture production systems, however threaten the diversity of PGR with the promotion of homogenous crop varieties. In recent years, farmers' access to PGR and their traditional role in conserving and managing PGR has been increasingly reduced alongside the loss of PGR diversity, the bias and massive promotion of technologies favoring homogenous crop varieties and application of different forms of Intellectual Property Rights (IPRs) like patents on seeds (web entry 'About SEARICE).

SEARICE expresses its concern about the rise of GMO seeds and the mechanisms of control that transnational companies (TNC's) use to spread their technology. During my interview with some of their main advocates we spoke about various issues concerning this development. I spoke with Attorney Mario Maderazo; Policy and Communications Coordinator, Roy Cabonegro, Policy Research and Advocacy Specialist and Attorney Rosette Ferrer, Seed Production Program.

Who controls the seeds

SEARICE especially focusses on the issue of control in relation to gen-technology. Ferrer: "...the issue of control is the most concerning to us. We think that genetic resources in general have to be freely exchangeable instead of a matter of income...". Ferrer refers to how the effects of the Green Revolution created that large plant breeders came into being, that dictated to the rest of the farmers and peasants what kind of varieties could be planted, which led to erosion in genetic seed resources. As an example she points to varieties that are very comprehensible in terms of climate change adaptation and the risk of floods and typhoons, natural disasters the Philippines are very prone to, but that are currently inaccessible to most farmers because it is not accessible through the regular market. According to Mario Maderazo another issue that creates problems around the access of the seeds comes because of the funding of the research institutions such as PhilRice and IRRI.

“...we all know that public financing of these research institutions is very minimal in comparison to private and corporate funds. Even if it [the seed development] were going through public institutions, we still need to raise the question until which extent it is governed for the public interest or other interests”.

Maderazo also says that the government has but little control over the research institutions because they hardly invest in them. Which leads to a decline in trading knowledge because it serves no corporate interest. According to Cabonegro the government line is that it promotes and support all various technologies and that it lets the farmer decide. But the government also has certain trade commitments it wants to follow-up on; Cabonegro:

“...they say that they are open for everything, but when you look at it from the bigger perspective of trade and commercial interest, the government is entering the bilateral multilateral agreement of the Trans-Pacific Partnership(TPP) which brings certain conditions with it, for example the use of foreign technology that is imported from other countries into the Philippines, such as Bt-corn and the very controversial Golden Rice...”.

What they see happening is that the production of knowledge is run by a mere concern of private interests in which farmers are being transformed into consumers, as they lose their own production methods and are pushed to submit to the market forces as dictated by the cooperative driven private companies. The market gets driven by the seeds that are made available through these interests, facilitated through the (local) governments and local traders, the farmers have no other choice according to SEARICE.

It is especially the issue of free choice that SEARICE is concerned about. They see a lot of risks and insecurities within the adaptation of gen-technology, but the issue of access and control is their most prominent concern. SEARICE advocates for farmers rights within the International Treaty on Plant Genetic Resources for Food and Agriculture (IT PGRFA) that has been established through collaboration between farmers rights groups as SEARICE and the FAO and that is also acknowledged by the Philippines. The treaty:

“...is a global response to promote the conservation of plant genetic resources and to protect farmer’s rights to access and have fair and equitable sharing of benefits arising out of their use. Sustainable use of plant genetic resources is fundamental for achieving food and nutrition security and for a progressive realization of the right to food” (FAO 2011 web-entry)

The treaty aims at: recognizing the enormous contribution of farmers to the diversity of crops that feed the world; establishing a global system to provide farmers, plant breeders and scientists with access to plant genetic materials; ensuring that recipients share benefits they derive from the use of these genetic materials (Plant-treaty web-entry). According to SEARICE, the Philippines is not only failing in implementing the agreements of the treaty, it is contesting the farmers rights by not submitting to the treaty. Maderazo poses the example that according to the treaty farmers should be able to participate in the certain policy choices of the government that affects the farmers. But according to Maderazo the farmers are not included in any policy intervention at all, last to say that they get to choose in terms of what would be most beneficial for them. Along the lines of the IT PGRFA, Maderazo states that “...the application of this technology is not promoted towards farmers rights nor interest, but is really about getting control over seeds...”.

Local power structures

Cabonegro illustrates how this system of control is implemented in the daily life and decision making opportunities of the farmers. It are most often the people who provide the farmers loans for inputs who distribute the gen-tech seed. They dictate what kind of seeds are being

sold and therefor produced, leaving the farmers little choice in this. The most farmers have become dependent on the loan providers through long-term indebtedness. The loan providers also sells the farmers harvest to the market, being in control over the entire production circle of the farmers. According to Cabonegro these traders often find their ways to the farmers as local governments agricultural extentionalists or other local officials, being placed in the middle of the farmers networks groups. This power relation in the farmers communities is decisive for the farm production of the farmer.

Issue of Transparency in R&D

Another issue that is a concern to SEARICE is the access and transparency to information about – the development of – gen-technology. For example, the field trials of the controversial Golden Rice have been a disputed issue for a long time, with many farmers groups and NGO's speaking out against it. The increasing resistance against the technology manifested itself in the uprooting of an entire test-field in the Bicol region. This became worldwide news (BBC, 2013) and stirred up the debate even further. From then on, there hasn't been any release of public data about it anymore. It has become impossible to know what is going on and how the research is being developed, even for influential NGO's as SEARICE. In Ferrer's opinion that makes the entire R&D on Golden Rice only look more suspicious. The body that monitors the R&D of GMO crops such as Golden Rice is the National Committee on Biosafety of the Philippines (NCBP). The NCBP looks into applications for field-trials and they give out the permits for this. The NCBP used to consist of different persons with different views and opinions on GMO's, but according to Ferrer the NCBP is now homogeneous and constituted by GMO proponents and can therefore not be neutral in the assessment of the requests. "...so far not one of the applications have been denied, every single requested permit has been granted, which is a curious fact on its own...". In SEARICES view the body is not functional anymore but has become a mechanism to legitimize the private sector's operations. Ferrer illustrates this with an example that the NCBP has the obligation to assess the socio-economic impact of each application of gen-technology, but the execution of this commitment has been absent so far. This is important because it shows the danger when a country presents itself as "neutral", seemingly submitting to legislation that underlines this position, but by not implementing and acting upon the legislation creating the opposite effect and works in the hands of the neoliberal food regime. By incorporating the legislation in the governments institutional framework without acting upon it, it facilitates a free way for TNC's, while softening resistance from critical voices

because they seem to have a neutral and regulating policy. Which is obviously not the case. So this tries to soften resistance from contesting forces, while at the same time it facilitates the TNC's a backdoor by lacking following up on the responsibilities it signed for itself. Through continuous challenging and monitoring, SEARICE is able to contest this mechanism and bring it into light. I will show more similar structures in the following paragraph, brought into light by MASIPAG.

4.3 Alternative Assessment on Socio-economic Impacts of Genetically Modified Corn in the Philippines by MASIPAG

Because there has been a persistent lack in the execution of gen-technology in the countries' regulatory system, the NGO MASIPAG has taken the task upon them to assess this instead. MASIPAG is a farmer-led network constituted of people's organizations. It has a scientific approach: "...NGO's and scientists working towards the sustainable use and management of biodiversity through farmers' control of genetic and biological resources, agricultural production and associated knowledge"(‘About MASIPAG’ web-entry). I have had multiple interviews and conversations with several members of MASIPAG, but for the focus of my thesis I like to represent MASIPAG through the relevance of their very comprehensive research on the socio-economic impacts of genetically modified corn. They have published this research in 2013 and it has become an important document in the GMO debate and discourse in the Philippines. It also explores another side on my case-study on GM-corn in Pangasinan that I decided to carry out after I spoke with the NGO's.

“This paper is dedicated to the thousands of corn farmers and their families, whose sacrifices and hardships are testament to their effort to feed the nation. It is their stories of struggle and courage in facing the daily challenge of farming that is at the center of this research. We hope that by writing this paper, we can contribute in uplifting the life and livelihood of the corn farmers. It is high time that their efforts be appreciated, and that their rights safeguarded and protected” (2013, V)

The choice to open the publication with these words reflects the interest and appreciation that MASIPAG has in its farmers and how it is committed to advocate for their rights and interests. The paper criticizes the rational choice idea that says that farmers would only plant GM corn if they get benefitted from doing so.

“Behind the veneer of rapid expansion of GM corn planting is the aggressive and well capitalized propaganda machine of the biotech companies, enabled and supported by pro-GMO policy and program of the government, and enhanced by

promotional arrangements by local financier-traders, and seed/agro-chemical companies” (Ibid.: V).

The paper gives deeper insights in the mechanisms and consequences of the GM corn industry in the Philippines. According to MASIPAG, the real beneficiaries of the GMO market are only a handful of agrochemical TNC’s who control the right over seeds through patents. In 2013, the top four pesticide firms controlled 59% of the global market and the top four seed firms controlled 56% of the global property rights of the global seed market (ibid.: 25). The patents prohibit farmers to save seeds and violators – even those unhappy few whose fields are accidentally contaminated through GM pollen – are penalized or even imprisoned (ibid.: 24). Through multilateral agreements such as WTO membership and the TPP, developing countries push member countries such as the Philippines to adopt and implement patent laws similar to theirs, which enables them to maximize their gains and establish further control over the seed and agricultural chemical market (ibid.: 25). According to MASIPAG, the implications of the push for GMO’s is the “...alienation of the food producers from the seed. Through biotechnology, seeds have been developed increasingly towards satisfying the thirst for more profits of agrochemical TNC’s rather than food security” (ibid.: 27). This development has led to the promotion of environmentally unsustainable agricultural techniques, it depletes soil nutrients, poisons ecosystems, destroys biodiversity and leads to soil erosion (ibid.). Besides environmental degradation, it is also accounted for the reduction of farmers choices and decision making and therefor control over its own seeds and production techniques. This came at the cost of reduction of farmers incomes through an increase of production costs (ibid.). These developments are almost exactly similar to the effects of the Green Revolution and gen-technology can therefore be seen as a reinforcement of a construct that was already been implemented in the agricultural field, consolidating the tools of control through the upgrade called the Gene Revolution. We see exactly the same structures, with the mere difference that the TNC’s are much more directly involved now. This direct involvement is more difficult to trace back in the Green Revolution. I would argue that the visibility has become more clear because the power of the TNC’s have grown under the neoliberal current and are now able to influence the power-field in a more direct way.

MASIPAG reports that GM corn was introduced into the country through sales agents of Monsanto, Pioneer, Syngenta and Bayer. These are the four massive players in pushing gen-technology in the Philippines (ibid.: 33). The agents of the gen-tech companies establish connections with the local traders to promote and sell their products. These traders also serve

as their main financiers or lenders according to the farmers that have been interviewed by MASIPAG (ibid.). Besides the traders, MASIPAG also reports that the agents ask for assistance at the local government to arrange farmers meetings. These meetings are accompanied with presents such as tokens, towels, free t-shirts that carry the companies name and free seeds and herbicides. They also provide food for the attending farmers.

Socio-economic impacts

The paper reports on four different negative impacts to the farmers due to the production of GM corn (ibid.: 40-55). These four impacts are very similar to the impacts of the Green Revolution as I have showed previously. The impacts mentioned by MASIPAG are:

1:Increasing indebtedness; 2:Loss of ownership of their lands and control over their seeds;
3:Food insecurity from loss of biodiversity and soil degradation; 4:Threats to health.

1. Increasing indebtedness

In all 12 cases that MASIPAG studied, farmers have seen negative returns and most of them are indebted to their traders. The farmers who did earn money said that nothing came back because the traders had financed all their production needs including their food. One of the farmers comments: “You have already consumed what you have yet to harvest” (ibid.: 41). The traders also fetch the harvest from the farmers and dictate the buying prices. Those farmers who had sources of income (like overseas relatives sending them money) were not indebted to the traders and could therefor sell at better prices, because they were not forced to sell at the lower prices as dictated by the traders. Apart from being indebted, the costs of inputs have also gone up with between 10 and 15 percent per year. The costs of seeds skyrocketed in some districts with prices starting at Php2,800 per 18 kilo bag, to Php4,600 per 9 kilo bag in 2008. This is extremely expensive for the farmers, even more if taken into account that the seeds have to be bought new each year, since they are not suitable for a second planting. About 40 to 48 percent of the total costs of the farmers now goes to external inputs. Another considerable amount of farmers costs go to the interest they ow to their traders. In four months of GM corn cultivation, farmers would pay an interest between 20 and 40 percent on their loans (ibid.: 44). Despite all the promises of the agents and traders made during the farmer meetings and field demonstrations, all of this led to a huge decrease of net income for the farmers and made them dependent on the traders through being indebted.

2. Loss of ownership over lands and control over the seeds

Traders have now gained control over their farmers through the introduction of GM corn. Most of the farmers have become indebted to the traders and through this state of being indebted they lose their control over their own lands and over their own decisions of what and how to produce. The traders decide for the farmer which kind of crops they plant and even which brand it is. Latter has to do with the incentives that seed companies give to traders to reach a certain sales quota (ibid.: 46). It is important to say that MASIPAG stresses that farmers will not admit in interviews that they are indebted. In the case of MASIPAG it were key informants such as peasant leaders and barangay officials who gave them insights in the real financial situation of the farmers. They revealed that many farmers lost the rights over their lands and some of the farmers became tenants in their own land that was now in ownership by their trader. Besides losing rights over their lands, they also lose their rights over the seed resources (ibid.: 47).

3. Food insecurity from loss of biodiversity and soil degradation

Besides the issues of control, another evident impact in the farmers lives is the negative impact on the environment through the adaptation of GM corn technology. The first of the many impacts is the loss of biodiversity. Due to the increased toxicity of their soil there is a lost in beneficial nutritional by-products such as fish, snails and edible plants. The farmers also find increased difficulties in planting vegetables and root-crops near the GM fields since herbicides kill all but the GM corn. Another problem is the increase in pests and even new pests have shown up. The GM corn is not designed to be resistant to these pest varieties and is therefore prone to the pests. The farmers have also noticed that the corn borer starts to return in their fields and they suspect that the insect is developing an increasing resistance to the Bt corn. However the absence of previously beneficial by-products in the fields in terms of edible plants, super-weeds have been detected in the field that can only be killed by adding another herbicide into the collection of chemicals. This herbicide, 2,4-D is notorious for its high level of toxicity and known as an endocrine disruptor. Lastly, the soils are getting infertile through fertilizer and herbicide use. The farmers complain that they have to use increasing amounts of fertilizers to achieve good harvest which has a detrimental effect on the soil and beneficial soil microbes. Besides fertilizers the use of the herbicide Roundup increases soil fertility further by eliminating weeds down to its root, a former natural food for soil microbes that builds up soil nutrients (ibid.: 50). The elimination of soil microbes degrades and exhaust the soil's fertility until it is depleted and increasingly hard to produce anything at all. It's a vicious circle, the more chemicals are being used, the more chemicals it

will need to give the desired output. In the meanwhile the costs for these inputs rise until the farmer cannot catch up anymore and is left behind with a depleted soil that is not suitable for production any longer.

