THE CHALLENGES OF THE AGRARIAN TRANSITION IN SOUTHEAST ASIA

ChATSEA Working Papers

Working Paper no. 13, November 2010

Aquaculture for Rural Development: An Asymmetrical Initiative

by

Evangeline O. Katigbak

ISSN 1919-0581
ChATSEA

The Challenges of the Agrarian Transition in Southeast Asia Project (ChATSEA) is sponsored under the Major Collaborative Research Initiatives of the Social Sciences and Humanities Research Council of Canada. With its primary focus on Southeast Asia Region, the Project seeks innovative understandings of the agrarian transition understood as the multiple, uneven, and reversible pathways and processes through which agrarian relations are transformed. Key processes being studied include agricultural intensification and expansion; commodification; peri/urbanization, industrialization, human mobilities, intensification of regulation; ecological change; agrarian social movements; and the remaking of agrarian wealth and poverty. The Project involves an interdisciplinary team from Canada, Southeast Asia, Europe, and Australia. It is directed by Professor Rodolphe De Koninck, Canada Research Chair in Asian Studies, Université de Montreal, Canada. It runs from 2005 to 2011.

For more information: http://www.caac.umontreal.ca/en/chatsea_intro.html

ChATSEA Working Papers

The ChATSEA Working Paper Series is intended to present empirical findings from original research concerning the agrarian transition, with an emphasis on contemporary context. The Series includes work done by faculty and graduate students sponsored by or affiliated with ChATSEA, and by other scholars who are not affiliated but whose research concerns similar themes.

Working Papers should speak directly to the question of agrarian transition in Southeast Asia. It may approach the topic through a focus on one or more of the constituent processes of the agrarian transition, identified as: 1) agricultural intensification and territorial expansion; 2) increasing integration of production into market-based system of exchange; 3) accelerating processes of urbanization and industrialization; 4) heightened mobility of populations both within and across national borders; 5) intensification of regulation, as new forms of private, state and supra-state power are developed and formalized to govern agricultural production and exchange relationship; 6) processes of environmental change that modify the relationship between society and nature to reflect new human impacts and new valuations of resources.

Working Papers are sent out for anonymous review by scholars in the field. The maximum length for a Working Paper is 8000 words. Please submit papers, or abstracts of planned papers, to the managing editor by email. The managing editor of the series is To Xuan Phuc, PhD. Email address pto@forest-trends.org. Members of the editorial board are Keith Barney, Philip Kelly, PhD, Tania Li, PhD, To Xuan Phuc, PhD, and Peter Vandergeest, PhD.
| Working Paper no. 6, June 2009 | Agrarian Transitions in Sarawak: Intensification and Expansion Reconsidered | Cramb, Rob A. |
| Working Paper no. 9, March 2010 | Agrarian Class Formation in Upland Sulawesi, 1990-2010 | Li, Tania Murray |
| Working Paper no. 11, October 2010 | Paddy Crop Transition after 31 Years of Green Revolution: Restudy on Farmers’ Communities in Northern Peninsular Malaysia | Ahmad, Raiha |
| Working Paper no. 12, October 2010 | Intertwined lives: household dependence and the livelihood strategies of morning glory (*Ipomoea aquatica Forskal*) producers in desakota areas in mainland Southeast Asia | Salamanca, Albert M |
AQUACULTURE FOR RURAL DEVELOPMENT: AN ASYMMETRICAL INITIATIVE

Evangeline O. Katigbak
MSc Geography
eokatigbak@yahoo.com
Department of Geography,
University of the Philippines-Diliman,
Faculty Center 3055
Diliman, Quezon City, 1101,
Republic of the Philippines

Acknowledgements
I am grateful to the reviewers of the initial draft of my paper for their comments and suggestions. I would also like to thank my colleagues from the Department of Geography at the University of the Philippines-Diliman, especially my thesis adviser Dr. Doracie Zoleta-Nantes, for their valuable insights and assistance that they extended to me while working on this research. Many thanks are also due to the wonderful people from my research site who shared their ideas, thoughts and time to accomplish this study. Lastly, I acknowledge the research program The Challenges of the Agrarian Transition in Southeast Asia (ChATSEA) for funding this project.