Another problem is that it changes the structure of the soil, which either becomes harder or it loosens up, depending on the specific local conditions. When the soil loosens it becomes very vulnerable to erosion and landslides. Farmers complain that some farm fields get destroyed after heavy rainfall as their lands get flushed away. Something quite problematic for a country that is vulnerable to typhoons, heavy tropical rains and floods. Another side effect is that the spread of loose lands, through floods and erosion, also influence their new environments. One farmer saw forest lands being replaced by GM corn after heavy erosion and pesticides poison marine life as the chemicals find its way downstream, polluting the once abundant fishing areas (ibid.).

Due to the loss of beneficial by-products and the increasing difficulties for the farmers to grow other crops next to the GM corn, the diets and food security for the farmers have decreased. Instead of producing their own food crops and roam their fields for protein resources, they now have to roam the markets in search of affordable food products.

4. Threats to health

The MASIPAG report is one of the sole documents I have found that have assessed the impact of GM corn production on the health of farmers. The report states some concerning facts. Farmers of all assessed districts except for one have experienced a variety of symptoms after eating the GM corn. Amongst these are stomach and gas pains, diarrhea, skin allergies, yellow skin, shortness of breath, chest pains and coughing. Also the incidence of asthma attacks amongst children increases as the GM corn reached its flowering stage. Also farmers doing the spraying suffer from headaches, shortness of breath and skin irritation. Some illnesses such as urinary tract infection, kidney and liver problems, and high blood pressure and diabetes have become more apparent since the introduction of GM corn. For elderly people also cancer is included and for new-borns there are higher rates in birth defects such as deafness or mute hearing (ibid.: 52-54).

Because of all the health risks involved, MASIPAG argues that the Philippines should exercise the 'precautionary principle', where until scientifically proven as safe, a product must not be tried, propagated and commercialized (ibid.: 54). The report has showed that the farmers "choice" for GM corn is not as simplistic as the economic rational choice theory may

make believe. Once trapped by the promising stories of the traders and agents, the farmers are caught in a downwards spiral that gets increasingly hard for them to escape, the longer they are part of it. “The most bitter realization is that they have become more indebted to the traders than ever before” (ibid.: 55). This shows and underscores how the Gene Revolution was an enforcement of the structures brought in by the Green Revolution. It enforced the mechanisms of the tools of control. This has been possible because the TNC’s have been provided with increasing room of manoeuvre through the neoliberal restructuring, while the farmers and peasants are further marginalized and excluded from the agricultural system. This power relation is what NGO’s as MASIPAG and SEARICE are contesting, through the legit framework of institutional monitoring they try to keep the government responsible for its own power of intervention, regulation and assessment. This is also what Mouffe speaks off when she argues that ethico-political principles, as international legislation for the regulation of implementation of gen-technology that the Philippines have signed, should be fought for to insist on an effective implementation, instead of rejecting them with the argument that it is a sham. And that is exactly what the most prominent NGO’s like MASIPAG, SEARICE and Greenpeace are doing. By remaining an antagonistic position, that continually creates voices of consent, it can maintain its independent position by exactly not giving consent to the capitalist domination which Mouffe talks about. By not creating a space for compromise and consensus, it stays outside of the neoliberal capitalist hegemony through which it can maintain its position of “...challenging the current neo-liberal mode of capitalist regulation”(Mouffe, 2005: 32). By not getting involved in the structure the NGO’s remain their room for manoeuvre through which it can challenge “the unchallenged hegemony of neo-liberalism with its claim that there is no alternative to the existing order” (ibid.:31). I have already showed how SEARICE insists on the Philippines to implement the ITPGRFA it has signed. In the next chapter I will show how Greenpeace and MASIPAG fight for further implementation of other ethico-political principles the country has signed for but not implemented, and how effective this fight can be.

4.4. Institutional Monitoring and Regulative Framework

MASIPAG refers to the rise of GM-technology in the Philippines as promoted by the industry to be: “...the centrepiece of a new wave of Green Revolution promoted by developed countries and TNC’s purportedly to solve the problem of low productivity and hunger among the poor population especially in underdeveloped countries” (ibid.: 3). The paper shows how GM-technology has mostly benefitted the gen-tech industry and TNC’s

over the farmers who applied it in their farms, serving no other than the neoliberal capitalist framework. The sale of GMO seeds was valued at \$11.2 billion and herbicides packaged with the seeds stood for another \$17,9 billion in 2010 alone (ibid.: 27). This is without the sale of other inputs such as fertilizers and pesticides (ibid: 4).

The Philippines are being seen as the leader in biotechnology in Asia and a model for other countries in relation to biosafety regulations. MASIPAG questions the 'model-role' of the country due to its lack in biosafety regulations by noticing serious flaws in the regulatory framework and especially the execution of it. It questions the legality of the process of approval in which permits are granted, the understanding and commitment of involved government agencies, and the access to knowledge for farmers and government officials on the effects of planting GM corn (ibid.: 6). In terms of monitoring it seems that nothing has been monitored yet so far by the appointed government agencies, which is at least curious since GM-technology is adopted in the country since 2003 already. The government has not yet finalized the Manual on Biosafety Decision Making, which is set up for monitoring GMO's in the country. There has not been any post-monitoring of field-tested GMO's, which is in charge of the Department of Environment and Natural Resources (DENR) and the Department of Health (DOH) has also not done any post release monitoring on the impact of GM corn on the farmers and their families who consume Gm corn as food. Also the Bureau of Plant Industry (BPI) from the Department of Agriculture (DA) has not assessed any post-monitoring in the last 13 years of the commercialization of GM-corn. Reasons given for this is that they do not have sufficient funds to do so. Meanwhile, there are no approval or regulatory guidelines set up by the Fertilizer and Pesticide Authority (FPA) for pesticide protected plants such as GM corn. Also the Bureau of Animal Industry (BAI) has a role in regulating GM feeds, such as GM corn, but they neither have taken the commitment upon them in the regulation and monitoring of GMO's (ibid.: 6-8). Apparently, so does the paper conclude, the Department of Agriculture is not very keen on involving other government agencies by not having done a systematic assessment of GMO commercialization. Something that "...industry players are quite content with..." (ibid.: 8). All this indicates a serious lack of a sufficient framework and governmental incentive in executing regulation and monitoring of GM-technology in the Philippines. Which is quite concerning, looking at the fact that the Philippines has achieved the 'biotech mega-country status', in which one could expect that such a country would take the technology it exhibits serious in order to protect the safety and welfare of its citizens. Which the Philippines, in this case, cannot guarantee. It shows that the "democratic" government has not been able to create an institutional framework through

which critical and alternative voices can find their expression and through which contested currents can be regulated. According to Mouffe this is an immediate threat for the liberal democracy. The hegemony of neo-liberalism remains unchallenged through the political order, caught as they are themselves through constructions of debt and dependency due to decades of loans, political corruption and mismanagement. The institutional framework does not provide space for voices of dissent and conflict that question the current hegemonic order of the neoliberal food security paradigm that holds the agricultural world in its grip through controlling tools as patented seeds and chemical inputs that by design need more and more of its application to remain functional, while depleting fertile soil and the health and independency of farmers, making farmers and the whole agriculture system addicted to its input. I will show how this works in reality in the case studies that will be presented in chapter VI.

The Philippine government may not provide space for voices of dissent and conflict in its – lacking – institutional framework, but the voices of dissent have now found their own way of expression. MASIPAG in collaboration with Greenpeace Southeast Asia and some other civil society organisations, filed a case to the Philippine Supreme Court to ban development of genetically engineered product in 2015. The organizations already did this in 2013 at the Court of Appeals (CA) with the result of the CA ruling that the field trials of GM eggplant – similar technology as GM corn – should permanently be stopped (Business Inquirer, 2013). In December 2015, the Philippines’ Supreme Court:

“...has ordered a permanent ban on field trials of genetically engineered eggplant and a temporary halt on approving applications for the “contained use, import, commercialisation and propagation of GE crop, including the import of GE products” (Greenpeace press release 2015)

The ban is in place until a new administrative order takes effect and a sufficient regulatory and institutional framework can be provided. The ban is motivated by the concern that it is “...best to err on the side of caution in the absence of scientific consensus – regarding GE products in their decision” (ibid.) and is motivated by the application of the precautionary principle by the Supreme Court. According to Virginia Benosa-Llorin, Ecological Agriculture Campaigner for Greenpeace Philippines, the decision is a “major setback for the GE industry” (ibid.). The court ruling is a victory for the food sovereignty movement in the Philippines that Greenpeace is part of: Benosa-Llorin: “The Philippines has been used as a model for GE regulatory policy around the world, but now we are finally making progress to

give people a right to choose the food they want to eat and the type of agriculture they want to encourage” (gentechfrei, 115).

Two important things are noticeable here. Through the opposition of the NGO’s, in combination with the ruling power of the Philippines Court, it has been possible to influence policy and legislation in times that the government and the neoliberal hegemonic order would not allow it. Secondly, it has been an important blow for the gen-tech industry, that is now met with a barrier and an obstacle in the country’s legal structure, while it previously had free play in the country. This shows that not only a functioning government is necessary to regulate and contest the neoliberal order, but that a functional civil society and Courthouse are important players in this power-field as well. In this way, the countering voices of contest show to be able to challenge the current neoliberal hegemonic order and can effectively influence the power-field.

Under the idea of ‘modernizing’ of the agricultural techniques through the adoption and implementation of gen-technology, the claim has arisen that there are no relevant alternatives to the existing order, as Mouffe already indicated. But however how much the neoliberal food security paradigm tries to deny it, there are other relevant alternatives for the agricultural system as the food sovereignty movement proposes. Benosa-Liorin argues this in her remark about how “we”, the civil society, is finally making progress “...to give people a right to choose the food they want to eat and the type of agriculture they want to encourage” (ibid). They have made space available for this alternative by challenging the hegemonic order of the neoliberal food security paradigm, that rules over the Philippines. This example shows how important and powerful the civil society actor is in times that governments fail to make space for conflict and voices of dissent. That is to say, when the House of Justice has the means to perform and execute her power as the regulating body she is, which in this case seems to be the case.

4.5 Food Sovereignty as alternative

The current neoliberal approach towards food security is amongst other motivated by the expected world population growth of 34 percent in 2050, reaching 9.1 billion inhabitants by that year (FAO, 2009:2). An increase of 34 percent of world inhabitants, will also increase the demand for food. FAO’s report is similar to the vision of the IMF, World Bank and other mainstream development institutions, that aim to achieve an increase in food production by an increase in yield and cropping intensity through technological intensification (ibid.) and

neoliberal free market mechanisms as I have shown above. The idea of increase in food production through neoliberal market mechanisms is strongly contested. Leading scholars of the counter paradigm called 'Food Sovereignty', dispute the idea of the need for intensification of food production in order to feed the world. Holt-Giménez et al. discuss this in the article with the quite telling title: 'We Already Grow Enough Food for 10 Billion People...and Still Can't End Hunger' (2012). According to Holt-Giménez et al.: "Hunger is caused by poverty and inequality, not scarcity..."(ibid.: 595). They argue that the world already produces 1½ times the amount of food for the current number of the earth's inhabitant and even for over the estimated number of 9.2 billion souls. According to Holt-Giménez et al. the world currently produces for 10 billion people, so scarcity of food is not the main concern. They do not see the solution in an intensification of food production as they argue that the real problem to an inaccessibility of food is caused by poverty, dependency on the market and high food prices, not by a lack of it. The scholars refer to several researches that show how organic agriculture produces the same yields as conventional agriculture and even outperform the mainstream under challenging conditions such as drought and environmental distress (ibid.: 596).

Holt-Giménez and the co-authors of the article promote the food sovereignty movement and perform academic activism to push this paradigm as an alternative to the mainstream neoliberal food security discourse. The movement of food security came into being through the establishment of the movement La Via Campesina. It has united peasant and small-scale farmers groups of 73 countries in the Americas, Asia and Europe, to counteract against the domination of the neoliberal food security paradigm. At the World Food Summit held in Rome in 1996, La Via Campesina defined food sovereignty as: "...the right of each nation to maintain and develop its own capacity to produce its basic foods, respecting cultural and productive diversity. [...] Food sovereignty is a precondition to genuine food security." (La Via Campesina, 1996). It defined it further at the Nyéléni Mali Forum for Food Sovereignty in 2007:

"Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations. [...] Food sovereignty implies new social relations free of oppression and inequality between men and women, peoples, racial groups, social classes and generations" (Via Campesina, 2008)

The food sovereignty paradigm distinguishes itself from the neoliberal food security paradigm by focusing on the rights for farmers and consumers to produce and consume by their own means and production systems. It aims to bring the power and control back to the farmers and consumers in terms of not being dependent on market forces, but by sovereign production and consumption on their own terms and desires. Opposite to the idea of neoliberal food security, it states that communities and nations should have the right and means to produce their own food, through their own genuine and sovereign way of production. Instead of being dependent on food and production systems through external market forces, as neoliberal food security applies. In the above paragraphs I have showed the influence of the food sovereignty movement in the Philippines. The contesting voices can somewhat influence the current power-field by challenging the current neoliberal paradigm. The Philippines have a long history of contesting suppressive powers in the Philippines, sometimes more effective than other times. It is clear though that only by maintaining an antagonistic approach towards the hegemonic powers, by showing influence through dissent instead of by consensus and embeddedness, the mainstream status quo can be challenged.

4.7 Conclusion

In this chapter I have showed the effects of the Gene Revolution and how comparable they are with the similar controlling mechanisms of the Green Revolution. MASIPAG assesses the impact of the Gene Revolution mainly as an increase in indebtedness, loss of ownership and control over means of production namely land and seeds, increase in food insecurity instead of food security through loss of biodiversity and soil degradation, and health threats through the use of chemicals and consumption of the GM-corn. This is similar to the effects the Green Revolution had on the life of farmers.

SEARICE pointed out how TNCs hold a monopoly of control over the access to seed diversity through Intellectual Property Rights. Therefore they insist on a right implementation of the IT PGRFA, a treaty that which acknowledges the farmers rights to access to Plant Genetic Resources and that is signed by the government. SEARICE and MASIPAG both show how farmers production and livelihoods are controlled by powerful field agents, traders and middleman, who are in charge of loans and dictate the seed and production market. However the TNCs themselves also show to be powerful in the promotion of their technology, that they exhibit through field demonstrations and farmers meetings, they ultimately rely on these field agents to fulfil the key-role as middle man between farmers and TNCs in the field. This middleman does not only facilitate the produce, but is also the

keyperson of keeping farmers indebted, with all the detrimental consequences for the farmers that that entails

This chapter has focussed on the contesting voices of dissent, that challenge the neoliberal hegemony of the approach to food security, fight for a proper implementation of its ethico-political morals and propose an alternative to the current order by remaining an antagonistic position in the power-field. I have enlightened the civil society and NGO's as the decisive actor in this Philippine power-field in terms of challenging the hegemonic position of the TNC's in the field. I did this by showing how the NGO's insisted on implementation of the regulatory framework through which the country displays its ethico-politics morals, but does not follow up upon. By not following up on its own regulatory framework, it provides the TNC's free play and room for manoeuver in the power-field, while marginalizing farmers. The NGO's challenge this power-play and seem to be successful in doing so, looking at the success of the Court Case of Greenpeace and MASIPAG. In the next chapter I will show what kind of interventionist role the government takes through showing its approach in food security policy through the Food Staple Sufficiency Program, that aims on self-sufficiency in rice production as staple.

Chapter V: National Policy towards Food Security through UPLB's Reflections

So far I have discussed the role of the actors of NGO's that come from the food sovereignty movement and how they contest the neoliberal current towards food security. I have argued that the government does not follow up on the implementation of its own framework of regulation and monitoring, through which it provides seemingly unlimited space of room for maneuver for TNC's, while encroaching upon room for maneuver for peasants and farmers, who are increasingly marginalized through the neoliberal hegemony over food security. The role of the government has become questionable, since it does not follow-up on its own regulatory system. The question raises what the exact role of the government is in terms of food security for the Philippines. So far I have mainly showed how the government facilitates the TNC's by not being involved, by not acting upon its governing role. But it would not fair to leave the governments agricultural program out of consideration. The government claims to have its own policy and approach to food security through the Food Staple Sufficiency Program, an agricultural policy that aims to provide food staple sufficiency before the country has to eliminate its last protectionist border for rice import in 2017. In this chapter I will explore this program and the efficacy of it. I begin this chapter through an exploration through the University of the Philippines Los Baños (UPLB), for this is the place where various voices can be heard that are concerned with the governments approach towards the issue and it will lead us to the governments agricultural policies and reflections on it. Also, the UPLB is an important institute that ties up government and private investments in agriculture while it allows room for debate for contesting voices.

5.1 University of the Philippines Los Baños

The University of the Philippines Los Baños is a public university that (UPLB) came into existence at 1909 as the College of Agriculture. In 1972 it became one of the national universities of the Philippines in 1972 (UPLB, n.d.). Loyal to its origin, it is still the leading university of the Philippines in terms of agricultural research. Already before it became a university the institution partnered up with the International Rice Research Institute (IRRI) by linking UPLB's scientists and fieldwork together. IRRI's and UPLB's partnership started with the Green Revolution in 1960, when the College of Agriculture signed the first lease of campus land to IRRI. The publicity brochure of IRRI and UPLB describes their partnership

as following: “IRRI continues to make a difference toward securing food and farmers” livelihoods, and its excellent conduct of science continues to borrow significantly from the expertise that UPLB produces’ (UPLB& IRRI: 2015). UPLB developed many of the country’s most important innovations on improving food production and promoting environmental sustainability (ibid.). It goes without saying that the partnership between UPLB and IRRI is focused scientific technology based-research. The current partnership is focused on “...strategic research for sustainable food and nutrition security in Asia”(ibid.) and carries out biotechnology research in some of their collaborative projects. By sharing research-fieldsites and greenhouses together, IRRI and UPLB literally joint up under the same roof.

The alliance between the university, that is public which means supported by the government, and the mainly privately funded gen-technology research institute already points out how the government relates to gen-technology and its affiliates. It also indicates the scientific technological outlook of UPLB towards food security and food production. Nonetheless, this technological paradigm, that promotes the use of gen-technology as a way to achieve food security, is not the only current that runs through the corridors of the university. The debate whether food security should be approached towards gen-technology extends into the university ground. Therefor I have tried to find a broader spectrum of opinions and visions on the issue that is a bit broader as the current mainstream technological food security paradigm of the UPLB currently expresses. The first thing I was interested in was how the issue can be placed in the political-economic government structure of the country. Therefor I had several interviews and conversations with Dr. Agham Cuevas, Assistant Professor at the College of Economics and Management. Dr. Cuevas provided a good overview of the neo-liberal approach in the Philippine agricultural political-economy of the Philippine government.

According to Cuevas the highest percentage of the poor are concentrated in the rural areas. The severity of the poverty cannot be addressed as long as the agricultural sector does not get developed. This has not happened so far, at least not in a productive way according to Cuevas. Cuevas points to varies policy interventions such as the Agriculture and Fisheries Modernization Act of 1997. According to Cuevas, all the necessities for agricultural development are embodied in this law, but also this law shows a lack of implementation. The major reason why this Act has not been followed-up on, according to Cuevas, is because the budget is not being allocated to the right departments and municipalities. Section 93.c of this law states that: “the budget for agriculture and fisheries extension services shall be at least

one percent (1%) of the gross value added by the year 2001” (Act, *ibid.*). According to Cuevas this has never happened. There are various reasons for this, one important reason he names is corruption. Cuevas points out to the fact that already only in the last six years, already five ministers of Agriculture have been fired because of corruption. Another reason is the political sensitivity that involves agricultural reform programs, Cuevas: “If the government is not able to provide for staple sufficiency in an unstable democracy, as the Philippines is, it creates a lot of reforms and a complicated political situation. Our administration doesn’t feel like taking upon the problem of having to answer for the lack of staples”. But the times of a political *laissez-fair* approach seem to be over. The Philippines are obliged by their WTO membership to lift their quantitative trade restriction on rice by 2017 (GMA Network, 2014). The Philippines are therefore urged to act upon their rice production deficit, before the entire production gets flushed away by unlimited imports. In order to insure staple sufficiency, at least on rice, the Department of Agriculture created the ‘Food Staples Sufficiency Program: Enhancing Agricultural Productivity and Global Competitiveness 2011-2016’.

5.2. The Food Staples Sufficiency Program (FSSP)

The FSSP has two main objectives for the agriculture sector; food security and raising incomes. It aims to achieve food security by improving farm productivity and to make the Filipino farmer competitive with the global market. The main focus in boosting productivity is on the self-sufficiency of rice production, which is the country’s main staple. The aim of the program is to increase yield by 6% each year. The starting point of the program is the year 2010 where yields were estimated on 15.77 million metric ton (Mmt) with the target increase of 22.73 Mmt in 2015 (*ibid.*: 3). The ‘Strategies and Key Interventions’ for this through farm productivity and competitiveness were: 1: the expansion of irrigation services; 2: the encouragement of widespread use of High (hybrid) quality seeds, fertilizers and other integrated crop management practices; 3: research and development in new varieties and crop management; 4: Promote mechanization of on-farm operations to bolster farm efficiency and reduce labor costs; 5: Enhance the extension services; 6: Boost field and overall productivity growth in rainfed low areas (*ibid.*: 4). These points express the technological and industrial approach of the strategy that aims on intensification of farming that produces ‘more with less’ (*ibid.*: 20).

According to the statistics of the Philippine Statistics Authority this aim has not been reached. The production yields looked promising until 2013, when the increase fell back on

2.3% and by 2015 there was no increase at all but instead a decrease in production of -4.3%. The target of 22.73Mmt in 2015 was not reached, instead it stagnated on 18.16 Mmt. Between 2010 and 2015 there was only a 15% increase in production instead of the targeted 44%.

	2010	2011	2012	2013	2014	2015
Total Rice production in Mmt	15.772	16.684	18.032	18.439	18.967	18.149
Production increase in %	- 3.1	5.8	8.1	2.3	2.9	- 4.3

Statistics retrieved from <http://countrystat.psa.gov.ph>

The second aim of the program is to ‘raise incomes’ in the agricultural sector. The strategy to achieve this is firstly to boost farm production by using ‘more with less’. The ‘more with less’ accounts for less farming costs to produce more. The program indicates that 45% of total production cost is labor cost (ibid.: 20). Therefore, a ‘key feature’ of the program is a structural transformation that:

“...farm labor moves out to more productive and better-paying jobs elsewhere. Because agricultural labor makes up the bulk of the poor, a reduction in poverty rates is seen over time. This structural transformation is at the heart of successful poverty-reducing efforts and long-run economic development” (ibid.:7).

However the program indicates a specific strategy for increasing agricultural yields, there is no specific description of provisions for ‘more productive and better-paying jobs elsewhere’ for the rural poor. The program offers no strategy of how to create these better-paying jobs for the rural poor, but seems to assume that these opportunities will just magically be there, without further mentioning how this can be established. The program also does not need to do that, when the rural poor are placed outside the census of agricultural labor, they will simply not show up in the agricultural poverty statistics any more so this will automatically show an increase of income in agriculture. It will not indicate though, were these rural poor have been moved too and if they have indeed found more productive and better paying jobs elsewhere. One can wonder if this is true-poverty reduction or just excluding the poor out of the census without any real structural improvements being offered to the poor. As long as the labor on the land is not being replaced with work in other sectors, nothing is solved, but rather becomes worse. The authors of the program seem to assume that these opportunities will just come to exist in some magical way as they write down their program but this will not be reflected in the real world of the rural poor.

Statistics from the Philippine Statistics Authority shows that employment in agriculture has decreased with 4% from 12.267.000 persons in 2011, to 11.801.000 in 2014.

Employment in Agriculture	in
2011	12,267
2012	12,093
2013	11,835
2014	11,801

Statistics retrieved from <http://countrystat.psa.gov.ph>

It is important to note that this is calculated in the formal employment sector, the informal employment sector is not weighed in. However employment in agriculture has decreased, according to the World Bank the rural population has increased from 48million persons in 2010 to 55 million persons in 2014. This is an increase of 15% (Trading Economics n.d.). In the meanwhile, those who did maintain or attain to work on the land, saw an average increase in their wages with 12% for both palay (rice) and corn workers between 2011 and 2014.

Real Wage Rate	2011	2012	2013	2014
All Farm workers	164.40	169.88	173.98	181.28
Palay workers	187.26	190.36	193.51	209.74
Corn workers	148.95	146.19	155.61	163.64

Statistics retrieved from <http://countrystat.psa.gov.ph>

According to The International Fund for Agricultural Development (IFAD), the rural areas is the place in the Philippines where poverty is most severe and widespread; with 80% of the poor population living here. Agriculture is the most important source of income and livelihoods for rural people, with most of them depending on subsistence farming and fishery (IFAD: 2009). I have not been able to find statistics about the percentage of rural population working in the agricultural sector or in other sectors. I have also not been able to find statistics about the amount of rural population switching from the agricultural sector to other forms of employment. According to Agham Cuevas, the rural population is mainly employed and dependent on agriculture. Other industries and sources of employment are still underdeveloped and therefore not a good alternative for employment. In that case, the strategy of the Food Staples Sufficiency Program would not help the rural poor in increasing their wealth. Rather, it excludes them from the agricultural labor market without offering their alternatives for their livelihoods. This means it increases inequality in the rural areas, since those who do work have a higher income under the FSSP strategy ‘more with less’. It seems to be that those who are replaced by mechanics do not have a visible source of employment to fall back in, last to say to increase their livelihood.

In terms of food self-sufficiency and the aimed targets of the program, the program has also not been successful. The increase of production stagnated and even decreased with a significant -4.3% in 2015 in comparison with the previous year. The reasons for this are not clear, but it is clear that the program did not achieve what it intended to do. What this means in terms of the effects of lifting the quantitative restrictions in 2017 is also not clear, but it is clear that the government program does not offer a solution for the treat of a flood in rice when the market is opened for foreign import.

In Cuevas' opinion opening of the market can create a risk for the production and producers of Filipino rice. According to Cuevas the rice is not competitive with foreign rice producers such as Thailand, Vietnam and China because their price is much lower and it will be very difficult for the Philippines to catch up. Also, according to the Philippine Statistics Authority production costs and prices of rice have increased up until 2014/2015:

Agricultural Commodities: Farmgate Prices by Commodity and Year

Unit: pesos per kilogram

	2010	2011	2012	2013	2014	2015
..Palay [Paddy] Fancy, dry (conv. to 14% mc)	15.35	13.55	14.35	17.33	20.01	18.04
..Palay [Paddy] Other Variety, dry (conv. to 14% mc)	14.87	15.17	16.22	16.93	20.07	17.33

Statistics retrieved from <http://countrystat.psa.gov.ph>

Palay: Updated Average Production Costs by Type, Item and Year. Unit: pesos per hectare

	2010	2011	2012	2013	2014P
All Palay					
CASH COSTS	15,663	16,844	17,703	19,715	20,671
..Seeds Paid in Cash	813	829	886	1,309	1,567
..Fertilizer Paid in Cash	3,879	4,528	4,896	4,909	4,666
..Pesticides Paid in Cash	1,478	1,453	1,439	1,284	1,257
..Hired Labor	5,099	5,387	5,614	7,161	7,795
..Caretaker/Overseer's Wages	0	0	0	113	123
..Other Permanent Employee's Salary	0	0	0	44	48
..Land Tax Paid in Cash	170	172	174	187	189
..Rentals	250	260	274	424	473
..Fuel & Oil Paid in Cash	804	902	960	831	856
..Transport Cost Paid in Cash	0	0	0	165	167
..Interest Payment on Crop Loan	332	365	402	332	365
..Irrigation Fee	325	332	355	434	520
..Electricity Cost	0	0	0	33	34
..Food Expense	673	711	727	914	978
..Repairs	1,268	1,307	1,359	1,175	1,217
..Others Paid in Cash	572	598	617	400	416

Statistics retrieved from <http://countrystat.psa.gov.ph>

Because the costs and prices of rice production have proven to be very difficult to be brought down, it is of great importance for the Philippines to become self-sufficient in staples like rice to prevent the market to flood. Until now the predictions for this not to happen do not look

very promising, as argued above. Therefore it is very likely that the country will fall further dependent on the foreign rice market and millions of rice farmers incomes will be at stake.

While the government program is not very successful in implementing its programs and restructuring of the rural lands, some of the other players in the field get full space to influence the Philippine agriculture. These are the TNC's as Monsanto, Bayer and Syngenta. Most of the TNC's have their offices in Manila, the capital of the Philippines. They distribute their seeds through multiple channels. Later in this thesis I will elaborate on these channels through case examples, for now it suffices to state that these channels are provided through the government, private seed sellers or middleman and through farm demonstrations that are organized through the companies themselves.

Cuevas is a proponent of gen-technology in the Philippines and his vision is resonant with the university's political-economical vision on gen-technology and that of the government. In a third interview he shared the dominant discourse on this with me as prevalent in the faculty of Economics and Management.

According to Cuevas, every technology that can enhance productivity without clear scientific prove about damaging effects should be welcomed in the Philippines "...anything that can increase the productivity of the agricultural sector is a way out of poverty. Because as I said, the poor are in the agricultural sector in the rural areas...". According to Cuevas the government is not involved in the distribution of gen-technology but is instead a private sector affair with no public investments. As already shown in previous chapters of my thesis, the government is actively involved in the spread and distribution of gen-technology. The case study in Pangasinan will show what this exactly implies and how the distribution materializes through government structures. According to Cuevas however, the government is neutral in the matter, they allow the use of gen-technology but it does not get involved itself. The fact that the most gen-tech breeding programs are carried out at IRRI without government objections show that the government is at least tolerant and pen for it and that it does not hold back on further developments in the sector. And as I previously showed, it also lacks in providing a regulatory framework through appointed institutions.