Abstract
The aquaculture sector in the Philippines has seen tremendous growth over the last three decades. Its growth is largely supported by both national and various local government units as aquaculture is seen to support food security programs in the country’s drive towards economic development. This is in response to food security challenges at the present and in the future, and also because growth in the sector is seen to increase export gains in the country. This study provides an analysis on how aquaculture development, which has largely been driven by the international demands for seafood, has impacted the livelihoods of coastal dwellers in the Philippines. The study captures local communities’ responses to this initiative as seen in the experiences of the people of Infanta, Quezon. It details the assertion of local peoples of their rights over mangrove areas, which are common property resource, against more economically and politically powerful fishpond developers who are not from the municipality. The study hopes to add further to the understanding of how conversion of mangrove areas to fishponds is transforming livelihoods and identities of peoples in the local communities. This research employs political ecology in locating the ecological transformations and the consequent changes in livelihoods and identities of the local population in Infanta.

Keywords
aquaculture, mangrove conversions, fishponds, rural development.
Introduction

An increasing number of the world’s population is relying on fishery related activities, particularly aquaculture, for income and nutrition (World Bank, 2006). Aquaculture is seen as an effective development strategy that would alleviate poverty in the rural areas by providing the rural population with a more stable employment and income. The Asian Development Bank’s (ADB, 2005) case studies on aquaculture in Bangladesh, Philippines and Thailand indicated that fish farming and freshwater aquaculture generate self-employment opportunities in the rural areas, as well as diverse livelihood opportunities for fishpond operators, and employees in seed nurseries and hatcheries, and seed and fish traders. The presence of such economic activities also provides part-time employment such as pond construction and repairs and fish harvesting for the local population (ADB, 2005). However, aquaculture has also brought about disadvantages to the rural population. Cases in many countries, such as Thailand, Mozambique, and Indonesia, for instance, show that aquaculture activities have displaced local populations, bringing about economic dislocations as the villagers were denied access to the source of their traditional livelihoods (Environmental Justice Foundation [EJF], 2004; Sathirathai and Barbier, 2001; Kairo et al., 2001).

The Philippines’ experience in employing aquaculture as a rural development strategy has likewise resulted to the massive displacement of rural population away from their traditional economic spaces and the massive conversion of mangrove ecosystem (White and De Leon, 2004). These happenings point to several questions that critique ‘development’ strategies that are actively employed in the countryside and how these impact the rural population. This study provides an analysis on how aquaculture development, which has largely been driven by the international demands for seafood, has impacted the livelihoods of coastal dwellers in the Philippines. In particular, this study seeks to understand how local communities respond to aquaculture as a rural development strategy that facilitates the encroachment of intensive fishery production sites onto public lands, particularly mangrove areas, in terms of transformations in their livelihoods and identities. It situates the experiences of local residents on the use of aquaculture as a rural development strategy and the negotiations that the local people take vis-à-vis the processes that lead to ecological transformations in their community. It focuses on how the operation and expansion of fishponds affect and configure changes in the local community members’ livelihood strategies, identities and environment. Development strategies such as the conversion of mangrove areas to aquaculture ponds that are aimed at marking the Philippines’ position in the global economic arena have overlapped with the daily negotiations of identities, politics and economies of individuals, households and local communities. This study also aims to understand how global market forces, as incorporated into the Philippine government’s program on development, influence the decision to convert agriculturally productive forest lands particularly mangrove areas to other uses such as aquaculture ponds. This study also situates the responses of different actors in Infanta to the facilitation of the national and local governments of the development of intensive fishery production sites in their community.

In light of these, I argue that local communities initiate and pursue collective struggle when their common resources, which are sources of their livelihoods, are threatened. Hence, it is important not to treat villagers as passive actors but include their voices and their traditional knowledge in drafting development policies in the countryside. In this study, I show that top-down approach to policy-making, especially as regards local development, can at times produce results that are reversed to the desired effect of development policies. This, I contend, is because such policies sometimes do not take into consideration the needs and capabilities of local communities. I use the struggle between fisherfolks in a village in Infanta, Quezon and a politician from Metro Manila over a fifteen-hectare man-

ChATSEA Working Paper no. 13, November 2010
Aquaculture for Rural Development: An Asymmetrical Initiative
grove area that the latter illegally cut and converted to fishpond to illustrate and articulate my contention.