When I ask Cuevas if there is some sort of safety net on gen-tech developments and implementations in agriculture he acknowledges that there is no such thing, except of gene-banks that keep store of the traditional varieties but which are inaccessible for unauthorized people such as farmers and NGO's. Cuevas believes that there is no relevant threat to

traditional varieties that can be extinguished by the use of GMO's. He points at the debate around GMO's, of which he believes is just a matter of time for the technology to be accepted. He has seen no scientific prove yet that GMO's can create negative effects in the long term future, opposite to what he sees as improvement of income for farmers who produce GMO crops such as GM-corn. Cuevas sees farmers as rational decision makers who think economically, as long as the farmers are been given a choice – to produce GMO's – they would always make a rational choice "...If the GMO is not profitable, they will simply change to another system that provides them with higher income, the farmers can choose for themselves...". Cuevas holds the opinion that it are mostly the farmers that benefit from the higher yields and that it is therefore a solution against poverty in the rural areas. He ignores the heavy burden of indebtedness that farmers take upon them in order to gain access to the technology, and the strings of dependence they fall prey to. He sees no problem in the fact that the TNC's are profit maximizing companies that serve their own commercial agenda.

"...It's [gen-technology] privately funded, based on the macroeconomic principle that firms are profit maximizers, ofcourse they'll try to squeeze out profits. But here's the point, farmers are not dumb, they know how to do business. If they buy imports at a high price and they are not able to their outputs on an even higher price, they will shift..."

This comment of Cuevas shows how he approaches the matter out of a rational choice theory. The farmers are assumed to have the knowledge and access to a set of various options in which they pick that one that corresponds most to their desired outcomes, without external influences or pressures. And without taking note of the consequences this might have for the farmers in the future and their free position of choice. Sociologist John Scott defines rational choice as:

"Rational choice theories hold that individuals must anticipate the outcomes of alternative courses of action and calculate that which will be best for them. Rational individuals choose the alternative that is likely to give them the greatest satisfaction (Scott, 2000: 129)"

The question is how broad and accessible the range of options in the real world of the farmers is and what kind of access to knowledge and options they have to base their decision upon. The simple fact that the farmers choose for GMO's, might not be reflective of what would actually be best for the farmers. When the farmers have limited access to choices, the decision might be based upon the choice between the lesser of two evils. The variety of options that farmers have will be assessed and showcased in the case study about Pangasinan and is

already previously explained through the critique of the report of MASIPAG, that argues that the farmers are under many constraints and far removed from freedom of choice in terms of own production. The fact that Cuevas, as a prominent political-economic scientist on the countries' leading agricultural university, ignores or is seemingly unaware of the negative effects of gen-technology in terms of socio-economic context, is at least worrisome. Cuevas argues through the current neoliberal paradigm of food security that does not allow alternative visions in the approach of how to produce food in the Philippines and how to become food self-sufficient. It is exemplary for a country that has fallen under the western hegemony of the neoliberal sway and is worrisome because, at least in my opinion, a university should be an institute that does not promote political/economic views and positions, but questions and investigates them. Giving way for voices of dissent, conflict and debate to take place, as Mouffe also argues. This tendency does not show out of my conversations with Cuevas.

5.3. Alternative voices finding expression through UPLB

To the probable contentment of Mouffe, Cuevas is not the only scientist that influences the debate in the UPLB. During my stay I have had conversations with several scientists, with some of them showing me other approaches to the issue or bringing forward opinions as I heard earlier through the food sovereignty movement of the Philippines.

Later that day I interviewed Merlyne Paunlagui, Rural Sociologist and Assistant Professor and Director of the Center for Strategic Planning and Policy Studies (CSPPS). She explained to that it are mostly the traders who make the biggest profits out of the gen-technology, rather than the farmers. She refers to structures as also explained by the report of MASIPAG and as I will also show in my case study in Pangasinan. The traders are the middlemen, also referred to as seed and chemical suppliers or loan providers. The traders provide the input and supply loans for the farmers to enable them to purchase the input package. Paunlagui tells me that they take care of everything; besides taking care of the input, they also take the role of the middleman that buy and dictate the price of the output and then sells it to the market. Only few farmers have their own immediate access to the market. The traders are often businessman or they have a position in the local government that gives them access to the farmers network. The traders buy their seeds and chemicals often directly from the TNC's like Monsanto, Bayer and Syngenta. The traders are represented through the local government and are also present at the farmer meetings when the companies demonstrate their products. They uses both points of access to connect with the farmers. Through this construction, the traders are the ones that profit the most of the high yields of the farmers and gives them a

power position in the field of trade of inputs and outputs. The farmers welcome the technology because it promises them higher profits according to Paunlagui. She also points out that there is not much information supplied about the health risks of the inputs, since the GM-corn is mostly used for cattle feed there are no concerns about the health impacts of consumption. Paunlagui is concerned about the intensity of chemical use, according to her farmers use too much chemicals and now spray herbicides instead of preparing the land against weeds.

Rolando Bello, Associate Professor at the faculty of Governance and Rural Development, confirms that the push for GMO's comes from the marketing techniques of the TNC's and is facilitated by private traders who directly distribute the technology to the farmers. He calls them "field agents", "...who roam around the fields and talk to farmers to introduce the technology...". In my interview with Bello he explains how the agrarian reform program creates farmer groups that are directly linked to (local-) government programs in order to achieve "...economies of scale.". Most of the lands of the private farmers are too small to reach economies of scale, which makes it difficult for them to get credit from the government. Also, Bello sees mostly big scale farmers being targeted because the small farmers cannot afford the high costs of the technology package. This is why, in accordance to Paunlagui, the traders supply loan packages through which also smaller farmers have access to the technology.

After the conversations and interviews that talk about small-, middle and large scale farmers, I became interested to other groups in rural areas that cannot be categorized as one of them. Therefore I spoke with Dr. Maria Helen Dayo, development anthropologist with a specialization in agricultural economics and director of the Gender Centre at UPLB. Dayo paints another picture of the matter. In her ongoing research about indigenous minorities in Mindanao, she sees how there is an increasing power tilt coming from the TNC's through the introduction of seeds and chemicals; "...it influences the market in terms of what kind of input it has to offer and which kind of outputs are desired, it has overtaken the entire view on food security and farming in general...". However the island of Luzon and the archipelago of the Visayas had already been influenced by the Green Revolution, this was not the case in Mindanao according to Dayo. She explains how this has changed since the introduction of gen-technology in the Philippines in 2003. Mindanao has been one of the last frontiers of the Philippines, meaning that it was still quite untouched by modern technology and external influences from the capital. A state sponsored migration policy, that subsidized rich farmers

to migrate from the more developed parts of the Visayas and Luzon changed that between the 1950's and the 1970's (Buendia, 2015). This migration was enforced by the government but instigated by the corporate interests of DelMonte and Dole, who saw commercial opportunities in the backlands of Mindanao. From this moment the indigenous communities experienced increasing difficulties to survive, because their best land were being taken by the settlers; "...transnational agribusiness have invaded indigenous peoples lands and have undermined subsistence farming. The market forces are so powerful that it has inverted their cosmology into consumerism...". On the one hand they have adapted themselves into the mainstream, on the other hand they are marginalized because they have no titles to claim their lands or indigenous rights. After the first restructuring of the agricultural fields in Mindanao, there is a second sway since the gen-tech companies set foot in the Philippines; "...It is easy for them to settle in Mindanao because they can make use of the infra- and agricultural restructuring that have been laid down by the first sway of transnational agri-companies in the '70's". The table 'Area of GM Corn Cultivated in the Philippine Island Groups 2003 – 2011' reflects the growing trend of GM-corn production in Mindanao, that increased from a total Mmt of 587 in 2003 to 185.741 in 2011.

	2003	2004	2005	2006	2007	2008	2009	2010	2011
GM- Corn									
MINDANA	587	10,706	5,829	10,693	16,604	13,053	9,516	3,120	1,874
RR Corn									
MINDANA	0	0	0	10,384	56,589	41,443	40,501	8,048	9,943
Stacked (GM-RR)									
MINDANA	0	0	0	469	9,641	48,844	40,618	115,153	173,924
GRAND TOTAL	587	10,706	5,829	21,546	82,834	103.34	90.635	126.321	185.741

Source: White Corn in the Philippines – Greenpeace (2013)

5.4. Conclusion

By entering the countries national approach towards food security through the UPLB, I already showed its affiliation with the private gen-technology sector. The country seems to prefer to leave it to the scientists whether or not to use gen-technology in agriculture. According to Cuervas, the country has issues about whether to interfere in the countries food provisioning because agricultural reform programs are a precarious issue for a countries

stability. Perhaps it is therefore that the Philippines prefer a laissez-fair towards their own agricultural policy, or they pose that as an excuse to give way to the TNC's to do the restructuration. Whatever it may be, the country seems to be urged this time to come up with a national policy that can protect the country against the elimination of the last tariff walls in 2017. This is a condition set through the WTO membership and is a serious and direct threat to the Philippine agricultural production system, especially to its smaller farmers and peasants who will never be able to compete with the unlimited influx of cheap rice. Unfortunately, I have showed that the program to protect the domestic market through the Food Staple Sufficiency Program (FSSP) has not been able to achieve either of its two goals; to achieve food security in terms of rice staples or to raise incomes. Instead of a target of a 44% increase in rice production in 2015, this stagnated with a little 15% percent increase in production, not even half of the intended goal. Their goal to increase more income sounds wonderful in its aim but the means through which to achieve this have shown to be very questionable. I showed that the increase in income through the current policy will mainly be facilitated by the elimination of poor farmers, under the idea that they can have "better-paying jobs elsewhere", without providing or mentioning any realistic opportunity for farmers to have a better paying job elsewhere. So currently it mainly looks as if the farmers income can be increased by excluding poor farmers income from the census, by excluding poor farmers from their livelihoods, marginalizing them even more further leaving them more poor and miserable as before. Obviously, this is not a solution but rather an huge increase of an already severe social problem

I can conclude the FSSP as a mechanism to allow and support more industrious techniques into the country, without the achievement of rice security, causing poorer farmers not being protected when the last market import barriers are removed in 2017. Also, it has shown to be efficient in erasing poorer farmers from the field, because it resulted in less employment in agriculture, while the rural population grew and the farmers who remained had an increase in income. Because there is no indication that the poor farmers found "better paying jobs" elsewhere, it is likely but not surely to say that these farmers are only further marginalized and more impoverished. The remaining poor farmers have a lot to fear when the barriers for rice imports are lifted in 2017.

The discourse of academic scholar Cuevas also seemed to exhibit little understanding and support for poor farmers. He did not count in any of their vulnerabilities, but rather saw them as actors capable of making beneficial decisions against the TNC's interest, turning a blind

out for their poor position in the power-field through their state of indebtedness and poverty. Despite Cuevas reinforcement of the status quo, the UPLB also shows to be a place for voices of dissent. Both Paunlagui and Rolando Bello provide a further confirmation of the power struggles between farmer, TNC and middleman. It confirms the mechanisms of control and indebtedness as I have showed in previous chapters and similar to the structures the Green Revolution as well. The research of Paunlagui reveals how the government has been actively involved in the eviction of small-scale farmers from their land in Mindanao, with the aim to create land for TNC's as Delmonte and Dole, already early as in the mid of the previous century.

All of this reveals that the government might not be as "neutral" in its position as it likes to present itself. It must be taken into account that the government achieves it time and time again to fail in implementing aspects of programs, policies and regulations that could be beneficial for small-scale farmers, and would serve a more "food sovereign" approach. And time and time it succeeds in implementing policies that are beneficial for TNC's and the neoliberal hegemony over the country's approach towards food security. Even the very failing of some of the governments regulations, policies and programs, show to be beneficial for the neoliberal hegemony and should therefore be questioned if these are true failings are rather successes for the neoliberal dominancy.

In the next chapter I will show two cases, the first case further investigates the "neutrality" of the government and exposes how the government actually provides the complete infrastructure for TNC's to thrive, by actively facilitating TNC's to spread, promote and distribute their technology into the rural landscape. The second case will explore the countries' organic national policy, exhibited through a 'food sovereignty's' approach and show the efficacy of this program through the work of "the Father of Philippine Organic Farming".

Chapter VI: Case Study GM Corn versus Organic Agriculture

The two case studies both show another side of the agricultural spectrum of the Philippines. The first case study is done in Pangasinan, where I have interviewed GM-corn farmers and agricultural governmental officers in charge of implementing government policy. This case provides an example of how the agricultural technological packages are being implemented through the government into the farmers field. It shows several sides of the spectrum, the governments' policy, the TNC's gen-technology distribution system and the organic approaches in agriculture as run through the government.

The second case study shows an alternative approach to agriculture which in this case is the organic approach of Gil Carandang, in the Philippines referred to as "the Father of Organic Agriculture". His approach can be seen as an approach in agriculture that fits the food sovereignties paradigm. This because it is an organic, sustainable approach, with the aim to empower communities to become food self-sufficient and to produce by their own means. It also aims to create ties to local markets in order not to be dependent on neoliberal market structures but on self-rule and sovereignty in terms of access to markets and produce. It promotes the ties between local communities, local markets and communities' self-sufficiency to produce and consume in a sovereign way on its own terms. This case also further elaborates on the national Organic Agricultural Act, that will already be briefly introduced in the first case as some of some of the interviewees from the first case already engage in this Act.

6.1. Case I: GM Corn in Pangasinan

Through my connections at SEARICE I came into contact with one of the agricultural officers of District IV, containing five municipalities. The District IV is the fourth district of province of Pangasinan. According to the Pangasinan census (Pangasinan facts and figures 2010), this is one of the main agricultural hotspots of the Philippines, because the land is mostly flat and therefor very adaptive for irrigation. 52 percent of the total amount of land-area is irrigated. The land-area itself is 536.818 hectares and 373.720 hectares are agricultural land, that is a total of 70%. 64 percent of all agricultural land exists of croplands, the rest is pastureland or aquaculture. 72 percent of this land is devoted to rice production. A much

smaller percentage of this is devoted to the production of Corn, only 13% (ibid.: 3, 15-16). The corn that is being produced is yellow corn and this type of corn is only available in the GM-corn variant. According to my contact persons at SEARICE this is one of the main places in the Philippines where the GM-corn is mainly produced.

I have decided to do one of my two case studies here, because I wanted to get to know more about what the production of GMO-corn contains, especially in the light of the new Organic Agricultural policy that is recently been ordained in the Philippines. How is this policy integrated in an area that is relatively heavily invested with GM-corn production and which actors eventually influence and define the agricultural landscape of Pangasinan, District IV. It goes without saying that this case cannot be held exemplary or generalizable for the entire country. But by zooming in into this region it does show how national policies for agriculture eventually reach the field of the farmers and through which other dimensions the field is also influenced by.

The Municipal Officer of Agriculture Dagupan

Merle Sali is the Municipal Officer of Agriculture of Dagupan. I interviewed her to understand more about the several agricultural programs they are running and what kind of policy they are implementing. The municipality has different programs they offer. They offer livelihood programs to small farmers. These are loan programs in which they give the farmers cattle, poultry or swine. The farmer has three years to pay back the investment, for the same price as the municipality bought them. Their focus point are 'medium' scaled farmers. They work with farmers groups who can apply for a program. The programs are run through a participatory approach, which means that the farmers make their own plans while the municipality monitors the programs and conduct comparative studies between the different approaches. They also have agricultural field schools in which farmers are being educated about agricultural techniques that they can apply in their own fields.