**Situating Aquaculture for Rural Development Geographically, Conceptually and Methodologically**

**Aquaculture for Rural Development in The Philippines**

In 1974, the Bureau of Fisheries and Aquatic Resources (BFAR) started a program of developing mangrove forests into fishponds. This national policy that encouraged brackish water pond culture was premised on the belief that mangroves and other wetlands are wastelands (Primavera, 2000). This program continued into the 1990s with more than 200,000 hectares of mangroves converted during its implementation, largely aggravating the situation of the mangrove areas in the country. According to White and De Leon (2004), about 95,000 hectares were allocated for the development of fishponds. Of these, 63,000 hectares are under Fishpond Lease Agreement (FLA), with 16,000 hectares under short-term leases and about 8,000 hectares under private ownership. They further noted that some areas are still undeveloped and some are illegally occupied.

Aquaculture as a rural development strategy was met with both enthusiasm and resistance by various NGOs, local communities and big capitalists in the fishing industry. Those who favored aquaculture were primarily big capitalists in the fishing industry that could provide enough capital to develop large fishponds. There are also other local organizations and residents that supported this initiative. Resistance, on the other hand, came mostly from other local organizations and villagers who were directly affected by aquaculture development projects. While loans for pond constructions from different banks and lending institutions such as the Asian Development Bank (ADB) poured in beginning the 1950s (Primavera, 2000a; 2000c), local communities, organizations and personalities have also taken steps to counter expansions of fishponds and resist development strategies that contribute to ecological transformations which they deem exclusionary in orientation and would keep them from also benefiting from such transformations.

With both the Fisheries Code of the Philippines and the Agriculture and Fisheries Modernization Act (AFMA) emphasizing food security and poverty alleviation in the countryside, BFAR, together with other institutions and government offices such as the National Fisheries Research and Development Institute (NFRDI), has developed the Aquaculture for Rural Development (ARD) Program. ARD is said to veer away from the old way of aquaculture practice that is detrimental to the environment (Escober, Jr. and Jacinto, Jr., 2006). ARD is an on-going effort to disseminate the use of mature and proper technologies in the rural areas, particularly to the small and medium scale practitioners. This program heralds its claim to support community-based projects as well as simple and environment-friendly technologies that are aimed at income and employment generation for the rural population (Escober, Jr. and Jacinto, Jr., 2006; Platon and Israel, 2001).

The components of the ARD include (Escober, Jr. and Jacinto, Jr., 2006; Guste and del Rosario-Malonzo, 2004):

1. Establishment of mariculture parks patterned after the concept of industrial parks;
2. Conversion of ‘wastelands’ (marshlands, swamplands, sand dunes, lahar areas, etc.) into productive aquaculture areas;
3. Promotion of rice-ulang (giant freshwater prawn) culture;
4. Promotion of saline-tolerant tilapia for mariculture;
5. Culture of fish in condominium-type fish tanks;
6. Development of village-level aquarium industry; and

The Bureau of Fisheries and Aquatic Resources (BFAR) is the government agency man-

Katigbak, Evangeline O.
MSc, Dept. of Geography, University of the Philippines Diliman
dated to issue the Fishpond Lease Agreement (FLA). The FLA is a 25-year contract issued to those who wish to develop fishponds on government land. Republic Act (RA) 8550, otherwise known as the Fisheries Code of 1998, stipulates that the area leased for fishpond purposes shall be no more than 50 hectares for individuals and 250 hectares for corporations and fisher folk organizations. Moreover, the Fisheries Code mandates FLA holders to pay a lease rental that reflects the resource rent accruing from the utilization or resources. This fee is to be determined by the Bureau (Sec 6, RA 8550). White and De Leon (2004) argue that a major problem with FLAs is the very low rental rates of just about PhP100.00 ($ 2) per year per hectare. This fee was way below the estimated values of $538/ha per year and $42 to $156/ha per year, respectively, for fish and wood harvests from Philippine mangroves (Primavera, 2005). White and De Leon (2004:85) claim that this means that “conversion to fishponds does not carry penalties for low production and pays little back to the government or community for losses associated with conversion of mangrove ecosystems”. Hence, policies such as this encourage even more clearing of mangroves. Based on the mangrove resource valuation study done by Dr. Delos Angeles (1996), fishpond operators can, in fact, afford to pay the proposed increase in lease fees from PhP100.00 (US$ 2) per hectare to PhP1,000.00 (US $20) per hectare. The implementation of higher fees is encouraged in order to push for a more efficient use of the land. The implementation of this increase in fees is being opposed heavily by commercial fishpond operators (Primavera, 2005).