They have another program for HYV seeds that comes with the chemical package. The program is subsidized and the farmers only pay about 50 percent of the real cost of the package. The farmer can choose between certified or non-certified hybrid seeds. The certified seeds are developed in the seed-lab in the nearby town of Santa Barbara. They are more expensive to buy as the non-certified seeds and they also need higher input. On the other hand they are higher yielding and they can be used for a second or third year. This is not the case for the non-certified seeds because the crops will become moldy after a second planting.

Another project that the municipality runs focusses on farming with biological inputs. Instead of chemical inputs they promote organic inputs such as organic fertilizer and biological control agents such as Trichogramma. Trichogramma is a natural pest control agent in the form of a little wasp that lays her eggs inside of the eggs of over 200 different species of moths and butterflies, amongst them the Asian Corn Borer. Sali and her colleagues express a lot of enthusiasm about the little wasp which can "...really control pests such as the Asian Corn borer...", as one of Sali's colleagues Daisy Villareal tells me. According to them the biological program shows that there are less input costs through the biological program and they try to encourage the farmers not to spray so much anymore but instead use more organic sound inputs. This is very hard, Sali taps her index finger against her forehead while she explains to me how much the farmers like to spray:

"The farmers are very hard headed, all they do is spraying spraying. We give so many trainings to them to reduce their spraying but the following day they will be spraying again, and much more than what is recommended".

Sali and her colleagues blame this to the impressive demonstrations that TNC's such as Monsanto, Syngenta and Bayer give.

"When the farmers visit a seminar of one of the TNC's, they are very impressed. The seed-companies give them many freebies like t-shirts, caps, keychains, etc. But they also give free seeds during the demonstration and discounts on chemicals".

Besides all the free goods that are distributed during a demonstration, the TNC's will also be sure that their crops look as good as possible. And not always in a very genuine way according to Sali:

"They [the seed-companies] are very good talkers with great convincing power. They promise a lot and they use the results of their field trial to speak for itself. But most of the yields in the field trial are high yielding because they use too much fertilizer. But they don't tell this to the farmers, so the farmers are made believe that they can gain the same high yields but with a much lower input".

Because of the deceitfulness of the seed-companies, farmers find themselves spraying more as prescribed. This is not only a very expensive undertaken, that many farmers cannot afford on the long run, but according to Villareal it is also the reason that pests are getting resistant, which again makes them spray more. The farmers enter a vicious circle in which only those farmers can survive who have enough money to afford the high costs of input.

The municipality finds itself in a difficult position. Officers such as Villareal and Sali see for themselves how effective organic inputs are and how detrimental the costs of chemical inputs can be. But they are tied to the programs as ordained from the policymakers they are working for, which sometimes runs against their own convictions. They express they feel overruled by the seed-companies, who have strong ties with one of the big political parties, the Abono Partylist. The Abono Partylist is the biggest party of the Pangasinan Province and especially distinguishes itself by claiming to represent the agricultural sector (Punch, 2013). This party buys large quantities of GM-corn seeds from the TNC's and the municipality is ordered to spread them amongst their farmers, with accompanying chemicals, through a loan program. Sali:

“The Abono Partylist determines the wants of the farmers but they only give GM-corn. They are the ones who choose GM-corn and Roundup, it's a total package of technology, with all the chemicals and the seeds. We are the implementers of that and we don't have budget for another project. They are the ones we need to comply too”.

So on the one hand the municipality schools farmers to use more organic approaches but at the same time they distribute GMO seeds through the top-down implemented programs. Villareal: “It's like a conflict of ideas, we are stuck and thorn between two lovers”. Sali adds that the seeds are being bought by the Abono Partylist from big TNC's and that there might be other interest in the party to promote Bayer, Syngenta and Monsanto. “If they purchase more seeds we are talking about big money”.

The agricultural extensionalists

I have interviewed three different agricultural extensionalists who work in different regions of Pangasinan. Agricultural extensionalists are those who teach farmers about the different agricultural techniques on the farmer schools. They make sure that the different programs are implemented and directly communicated with the farmers. I interviewed them during a workshop about organic agriculture given by Gil Carandang. They held different ideas about organic farming and the use of biotechnology.

Joy Nevada – agricultural extensionalist in Malasiqui

One of the agricultural extensionalists, Joy Nevada who also owns a farm himself, has a second job as a loan provider to the farmers, he sells seeds and other agricultural supplies to the farmers to earn extra money “...the salary from the government is not enough to sustain

myself and my family, I work for the government for the connections that I can use for my own business...”. Nevada is connected with the seed distributor of Syngenta and acts as the middleman between the seed distributor of Syngenta and the farmers. He has a loan with the seed distributor from whom he buys the seeds for 4800 Php (Philippine Pesos). Then he sells them to the farmer in the form of another loan for 5600 Php. The farmers pay him back after the harvest as he pays back the seed distributor around the same time. He receives an interest of 800Php back. He has around 40 to 50 farmers that he provides with seeds in this scheme. He also creates market opportunities for the farmers by connecting them to the buyer: “The farmers will produce the crops of the seeds as I provide them because I will also sell it for them, so they don’t really produce anything besides GM-corn”. The farmers are dependent on him since he not only supplies them with seeds but also with a market to sell their harvest to. Nevada prefers GM-corn over any other crop because “...with Bt-[GM-corn] you have a relaxed mind that your corn will always be good...”. He pays attention that the insects will not become resistant by mixing GM-corn with 20% normal corn. Nevada believes that GM-corn is good “...because it only kills insects and not people...”. He says he knows the health risks about Round-up but he says he needs to spray it because otherwise the yields will drop. When I asked him if he wasn’t concerned for the health of his children he said “I hire people to work on my fields so we don’t do that work”. He has his own farm in which he has tenants who farm for him.

Marites Muegue – agricultural extensionalists in Mabini

Marites Muegue main motivation for participating the workshop is due to her worries about the food consumption patterns of her family and the farmers under her wing. She is concerned about the chemicals being used in farm production and also about the fast food which has become the mainstream dinner for many Filipinos. She points to the increasing numbers of people with cancer. She does her own research about it on the internet. In her region there is not so much GM-corn yet but she thinks this will increase in the coming years “Now only about 30% of our farmers in the eastern part produce GM-corn, but I think that in about five years time almost all farmers will produce it. Traders start selling it more so it becomes widely available for our farmers now”. When I ask her how the farmers got into contact with the GM-corn she says that it is being spread through the center we are in at the moment.

“It goes through the department of Agriculture, there are techno-demonstrations here. But they [representatives of TNC’s] will also come to our office and inform

us that they have a meeting or demonstration and they want our farmers to be there. So than we inform our farmers about this...”.

Muegue also tells me that it is difficult for her farmers to turn to organic farming because the yields so far are very low. After the workshop she wants to introduce the organic fertilizer as just being taught to her to her farmers so they can raise their yields. She says that many of her farmers want to turn into organic because of multiple reasons. The costs of their inputs are very high and they start to have health consequences such as a bad heart and weak lungs. She says that her municipality just recently started with an organic program because a certain amount of budget needs to be spent on organic agriculture. This was already ordained a few years back but until recently they only focused on chemical packages and hybrid seeds for their farmers. “I look forward to be able to share organic techniques with my farmers because I can really see how it can improve their health and bring back their costs for inputs”.

Ferdinand Bacanil – Mangaldan

It is the first organic workshop for Ferdinand Bacanil, agricultural extentionalist of Mangaldan. He is very excited to test it in his own backyard “The workshop is very interesting, together with Gil’s help I have designed a mini-farm and I want to apply this in my own backyard. If it’s a success I want to share it with my relatives and my farmers and spread the techniques through my own backyard...”. He first wants to test it and become more knowledgeable about it himself before he wants to share it with his farmers. He also says that it is very important for the farmers to see results first, before they will adopt it themselves. “It is difficult to encourage farmers when they haven’t heard about it. But if I can show how successful I am, than they will respect me and they will be interested and going to want the same...”. Bacanil wants to educate his farmers because he is worried about the ignorance the farmers have about the detrimental effects of chemical inputs for the soil and the surroundings:

“The farmers see the commercials of the industry [TNC’s] on the television and they go to their seminars. The farmers believe them because they are very promising and they also see in their own farm that suddenly they have enough income. But what they don’t know is that if they use those chemicals they are slowly destroying their land and their surroundings. That is why I want to teach them organic farming...”.

At this moments the organic agricultural program is not yet advanced enough to ensure high yields, which makes it hard for the farmers to change their way of farming. To go back to traditional farming is not an option because yields cannot be high anymore without chemical

fertilizers and pests have increased so they also need to use chemical pesticides. Bacanil sees the TNC's as an obstacles for an implementation of organic farming methods: "...the obvious obstacles are the Swiss [Bayer, Syngenta] because they promote the chemicals. We can educate our farmers about organic approaches but when they come to our farmers they might tell a different story. They are very convincing, they give a lot of free products and promise the farmers a way out of poverty. Farmers are very sensitive to that sort of talk". He feels that organic agriculture therefor is a long process, to develop it and to make the farmers familiar with it, he believes it will be very effective in the long run. Indebtedness of the farmers is another problem. Bacanil says that almost all his farmers are poor and that every one of them is indebted and have loans.

The GM-corn farmers

Circumstances during the interviews

I interviewed six farmers and four tenants in District IV. It is important to note here that the farmers were part of a farmers-association supported by the local government. I did not succeed in getting one on one with the farmers as I felt they thought that was a bit peculiar and they felt shy about it. I also had the feeling as if it felt secretive for them to be taken out of the group in a one on one conversation, as if that would suggest they had something to hide. I wanted to have one on one interviews with them because I didn't want them to be influenced by some of the other farmers who were around, just as the municipalities' agricultural technicians I was with. Unfortunately this didn't succeed, also because they often had difficulties with English or felt very shy. I needed people to translate and before I knew it people would join and become involved in questions or discussions. Sometimes it really took me a lot of perseverance to get their own answer. I did this mostly by ignoring the others, and maintaining eye contact with my interviewee. However this approach was often successful, it also sometimes made them feel more shy and I was afraid of being intimidating or too persistent. Therefor I also sometimes felt I had to lean back a bit to just let it flow. Conducting these interviews, under a corrugated iron roof where the sun showered her often 42C hot rays of heath upon, this were some of the most intense and challenging interviews I have held until now. I have tried to get as much as honest answers as possible, but sometimes I could feel that the farmers gave socially desired answers while being interviewed amongst their peers. Especially when they would take back statements they made just seconds before. This was mostly the case when we discussed issues as pests occurrences and resistance for

chemicals. I will mention it in my analysis when this was the case and when I think the answers might have been influenced by their peers.

Variety in produce

All of the interviewees produce GM-corn and some also additional crops next to it such as rice and often vegetables. Their age group is between 43 and 72. The farm owners have farms between 10 and 3 hectare and are therefore 'medium-scale' farmers as defined by the municipality. Three tenants have their own piece of land to farm and in exchange they also farm the landowners land. The other tenant shares in the profit of the land. The three tenants get to produce on their own fields whatever they like and are obliged to produce what the landowner wants on his field. The other tenant is totally dependent on the farm owner as what he wants to have produced. In this case that is a variety of classified hybrid rice, GM-corn and a small amount of vegetables for consumption.

They produce a variety of things on their farm, all of them produce GM-corn and hybrid rice, they get 3 to 4 croppings a year and tend to change between GM-corn and hybrid rice. Five out of ten farms also produce vegetables for their own consumption or when there's a surplus they sell it on the market. Four of the farms also produce white corn, which is for consumption and as a cash crop. They have various ways to get their seeds, they try not to be stuck by only one trader or supplier but they try to use different sources. It also depends about the kind of seeds, for the GM-corn and hybrid rice they tend to have one supplier, they get it through the government program or they use samples that they receive during demonstrations. For vegetables and the white corn they use their own seeds over and over again. The GM-corn and hybrid rice is in 80 percent of the cases sold to the traders who also sold them the seeds. The seed traders have a double function in this.

Income, loans and indebtedness

All the farmers say that they are - relatively - happy with their income. Especially those who have invested in farm machinery and who have family working on the land express the most contentment of all interviewees. That makes sense because this are the farmers who have the most money for they are able to invest in things as machinery. All the farmers who had children went to school. About half of the children also helped on the land or aspired this. However all the farmers say that they are – relatively – happy with their income, most of the farmers are indebted or have loans. A rule of the thumb seems to be that the bigger the land of the landowner, the less loans they have. It's common for the tenants and farmers to lent

money from the traders and to pay them back after harvest. They do this every cropping and every harvest so they always lose a bit of money on it. They hardly save money. More serious debts are when they have a big investment to make such as a child's higher education. One farmer, Romualdo Ramos, told me that he had a loan at the bank for 5 years to pay his daughters study. He had a loan of 50 thousand Php and had to pay back 130 thousand Php after the 5 years. Obviously, 160 percent interest is an exorbitant high amount of interest and it's an illustration of how difficult it can be for farmers to have access to capital in times of need.

Knowledge about GM-corn and GMO's

The farmers do not know what GMO's are, they have never heard about the word or understand it as GM-corn. At this point in the interview the farmers were often being helped by their peers who were also present during the interview. Sometimes the agricultural extensionists told them that GMO's is GM-corn. When I asked the farmer what GM-corn is, they define it by describing the qualities of it as how the agricultural technician or seed supplier had told them. This in almost all cases narrowed down into two descriptions used together: 'high yielding' and 'pest resistant'. There is no further explanation about the technology behind it, the controversy, or possible risks. During the farmer meetings and workshop they are also being told that they have to use Round-Up and chemical fertilizers together with it. They rely their information input mostly in the seed-companies when they organize farmer meetings. The seed-companies come every year before planting and my interviewees tell me they give them free things like t-shirts, brochures and sample seeds. They can also buy a certain amount of chemical inputs for a reduced price. Farmers also exchange knowledge amongst themselves but this is knowledge within the knowledge they have received during the farmer meetings with the TNC's, or at the seminars held by the municipality.

Health risks

About 50% of the interviewees have some idea about the health risks of using Round-Up. Also here there's interference of the peers in the group, especially from the agricultural technicians team. For example, when I ask Mr. Jimmy Prestouse if he knows how Round-Up can influence his health, he initially tells me that the technique is still young and that he doesn't know how it influences his health. After that some peers shortly talk to him in Tagalog and then he says "...I get my information about the health from the health

department in the municipal office...”. It shows that he has received at least some information, because when I ask him about the use of preventive measures for Round-Up he tells me that he wears gloves, and a mask and that he removes his clothes and takes a bath after spraying. So this is an indication that he knows about the toxicity at least until a certain extent. It is different per interviewee about how much they know about the health risks and the preventative measures. Different as to what I expected, this is not persé relative to the prosperity of the farmers. Gabriel Gutana, one of the landowners with ten people working for him on his 10 hectare field, is not aware of health risks. He also doesn't wears protective gear because he feels "...suffocated when I wear the mask...". On the other hand, the protective gear has been distributed to him and his farmworkers by the municipality, but he does not know enough about it to go through the hassle of wearing protective gear. This is also the case with other interviewees who do not wear protective gear. They have the suits but they are quite laconic about using it, seemingly not fully aware of the health risks. Some other interviewees are more serious about it and show me that the label on the bottles has a warning sign for respiratory disease if used without mask. The agricultural suppliers also stress this fact to me during the interview, that the warning sign is clearly on the bottle. Warning sign or not, only two out of the ten interviewees tell me that they use a mask during spraying. The gloves are also not very popular, only three of my interviewees tells me to wear them. The reason for not wearing them is usually that it is too hot or they show little interest/awareness about the risks. Eight out of ten interviewees tell me they were protective clothing, which they define as wearing regular clothing with long sleeves and trousers. They take it off after the spraying when they sometimes take a quick bath, but they will wear it the next time again. There's no special washing procedure for the clothing.

Reflections on the past

The farmers have been farming their fields since they were children. They inherited the land of their parents and have seen a lot of changes through the decennia. Most of the farmers started to produce chemical fertilizers between 1975 and 1980. Farmer Bernardo Rodriguez: "When I was younger we didn't use chemicals. We started using them since 1975 when the seed and chemical companies came to us and gave us high yielding seeds and chemical packages. This was the first time it entered into our farm". Before the introduction of the technological package farmers did not use chemicals. Some farmers tell me that the pests were easy to control before the use of chemicals, Jimmy Prestousa: "There were minimal pests because you sprayed no chemicals. The pests began when we started spraying

chemicals. The pests before were easy to kill and easy to eliminate. But when they began with the chemicals the pest became more strong”. During the interviews there’s also sometimes confusion about whether the pests are increasing or not. Farmer Michael Benoto initially tells me that the pests are increasing and that they get resistant for the chemicals. Then he tells about cutworm, army worm and corn borer and that they have increased. When I ask more about this, the agricultural technician interrupts in Tagalog and Benoto rephrases that these pests have actually decreased. There seems to be a lot of confusion about this and when I directly ask the agricultural technician if they know whether the pests have increased or decreased he says that they do not know about that. To me that sounds strange, the agricultural technician is part of the team that monitors and it seems to me that it would be part of their knowledge to know whether pests have increased or decreased. But the average of the farmers can tell me that the pests have increased since the chemicals and that it has been increasingly difficult to get rid of them. In the past some of the farmers used ‘traditional botanical control’, a spray made of fermented botanicals. Poor farmers who do not have the money to buy the chemicals still use these, but they say it is not sufficient enough anymore. One of the farmers, Enrico Torres, produces and markets organic fertilizers, according to him these are still very effective even in comparison with the chemical ones. He uses grass and manure compost to make the fertilizers, he would like to see the use of more organic fertilizers because according to him it is still limited. He would also like to be able to produce his own seeds for white corn and rice so that he can increase his independency of the seed suppliers.

Besides the increased pest resistance, the interviewees express that they are less poor now as they have become more ‘industrious’ as to how they grew up in the past. The interviewees feel more ‘relaxed’ and feel that if they invest in becoming more modern they can earn higher incomes. The biggest changes in their lives have been that they can afford machinery and some of them say that they are not longer indebted because of the GM-corn. Many of the interviewees children study and the interviewees feel very proud about that, however some farmers are also disappointed that their children are not interested in working on the farm anymore. They describe their increased welfare by an increased access to western values such as being able to watch television, buy commodities, visit malls, and watch movies. Some other things that have changed are their diets. In the past they used to eat a lot of products like (milk) fish, vegetables, fruits, white corn, sweet potato, cassava, coconut, turnips, peanuts and a little bit of meat. This also had to do with their environment, there was an abundance of fruit trees and vegetables. According to the interviewees, many of the trees and farmlands of

those days have been replaced by resident land. The interviewees say that they eat less fruit and vegetables now and more processed (fast)food, energy drinks and barbeque grilled meet.

6.1.1. Conclusion Case I

The municipality offers various programs for various farmers. They hereby offer a variety of inputs, ranging from non-classified seeds till GM-corn seeds. They also promote an organic program through the promotion of Trichogramma, a natural pesticide. It is hard to integrate this natural pest control because the farmers insist on spraying their fields with the chemicals that comes with the GM-package. It is necessary for the farmers to do this because the use of fertilizers has depleted their soil from nutrients, which they need to compensate with further increasing amounts of fertilizer. They also express how the farmers are seduced by the TNC's to use their GM products, something that was already mentioned by the report of MASIPAG about the convincing power of the TNC's. Villareal also points at the vicious downwards cycle that the farmers enter once they start using the TNC's GM technology, that is detrimental for their soil, their income and their health. It also increases further indebtedness. The municipal officer also brings forward how the national government actively distributes GM-corn amongst the farmers of Pangasinan. The Abono Party List purchases large amounts of GM-corn seeds directly from the TNC's, that are then ordered to be distributed through governments offices down into the farmers fields. The municipal officer says that she feels that her hands are tight and that she "just has to follow up on governments orders". Rather, she also admits that the Abono Partylist does not offer anything else besides the GM-corn, "determining the farmers wants".

Between the municipal officer and the farmers are the agricultural extentionalists, of whom I have interviewed three different persons. It was interesting to discover how all three extentionalist predominantly argued for an approach out of their own interest. Joy Nevada was very clear on his own personal benefit that his government function provided him with. He used the network of farmers to sell GM-corn seeds and he thereby acted as the middleman. He provides loan for the seeds, the seeds itself and he also arranges the output to the market by selling the harvest of the farmers he provides the seeds for. He also expressed that he was not concerned about the health risk that come with the production of GM-corn, because he has tenants who work his fields. Marites Muegue is an extentionalist who is concerned with the organic policy, but also she expressed that she went to the workshop because she is concerned about her families health in the first place. Despite her own function as organic agricultural extentionalist, she predicts that all the farmers in the area will produce GM-corn

in five years from now. Which does not show that she takes her own function, nor the organic agricultural policy very serious. She acknowledges that a current problem of organic agriculture is that the yields are very low. It must be noted that she refers to organic agriculture as the traditional way of agriculture, without zero chemical inputs and with non-classified seeds. This is rather different than the organic agricultural techniques that Carandang teaches during his workshop, in which he claims to gain as high yields or even higher as the HYV or gen-technology.

Ferdinand Bacanil expresses his pro-activeness by expressing the desire to try the organic technology first in his own backyard before sharing it with his farmers groups. He came to understand the importance of impressing the farmers, as a tool that the TNC's strategically use and that proves successful amongst the farmers. Bacanil also expresses his concerns about how the technique of GM-corn is slowly destroying their land and environment. He likes to be able to counter that through the organic approach

The farmers

Opposite to concerns raised from MASIPAG's report, the farmers all produced other crops next to their GM-corn production. I have no further information or data on the specifics, but they also do produce food-crops and sometimes also other cash-crops such as rice or white corn. They also have different traders for the different crops they produce. They do acknowledge, as we have seen previously, that the GM-seed suppliers are also the ones who take care of their harvest. Further, the farmers suggest that they feel content with their income, there are different voices and opinions about loans and indebtedness. For me as a researcher I am not sure how genuine or exemplary this data is. On the one hand this farmers group was chosen by the local government officials to be my respondents, whereby they had already indicated that this group did not belong to the most poorest farmers. Rather, it seemed to be that this were the more successful farmers of the local governments farmers group, as the local government also shyly admitted. On the other hand, being indebted or not having a good income is not something that farmers are open about, as already indicated in the report of MASIPAG. Therefore I am not sure how reliable this data about their economic reality is.

Another thing that can be said, is that the farmers showed to have rather little knowledge about gen-technology and its implications on health. A lot of interruptions made by the local government officials helped the farmers in answering questions they previously didn't have an answer on. However these farmers all belonged to the same farmers group, there appliance

of and knowledge about protective gear and clothing was far from homogeneous and seemed to be quite random. All farmers reflect on the past as being an abundant environment with many fruits and vegetables at forehand which provided in a diverse diet, very different than the current diet that mainly provides in staples food such as rice or white corn. There were also much less pests as in current days and the pests that were around were more easier to control. Further, most of the farmers were proud to say that their children could enjoy education from the extra income that GM-corn had provided for them.

This case has provided insight in how GM technologies are actively distributed and implemented through local government policies. It also shows how middleman and seed traders can easily make use of local government functions to enter into the network of local farmers. Local government officials also indicated how they would arrange farmers meeting on TNC's requests. Therefore, the (local-) government has a facilitative and actively supportive structure towards GM-corn technology and TNC's. It cannot be said that the government is "neutral" in gen-technology, since it actively supports distribution. On the other hand, the government has also provided budget for organic farming. Future years will show how effective this organic policy will be, but according to my informant who was in charge of organic agriculture, expectations are that in five years from now Pangasinan will be for a hundred percent devoted to GM-corn production, which makes one wonder about with what kind of purpose her role is intended. Also, the municipal agricultural officer indicated how difficult it is to implement organic agriculture whilst they also have been mandated to spread gen-technology. This shows that the government works closely together with the TNC's in Pangasinan, providing and facilitating ways for the TNC's to entire into the farmers production choices and possibilities. I have also showed how the production of GM-corn is facilitated from start to end. The farmers get access to the technology through loans and credit schemes which gives them access to the full production package. Besides managing the access to the inputs for the farmers, the trader also takes care of the output by taking care of the harvest. Through the GM-technology, the farmer is fully facilitated from the start till the end. The only thing the farmer has to take care for is for the produce. The structure of organic input is very different. Firstly, "organic" more than often seemed to refer to traditional agricultural production that shows an absence of chemicals, rather than a technological and modern organic production. There is also no structure from the government or any other actor that facilitates the entire farm process as how it exist in the GM-corn production. There is no coherent input package and the farmer has to take care of his own production output to the market. In this way the farmer would be more independent, but also much less facilitated and

secured as through the GM-package. When the farmer has little resources for his input and output, it might be too risky for the farmer to take the step into organic, as he will have to outsource everything by himself.

So on the one hand, the ties of dependency are constructed through this all-encompassing approach towards input and output facilitation of GM-corn production. It ties the farmers to the traders and because of their indebtedness to the trader it is difficult or impossible for the farmer to step out of this web of dependency. On the other hand, the farmer is neither provided with much better choices, if he could step out of this web of dependency in the first place. The farmer is not provided with many alternatives other than to fall back on traditional production methods that have not showed to be very beneficial for the farmers before. Thereby, as I have showed in the chapters before, the farmer has no access to the broads variety of seeds anymore as he used to have in the past. The market has also changed towards a strong focus on GM- products. So however the farmer might be tied to the trader through the controlling tools of the GM-technology package that is accessed to loans, the farmer might not even be bothered by this too much, since the alternatives are not seen as an improvement to the current state of affairs.

However, I like to stress and point out that this non-holistic approach towards organic agricultural production is the way how the government provides it, or maybe rather how it lacks to provide it. The government does not offer a more beneficial and facilitative structure to the farmers through which they can access and sell organic produce. This is why I have argued how important it is to not only contest the current hegemony, but also provide applicable and realistic alternatives for a more sustainable and socially just way of agriculture. I have already argued that the agricultural approach of the food sovereignty paradigm provides a sustainable and socially just alternative to the current neoliberal approach towards agriculture. Therefore I will show the organic approach towards agriculture of Gil Carandang, that works within the food sovereignties' paradigm and that provides an holistic and inclusive approach towards organic agricultural production. Carandang stresses the importance and how crucial it is to provide the entire facilitative structure of input and output for the farmer, before the practice will become truly sustainable for the farmers. Carandang is already introduced in this paragraph, but I will further elaborate on his approach and methods in the next paragraph through the case study.

6.2. Case Study Gil Carandang and Herbana Farms

When I met Gil Carandang I visited his workshop about how to make an organic mini-farm. After our meeting he invited me to join him to his own farm in Laguna, Herbana Farm ('The Unconventional Farmer' web-entry). Gil travels around the country to give workshops and lectures on a regular base, but Herbana farm is his home and demonstration field. Many visitors come here to learn more about Gil's natural way of farming methods. Gil only started farming when he was in his mid's 40's and felt stuck in his life, living in the United States at the moment. He wanted to make a change, to contribute to a better environment as he witnessed the rise of fast-food, obesity and intensive industrial farming. He followed several courses and workshops on Organic Horticulture, Sustainable Bio-Intensive Mini-Farming, Biodynamics and Indigenous Microorganisms. Gil was determined to go back to the Philippines to make a change: "After the seminar-workshop, all the participants were asked: 'How do you see yourself in the next 10 years?' I said, I will transfer what I have learned to others, especially the Filipinos when I return home to the Philippines. Thus, this career direction, is the path to sustainability – organic farming...". And so he did, Gil returned to the Philippines and soon became successful in the promise he made to himself. He became so successful that we never had found the time for a structured interview in the time that we travelled together, because he always had errand to run and people to talk with when he was not teaching. Gil did not like to do interviews neither, he always told me: "The proof is in the pudding..." with which he meant that he could tell me anything he liked, but eventually I had to see it for myself to gain real understanding. This also reflects back in his approach to farming, one of his favorite remarks is "...to be a good farmer is to observe nature...". Luckily for me, I got to observe Gil for a couple of days as well and my observations and field notes have been very purposeful to draft a sketch of the work and impact he delivers.

Gil felt reluctant to be part of the scientific debate but expressed a deep passion about sharing and especially implementing his knowledge in a practical way. He reacted dismissive on my questions about his opinion on GMO's and GM-crop. He did not want to be part of the discussion, he only wanted to focus on that what is really important to him: natural farming. In one of his rare recorded interviews he responds in a similar way:

"I hate to hear the question if there is a future for organic or natural farming in the Philippines. Organic and natural farming is the future! As I always say: "Whether you like it or not, the norm of the future is organic and natural. We

have no choice; it is the only logical path. There is no more ideology of the left, the right and the middle. There is only one ideology, and it is the ideology of the environment. Organic and natural farming is sustainable agriculture. The path to sustainable food systems is the path for our survival” (Rito, 2014)

Gil flies all over the Philippines now to teach communities about natural farming. In one of our rare conversations about GMO's, a topic that I could not resist bringing back up every now and then, he told me that he had the feeling that he was running a race with the TNC's. It was either them or him who would make the first contact with underdeveloped farming communities. Ones they had already been approached by the seed companies it was very hard to turn them into natural farming, he told me. As a reason for this he told me about the big promises and eloquent speeches given by the seed companies representatives during field demonstrations. “The poor farmers are very sensitive to that, they see the high yields and they hear the powerful speeches and they want the same thing, to improve their livelihoods. The farmers in the rural backlands are very poor you see, they are easily impressed by such talks...”. Gil was also concerned about the eroding of the soil after the chemical and packages once had been introduced into the fields. His methodology is mostly concerned about the microbial soil organisms and according to Gil it takes a while before the soil to get its fertility back from such an intervention. “...Most of the poor farmers do not have that time to go through the transition because they need to have their harvest. So therefor I do not invest in those communities, there's still enough to be done with those who are still farming traditional...”. Gil stresses to me that it is important to support the farmers from the beginning until the end. According to him it is not enough to just teach them natural ways of farming, as experience has taught him: “...there have been many occurrences that after a long period of training, they [the farmers community] just went back to their conventional way of farming when we did a later check-up...”. Therefor it is of crucial importance to connect them to local markets so they can sell their output. “...this is often the most difficult part of it, since farmers are used to their old relationships and connections, and there's not always a demand for these products...”.

In one of his latest projects in Palawan, the Bucana farm, linking the farmers community with the market is one of the biggest challenges. The farm is nearby the tourist town El Nido and at the time Gil had already established some connections with local restaurants to sell lettuce and some other vegetables to. But establishing a connection with restaurants is not the end of it, after that it is all about the maintenance of these connections. Gil: “...when you have a deal with a restaurant, you have to deliver to them on time or they will not have lettuce that

evening. We are not yet there [Bucana farm] that we can provide crops in such a regular way because the harvest is not always consistent so the restaurant still needs other producers as well. It's a challenge to deliver...". Because of this they only sell lettuce now to a couple of pizzerias in El Nido. Despite the challenges, Gil feels it is very important that the crops reach the market because he feels it is "...against all logic..." that the Philippines and even the island of Palawan imports all its fruits and vegetables from foreign countries while there is farmland available for the Philippines to produce themselves. This also resonates with Gil's deeper wish for the Philippines and its farmers to become food self-sufficient instead of depending on imports as it does now: "...I always say that each and every one of us should learn how to grow our own food. One day, it will save your life...".

Gil's methods

Gil works together with nature and with this he means that it is important to see and observe how nature works and what it does. In that way, the farmer can learn how to work with it accordingly. "We shouldn't fight nature but learn how she works and use that in our ways of farming. In this way we can gain much higher yields and use all her benefits". He works with all the natural dimensions: "...we have to observe the sun and the wind and the soil and water, these are the four systems that continuously interfere with each other and that determines specific circumstances and outcomes. So when we know what specific circumstances we need for specific outcomes, we have to adapt the elements to make it beneficial for us...". This goes as far as the entire design for the farm, which has to be structured around natural principles that take the interplay of the natural elements into account, as to the specific growth circumstances of each crop. Gil is a 'natural' and 'organic' farmer, which in his words means something like: "...there is really not much difference in organic and natural farming in essence, for both approaches respect the natural systems. For me natural farming is more profound in its natural point of views and very specific in lots of its natural approaches to farming. Organic farming refers to organic matter, deliberate farming of organic matter like composting, non-usage of chemical inputs, non-GMO, etc...".

His interest in 'organic matter' reflects his focus on microbial techniques that he combines with bio-intensive farming. He claims that this approach can produce the same high yields, if not higher, as with hybrid or GMO varieties and matching chemical inputs. For Gil it eventually all comes down to the life in the soil: "...Everything starts and ends with this living soil. The life in the soil, the fire, is the component of microorganisms. Organic and natural farming respects life. It enhances the soil, rather than degrades it. It creates life rather

than death, the soil is the basis of life. Organic and natural farming enhances the soil, while conventional farming degrades the soil with the use of chemicals among others...”. The inputs Gil uses are all made from organic matter that can be found on the farm. He ferments organic matter to make fertilizer and insect- and pesticides. Instead of using herbicides to get rid of crops, he makes use of the many beneficial of cover crops to enhance and rejuvenate the soil and improve water quality. The cover crops also provide habitats for beneficial insects and pest predators (The Unconventional Farmer: Cover Crops, webentry). Gil also has methods for poultry and pigs. For example the way how his piggery design works it naturally cleans itself. Its placed in such an angle that the sun shines upon the fat layers of sawdust long enough to dry the base and kill germs. The position of the piggery will also allow enough wind to pass through so there is no smell at all. Gil told me that they never need to clean the piggery in this way, they just sometimes add a fresh layer of sawdust to it. Initially I did not believe that such an easy invention would work, but when I arrived at the piggery there were six healthy looking pigs welcoming me with playful curiosity and without any trace of ammonia smell at all. The pigs also didn't need medicine, antibiotics, or any additive at all. They get fed with the leftovers of the farm, according to Gil they would eat almost anything so they are perfect for waste management he added with a laugh. The piggery looked very clean, the pigs were not afraid but rather curious and had a lot of space to roam in. If I was not impressed already, this was definitely the moment. What a difference with our western industrial ways to raise pigs on a farm, I kept thinking..

Institutional Framework

Despite Gil's objections against “scientific theories in books” and politics, he co-authored the Philippine National Standard on Organic Agriculture 2003 (ICS 65.020). The Standard decides on what kind of production systems can be considered and labelled as ‘organic’. Gil has been involved in this process from the early start. Gil became a certification board member of the Organic Certification Center of the Philippines (OCCP) in the early 2000's. When the OCCP started certifying and inspecting under the same roof, he established his own Independent Organic Inspectors Association of the Philippines (IOIAP) as he believed that both bodies should be separate as to function independent of each other. Thereupon IOIAP set up Pilipinas Certification (PilCert), with the purpose to establish an independent certification body to complement IOIAP. In 2010 the standard was enacted in the Organic Agriculture Act of 2010 (RA10068). The Act was a victory for organic agricultural activists

as Gil. It ratified the main principles of the agricultural movement in the Philippines that Gil was part of by stating:

“...It is hereby declared the policy of the State to promote, propagate, develop further and implement the practice of organic agriculture in the Philippines that will cumulatively condition and enrich the fertility of the soil, increase farm productivity, reduce pollution and destruction of the environment, prevent the depletion of natural resources, further protect the health of farmers, consumers, and the general public, and save on imported farm inputs. Towards this end, a comprehensive program for the promotion of community-based organic agriculture systems which include, among others, farmer-produced purely organic fertilizers such as compost, pesticides and other farm inputs, together with a nationwide educational and promotional campaign for their use and processing as well as adoption of organic agriculture system as a viable alternative shall be undertaken. The State recognizes and supports the central role of the farmers, indigenous people and other stakeholders at the grassroots in this program.”

It was through this Act that Gil started to give workshops and lectures for local governments and had the opportunity to transform communities in organic agricultural sustainable communities. It partly solved a problem that had come into existence after the Standard for Organic Agriculture had come into being. The problem with this Standard was that it made it compulsive for farmers who sold organic agricultural products to get certified. The certification is quite costly and impossible to afford for the average Filipino farmer, something that wasn't encouraging for the farmers incentive to sell organic anymore. Moreover, small scale farmers who already produced organic now had to face the problem that they had trouble selling their products on the market when they were not certified as they lost their comparative advantage. The Act lifted this problem until a certain way as communities now become transformed into organic sound agricultural practices by Gil which includes getting certified. The government and private donors finance Gil for this work. The big question of course is what happens to communities who are not being approached. It is still costly for them to get certified, while other communities are privileged by achieving it for free.

Besides political programs there are also programs from other actors that support farmer communities in integrating organic agricultural approaches into their livelihood. One of these other actors is the private sector. Gil invited me to visit one of his projects in Palawan, Bucana Farm. Bucana farm is financially supported by the Corporate Social Responsibility department of a conglomeration of three oil companies that work in the region. This conglomeration is the Malampaya Foundation Inc (MFI), composed of Shell Philippines Exploration B.V., Chevron Malampaya LLC and the Philippine National Oil Company

Exploration Corporation (PNOC-EC). MFI has hired Gil for the “capacity-building of farmer members of Samahan ng Nagkakaisang Magsasaka Mangingisda at Kababihan Tungo sa Maunlad na Pamayanan (SANMKAP) in intensive microbial organic farming methods and the set-up of the association’s community-managed organic farm in Bgy. Bucana, El Nido” (Malampaya Foundation webentry). By the time of my research, Gil was involved in the project for a year and together with the SANMKAP community he had set-up a vegetable garden. His next project was to create a piggery and to establish relationships with the local tourist market.

I spoke with farm members and with the executive director of MFI, who was at el Nido at my time of visit.

Bucana Farm

I meet Karen Agabin in her hotel lounge in El Nido, after being introduced to her by Gil.

Karen tells me about the corporation between Chevron, Shell and the PNOC-EC that has resulted in the joint CSR department that she is executive director of. Karen explains how the CSR department can be seen as “...the social arm of the gas project...”. She shows me map of Palawan that illustrates how the gas line runs through the island. She points to circles alongside of the line that indicate the location of communities they are working with. The SANMKAP community is one of the many communities they are working with, to support them in their livelihoods. MFI seeks to provide long-lasting and genuine benefits to communities through poverty alleviation and environmental protection. They have projects in the range of skills training, scholarship provision, health programs and agricultural support. The way of support is always decided with the communities and it takes a long process to identify the direct needs of the communities. They start with an assessment of identifying local priorities with the local governments, after that they do an assessment on grass-root level. They execute an indepth-social research in the community that can take up to one year, in order to design a community based management project.. The eventual project-agreement between MFI, the community and the local government always entails a conservation agreement that serves to protect the environment in which the communities live.

Since the gasline runs mostly offshore, the MFI mainly works with coastline communities. The farmers of Bucana farm are beside farmers also fisherman that earn an extra income through their farm. According to Karen they lived below the poverty threshold at the time that

the relationship was being established. Through the Bucana farm project they aim to give them a “boost” to enable them to live above the poverty threshold.

The farmers use a lot of chemicals on their farm to gain higher yields but at the same time these inputs are detrimental for their own catch, as it pollutes the waters and the corals they fish. Most of the farmers have not been aware about this negative impact of their own farming system before MFI approached them. MFI aims to “...enhance their knowledge and capabilities...” and to keep the community involved and engaged in the project. To keep the community involved is one of the main challenges they encounter. Karen explains how the community has already been approached by countless of organic trainings before by NGO’s and local government support groups; “...but after the trainings everybody was gone...” and there was never a follow-up or post-training. The key is to keep the community involved in the project and to provide a project for the long run. MFI does this by supporting the communities at the length of at least three to five harvesting cycles, after this they assess if they can sustain themselves; “...the final goal is for them to become independent of us, so that the community doesn’t need us anymore...”. The farm is set-up as way as to learn and integrate organic approaches in their own agricultural production. The current challenge is that the farmers are still working on a voluntary base without enough earnings yet for the farmers to be compensated. According to Karen a solution can be find in producing different vegetables, that tie directly into the demand of the local restaurants. But at the same time she feels that the solutions have to come from the farmers instead of something “...we just impose upon them, because then they feel they own the solution themselves...”. She says that there are plenty of opportunities because they have the comparative advantage of having the ‘organic’ label and even with this label some crops can be sold under the current market price. The reason for this is that there are hardly any transport costs for the products, whereas the usual products are often imported from foreign countries which makes them more expensive, according to Karen. Another reason for the lower production price is because the lower costs of inputs, this keeps the eventual product price low. Another challenge is to establish better marketing, according to Karen the marketing is to slow now and keeps the farmers from selling the crops that are currently produced. Besides the lettuce that is being sold to local pizzerias, the current produce is currently mainly used for the farmers own consumption.

One risk she identifies involves the marketing techniques of the TNC’s. Karen worries that they will approach the farmers and provides them with attractive promises: “...these companies are very aggressive, they have very good marketing techniques and they are doing

a lot of advertising...”. The chemicals that some of the farmers still use on their own land is already provided by these companies.

So far it is difficult to assess the project fully because it is still in the setting-up phase however the challenges and opportunities they encounter and the way how they approach community building are definitely relevant. After my interview with Karen I went to the farm to interview some of the farmers of Bucana farm. Even although I had a translator it was difficult to communicate with them because they felt very shy to talk to me. For some of them it was the first time they spoke with a foreign person and I could tell that they did not felt comfortable talking with me. Even though the discomfort, they did share some insights about their life and the project.

The president of the farmers organization of SANMKAP, Bangi Legaja, tells me that the farm already existed before they were approached by MFI. It was set-up in 1999 by a western NGO (he cannot remember the name of the NGO), they set it up in a multi-sectoral way. Meaning that it targeted various actors such as woman, farmers, elderly people and fisherman. The current project just started on February 17nd of 2015, just a few months before my visit. Bangi explains the structure of the organization and how the farm work. They set up the farm association with the help of the previous NGO. Everybody that wants to participate needs to volunteer on the farm to share the profits. The people who work on the farm often have none or only little land themselves and so they use the project as an extra income resource. There are monthly meetings in which they make decisions as a group, for example about what to plant for next cropping season. The members of SANMKAP feel that they help each other out in terms of need. As a cooperation they give support to each other, some other members also confirm this. Bangi is pleased with the help of Gil and he tells me that he is very enthusiast about Gils plans to attract agri-tourism into the farm. When I look around the farm-area I think to myself that there is a long way before tourists will come to visit this farm, as most of it is still very underdeveloped. Bangi states how important it is for the people of the community to volunteer in the project, he believes that it will start to pay off soon now Gil is here to help.

After my conversation with Bangi I have a conversation with six farmers in the form of a group discussion. The farmers tell me that they are hopeful about the project because they feel that the project covers them in their needs. It facilitates the resources to produce by providing inputs and land and by teaching them the skills to farm in an organic way, through methods they can also apply in their own gardens without being dependent on outside sources. They

also appreciate how the project seeks for market entrance to sell their produce to, as this is a crucial factor in making their farming activities productive in terms of the profits that they can gain from it. On the other hand they also feel the need for other farmers of the community to be persistent and to participate in all the activities. They make it clear to me that participation in the project is not always equally shared. It seems that those who have the least resources also invest most time in the farm. The little profits of the harvests go into the SANMKAP organization. The farmers feel that even though their income level has not increased yet, the project has been beneficial for them. They have learned how to grow (organic) crops and some of them get bright smiles on their faces as they tell me about the tomato's or other crops they have learned to grow within their own confines. They say to also have learned a lot of other things such as producing organic fertilizers, how to raise seedlings and how to take care of vegetables by organic produce. Some of the farmers also use the organic inputs on their own crops that they produce at home. Especially on their vegetables. The farmers who produce rice still work with chemicals. It surprises me how much Round-Up the farmers still use for their own rice production, but it surprises me even more when over half of the farmers confess to me that they are not aware of the health effects of Round-Up. There is no sign of preventive measures against the use of Round-Up for the farmers to protect themselves.

6.2.1 Conclusion Case II

Gil teaches a way of organic farming that takes into account the poverty of farmers and its need for high yields. He approaches organic farming in an holistic way, in which he is concerned from preparing the land until the connections for output with the local market. This holistic approach is necessary because it is important that the transition of traditional farming to organic farming is as smooth as possible, because the – mostly poor – farmers are directly dependent on the harvest for their income. Linking the farmers to the needs and wants of the local markets have been proven to be a challenging one. Even in Bucana farm, situated next to one of the main tourist towns of the Philippines, el Nido, it showed to be difficult to link farm produce to the local market and food production that the tourist industry provides. Perhaps this had to do with the fact that Gil had just been involved for a couple of months and the project had not found real shape yet.

Gil places itself right in the middle of the food sovereignty paradigm by the promotion of local food production to supply to local markets, to empower communities and fight poverty by organic agriculture and farmers sovereignty and to farm in a way that is perfectly harmonious with its environment and even upgrades biodiversity in the environment it is

implemented in. However Gil is a true activist in terms of that he uses his own hands as a weapon to fight industrialization of agriculture, he also sees that it is important to create a legal framework through which organic policy can be implemented, sustained and supported. Therefor he set up two institutional bodies for the certification of organic agriculture. The downside of this certification mechanism is that it suddenly becomes an expensive enterprise to perform organic farming. Farmers who have always farmed in an organic sustainable way but cannot afford certification are suddenly pushed out of the market by richer farmers who can afford a certification. This is an important pitfall that often seems to be neglected.

One of the most impressive things of Gil's work is that he is on a mission. At the same time, that is also the challenge. Gil is not able to transform the entire country on his own, even if he makes serious attempts towards it. Gil is on a mission but he is on a solo mission. My fear is that Gil is being presented and pushed on stage as "the Father of Filipino Agriculture", but that it is and remains a one man show, something that looks good on stage but has no follow-up. While the TNC's have hundreds, even thousands of agents on ground, Gil has only himself as resource. So my concern is how serious we should be about the Gil's work, as beautiful and inspiring as it is, when he is the only one implementing it? What difference can he really make in comparison with all the other counterforces? Gil runs the risk that his work is being used as window dressing, in which he makes the Philippine approach towards agriculture look more sustainable, socially and environmentally friendly as it actually is.

6.3. Conclusions Case Studies

In this chapter I have showed how in the first case the GM-technology was distributed and facilitated through the local government. The implementation of GM-technology into the agricultural fields was accompanied by loan packages that tied the farmers to the traders as well as through the technology, through mechanisms of control by debt. Another mechanism of control is that the GM-technology is offered in an inclusive way; the farmers are not only provided with a complete package of inputs, but the traders also facilitate the market entrance. In this way it provides the entire structure of the farmers produce, from seed to harvest. The farmer is tied to the trader and the package through the mechanisms of the technology that incur dependency upon it, by for example the increasing need to spray fertilizers, and through the indebtedness to the trader that the distribution of the technology brings with it. But better alternatives are also not at forehand. Organic production has showed to be presented as a fall back on traditional production, without the wide variety of technology and seeds as existed before the agricultural interventions. Therefore, even if the farmers would want to escape the

structure of indebtedness and dependency, it seems to be that there is not a better alternative at hand just yet.

In the second case I have showed an example of a better alternative, that also takes care of the entire structure of agricultural produce through the approach of Gil Carandang. He is aware of the importance of the facilitative element of agricultural restructuring as a necessity to become a sustainable method in the farmers live. We saw in the case of Gil that this process is also difficult to achieve, as market entrance does not prove to be easy with an organic farm that is in its start-up phase. It takes a lot of time and work to facilitate all the structures that are necessary to smooth the entire process from start till end. Here we saw the importance of long-lasting dedication to the project as Karen Agabin also stressed. Time will tell how this approach works out in the future, and if this form of agriculture is a sustainable option for the Filipino farmers who join the project. The same is also the case for the organic policy in the government, the workshop of Gil for the local government of Pangasinan proves that there is at least a growing interest and focus on organic agricultural production in the region. Concluding from both cases, one of the decisive factors of the success of the introduction of organic agriculture is depending on the facilitation of an all-inclusive approach towards organic production. Not only organic input and organic production techniques are necessary for a flourishing organic agriculture, but mostly sufficient entrance to the market for the farmers organic produce seems to be the defining factor for the success or failure of organic agricultural production.

In both cases we can trace the neoliberal food security paradigm as well as the food sovereignty paradigm. In the case of Pangasinan I have showed how the structures of the neoliberal food security paradigm found its ways into the farmers field through the facilitative actor of the local and national government. Through the chemical packages that accompanied the GM-corn seeds and through the GM-corn seeds themselves, the TNC's found their flourishment in the Philippine soil. The – local – government also made it look as if the food sovereignty paradigm through organic agricultural production was also embedded in their agricultural approach, which it was, but until an extent that was easily overridden by the hegemonic powers of the TNC's, as their structures are much more facilitated and dig much deeper into the Philippine soil. Therefor I maintain my position that food sovereignty and neoliberal food security must be treated as two antagonisms that both need to fight for their place and true expression in the field. For now it seems more that by adopting an organic approach into the – local – governments approach, the two *seem* to have a consensus but this

apparent consensus is rather a way for the neoliberal food security approach to acknowledge the existence of food sovereignties paradigm without actively giving it room for expression, whereby softening its power. The government should be the facilitator of the expression of both antagonisms and currents, but however it claims to be neutral, it is obvious that the government actively promotes and distributes the neoliberal approach towards food security.

This is also a current that is traceable in the second case, where Gil Carandang enters the role of the ‘Filipino Father of Organic Agriculture’, but it should be questioned until which extent he is actually able to make a real structural change into the agriculture field of the Philippines. Thereby I can conclude, that by integrating organic, food sovereignty approach into an neoliberal approach towards food security, there is the risk that this legitimizes and sanctions the powerful forces of the neoliberal paradigm to continue its doings, without giving “real” space for the food sovereignties approach to be actively involved in the Philippine’s approach towards agriculture. I argue that an active application of food sovereignties ideals can only happen when both of the paradigms are given space to actively contest each other and be in continuous debate, in which they both take and are granted equal positions. If this is not the case, approaches towards food sovereignty should remain in the field of a contesting force, for it is otherwise vulnerable to be soften up, being embedded in the hegemonic paradigm of the neoliberal approach towards food security.

Conclusion

In this conclusive part of my thesis I will elaborate upon the answering of my research question that I introduced in the beginning of this thesis:

Through which mechanisms of control did neoliberalism become the hegemonic paradigm in food security in the Philippines, what were the socio-economic effects of this approach and how can the neoliberal hegemony be challenged by a countermovement that offers a more just and sustainable socio-economic agricultural paradigm as alternative?

I have showed how the neoliberal paradigm towards food security has become hegemonic over the Philippines, through decennia of restructuration that was facilitated through the indebted state of the country. I have also showed that the TNC's have gained power through the hegemonic order of the neoliberal approach towards food security. This approach works through constructs of control, that are imposed over the country and its farmers through indebtedness and dependency. Both the country and the farmers are caught in a vicious downward cycle that becomes increasingly difficult to step out of, the longer they are part of it.

Throughout the entire thesis we see how the issue of debt through neo-liberal policy plays a huge role in the creation of dependency. The relation of dependency is first and foremost constructed through how the Philippines became indebted to the western institutions that than had all the space to implement a neo-liberal policy in the Philippines that dictated the opening up of the markets to create market space for American and European agricultural products. Secondly, this neo-liberal policy materialized its tools of control through the influx of western, modern technological agricultural packages that also created debt-issues more closer to the ground, and directly into the lives of farmers. A great part of farmers and peasants became tied to new production mechanisms that took away their own control and sovereignty over production inputs and outputs and land cultivation and ownership. Through the mechanism of debt and technology as control, the entire agricultural landscape changed: former traditional agricultural production methods and seed varieties were alienated from the landscape, farmers could not provide in their own and the countries food security anymore, farmers and tenants lost their employment in agriculture and small farmers lost their land to bigger landowners. It also gave way for already more prosperous farmers to become more prosperous by taking over smaller farms of farmers unable to keep up with the developments

and competition. The Green Revolution had allowed the western hegemonic powers to establish themselves in the agricultural landscape, through restructuration policies on the one hand, and through agricultural tools of control on the other hand. The market was opened, protectionist mechanisms were erased from the field and full consent to the west was given in terms of its economic demands for neoliberal restructuration. The countryside collapsed, agriculture fell prey to the market and farmers were left on their own, having to survive without the governments support system it could previously turn to.

It was not until 2003 that a third intervention took place, namely the Gene Revolution. I argue that the Gene Revolution can be seen as an “update” for the controlling structure that the Green Revolution had already implemented over the Philippines. It enforced the structures of control through the improved technology of gen-technology that speeded up the process of indebtedness and dependency to the technology even more further, making way for the west to penetrate the country even deeper. In exchange there was the increase of the production of non-human consumable GMO’s, increase of mechanization, increase of big-scale farms owned by rich land owners, increase in environmental degradation, and increase in dependency. Neo-liberal (agricultural) policy proved to be the main tool of power for deep structural transformation.

The governments’ policies have not created much of a change in the Philippines. At the same time we see that neo-liberal policies had the free hand in restructuring the entire Philippines, from the high economic structures in which it turned the Philippines from a protectionist oriented country into a free-trade non-tariff barrier economy whereby it deeply restructured the lives of millions of farmers and peasants in a more local economic structure. Through this we can see that the restructuration has worked in and through many levels of society. Government policy have showed not to be resilient enough to withstand this, but at the same time it has also shown to be capable to allow the intervention and introduction of TNC’s to restructure the country.

However the Philippine government claims to be neutral in the matter of gen-technology and claims to give attention to both a more sustainable ecological paradigm as proposed through the food sovereignty paradigm and the modern (gen-)technological approach of the neoliberal food security paradigm, I have showed that it mainly allows and facilitates space for the latter. The government does this through two ways, the first is an active approach. I have showed how the government actively distributes GM-technology through the purchasing of large quantities of GM-corn seeds by the Abono Party List, which then distributes it through

local governments' networks of, in my case, the province of Pangasinan. Local government officials also worked as GM-corn traders and or distributors and exposed everything but a neutral position. The FSSP program also turned out to work in the hands of the TNC's, by implementing more industrious techniques into the country, without benefits for poorer farmers or gain in countries' domestic staple sufficiency. The second way is through a passive approach. Exactly by its *not* doing, the government performs. By not implementing its own regulatory and monitoring framework, by not following up on legislation that allows farmers to have more control over their produce, they actively work in the hands of the TNC's and the neoliberal hegemonic approach towards food security. Therefore I have argued that the only way for the Philippines to have a serious go at a genuine approach towards the implementation of approaches coming from the food sovereignty's paradigm, is through continuous contesting of the neoliberal hegemony over food security by counter-movements as showed by MASIPAG, SEARICE and Greenpeace Philippines.

I have argued that it is only through the sidelines, exactly by not being implemented and swept under the neoliberal rug of hegemony, that the power and efficacy of the food sovereignty movement can truly make a difference. By a continuous contesting of the dominant paradigm dogmas, by challenging it and by raising questions, while at the same time offering solutions and alternatives to the currently available standards. There is a need for a continuous effort in reminding the dominant current on its responsibilities, on its promises and on the morals and rules it presents itself by. To repeat the statement of Chantal Mouffe that I have quoted earlier:

“If we take ‘liberty and equality for all’ as the ‘ethico-political’ principles of liberal democracy, it is clear that the problem with our societies is not their proclaimed ideals but the fact that those ideals are not put into practice. So the task for the left is not to reject them, with the argument, that they are a sham, a cover for capitalist domination, but to fight for their effective implementation. And this ofcourse cannot be done without challenging the current neo-liberal mode of capitalist regulation”

And this is exactly what the Filipino NGO's as MASIPAG and Greenpeace have done. By going to the Supreme Court it challenged the mechanisms of the current neoliberal food security's paradigm and insisted on the implementation of the country's own ethico-political morals as expressed and legislated in its own institutional framework. It did not accept the ethico-political morals as a way through which the country could merely present itself in a keen way and through which it could legitimize its oppressing powers. Instead, it kept the

country to its own moral promises, as Mouffe says, by fighting for the effective implementation of the ethico-political values they present under the status of their liberal democracy. In the case of MASIPAG and Greenpeace it has showed that there is an effective way of doing this by using the Court as an effective mechanism to remind the country on its own statutes and rules, through which it is forced to implement this and to live up to it. This is what creates the real space for alternatives, this is what can challenge the neoliberal hegemonic forces. It is about an active implementation of the countries moral statutes, the ideologic ways it legitimizes its existence and sovereign power by. When the countries countering forces are powerful enough, it is able to continuously contest and remind the country to its own promises and find ways, as through the Court, to force the country to implement this and to live up by it. This is also the only way for the Philippine government to counter the restraining powers of the hegemonic neoliberal wing it is under. When the country effectively stands up for its own constitution and legislation, there is no way that neoliberal capitalistic powers can go around this. Only when the country fails to actively live up through its own constitution, as we see in the failings of the country to adjudge the right regulation of GMO's through its own – currently lacking – monitoring institutions, is there space provided for the neoliberal mechanisms to sneak through its legislative system and to find its way through the cracks the country leaves open for the neoliberal mechanisms of power and control to sneak in and adopt itself into the country.

And in the meanwhile activists like Gil Carandang can provide practical examples for existing alternatives, and show its effect. But the alternative itself is not going to provide the solution for the problem, as it is not in the interest of the current dominant paradigm to provide such solutions or moreover, approaches. It is in its interest to gain and secure domination, so that it can enjoy the economic and political benefits of its dominion. There is no real political or economic interest in providing ecological, sustainable, community empowering and local production combined with local market. Rather, this is what is threatening for the global powers. Opposing, countering and contesting voices are absolutely necessary to challenge the government to walk its talk and to be true to its own ethico-political constitution. The contestment itself is necessary over consensus, because harmony can lead to forms of silencing, window dressing and tokenism, over an actual effort to create a structural change and to provide room for alternative initiatives. Therefor contesting forces that counter and challenge the hegemonic paradigm are of crucial importance to create a healthy democratic environment through which socially and environmentally sustainable initiatives in organic agriculture can be achieved.

Taken that I take the technological packages of HYV's and GMO's as packages to secure and tighten control over agricultural and economic systems, a question which I'm left with is why the Gene Revolution was necessary in the eyes of the hegemonic powers. Was it another way to remain an even tighter control over the Philippine agriculture, and if so, what for? Were there opposing powers at work that instigated the incentive for the hegemonic west to tighten control? What happened in say the decade before the introduction of gen-technology, that motivated the implementation for stricter control mechanisms through GMO's. Especially when we take note of the fact that it were mostly HYV packages that were taken over by GMO packages, so the ties of control were already there. Was it purely market interest? To introduce another import product that TNC's like Monsanto and Syngenta could make more profit of and thereby serving the western economy, or was it mostly motivated by implementing a more stringent form of control, and if so, what for?

Or a third option, if it is not mainly implemented for more stringent ways of control, nor for the mere profit of western TNC's, was it possibly introduced as a way for the western imperialist to experiment with this new form of technology, to see how it would work out in the field? Using the Philippines as their experimental testing-fields, to see which obstacles, opportunities and challenges it would bring forward, before imposing the technique over a much broader array of development countries worldwide? If that is the case, than not only the facilitating structures offered by the governments submission to the technique has been beneficial for the neoliberal hegemonic forces, but also the food sovereignties counter-movements and counteractions, reports, researches and activism. For it provides the hegemonic neoliberal forces with a perfect assessment of what kind of obstacles, opportunities and challenges the technique would encounter before it would be decided to implement it globally. In this way, obstacles and challenges can already be anticipated by and smoothed out before the imperialist will lay out this technology on global scale. However I realize that this might be a rather pessimist endnote to conclude my thesis by, I think it is worth the consideration if we really want to consider and find out through which kind of ways the power structures of the neoliberal hegemonic west find their ways into development countries, and to know what "we" are up against.

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