The aquaculture sub-sector in fisheries has also been identified as one of the major sources of jobs in the rural areas in the coming years. The projected growth in aquaculture is seen to likewise support food security programs in the country’s drive towards economic development. Growth in this sector is envisioned to be attained through increasing production intensity and diversification in the existing commodities and fishery farms (ADB, 2005; Lopez, 2006; Juliano, 1996). The sector also has potential to supply for both domestic and export markets.

**Fishponds in Infanta**

Infanta (Figure 1) boasts of having the most extensive brackish water fisheries in Quezon province. It also has a vast mangrove area that serve as a rich breeding ground for a wide variety of species, sheltering them also from strong winds and flood waters (CCLFI, 2003). The combination of marine fisheries and aquaculture has made Infanta a net exporter of fish (Infanta CLUP, 2002). Fisheries are divided into three types, commercial, municipal and inland fisheries, which are comprised primarily of aquaculture (CLUP, 2002: II-5). Municipal fisheries involve fishers using below 3GT fishing vessels. To date, there are around 1,025 fisher folks in Infanta. Lastly, commercial fisheries involve fishers using more than 3GT fishing vessels. To date, they employ about 171 fisher folks. Barangay Dinahican hosts a wharf that serves as fish landing for municipal fisher folks and even those of the Polillo Island. The national government has already planned for the upgrade of the wharf into a national fish port. The municipality is promoting the area as a growth center that specializes in fishery industries and beach/coastal recreation. This is in connection with the on-going regional industrialization programs of the national government and with the three municipalities of Quezon, namely Real, Infanta and General Nakar (REINA) being identified as a growth corridor, different projects, such as the construction of the Marikina-Infanta Highway and the establishment of the International Container Port in Real are underway. Infanta has also identified different growth centers in anticipation of the establishment of the International Container Port in Real. Magsaysay East Growth Center, for instance, is proposed to serve as the new town site and will have the specialized function as an industrial area. The Dinahican Growth Center, on the other hand, will be promoted as a growth center specializing in fishery industries and beach or coastal recreation (CLUP, 2002).

ChATSEA Working Paper no. 13, November 2010
Aquaculture for Rural Development: An Asymmetrical Initiative
In Infanta, fishing industry remains to be the most important production activity in terms of volume and value of production, the area coverage and the number of households and individuals involved (Infanta CLUP, 2002). Fishing activities are classified into marine, inland and brackish fishing. Included in marine fisheries are municipal and commercial fishing that are performed in the municipal waters of Polillo Strait and Lamon Bay and the Pacific Ocean for commercial fishers. Inland and brackish water fisheries involve the use of fish traps, fish cages and other forms of fish capture along rivers and creeks and developed fishponds along estuarine portions of mangrove forests and other wetlands (Infanta CLUP, 2002).

The total area occupied by fishponds in the municipality is estimated to be 1,177.27 hectares. This is classified into 512 hectares of FLAs and 665.27 hectares of private fishponds, representing one-fifth (21%) of all wetlands (Infanta CLUP, 2002). This figure, which is a result of the barangay survey done by the Municipal Agriculture Office (MAO) in 1999, contrasts with the figure that is included in the Physical and Socio-economic Profile (PSEP) of the municipality which estimates the total coverage of fishponds at 858.12 hectares. Majority of the 858.12 hectares is occupied by brackish water fishponds with 848.12 hectares and 10 hectares of freshwater fishponds. There is an absence of reliable and updated data on the extent of aquaculture in terms of hectarage and volume and value of production, in the municipality. In spite of this, however, the MAO of Infanta approximates the annual production in terms of volume at 1,946.064 metric tons with estimated value of PhP 92,803,200.00 per annum (Infanta PSEP, 2004). The main species produced in these fishponds are milkfish, tilapia, shrimp, prawns and crab. There are 70 fishpond operators in the mu-

Katigbak, Evangeline O.
MSc, Dept. of Geography, University of the Philippines Diliman
Table 1. Fishpond in Binulasan, Infanta

<table>
<thead>
<tr>
<th>Barangays</th>
<th>Area (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abiawin</td>
<td>38.8</td>
</tr>
<tr>
<td>Alitas</td>
<td>22.25</td>
</tr>
<tr>
<td>Amolongin</td>
<td>12</td>
</tr>
<tr>
<td>Antikin</td>
<td>211</td>
</tr>
<tr>
<td>Balobo</td>
<td>31.6</td>
</tr>
<tr>
<td>Binulasan</td>
<td>151</td>
</tr>
<tr>
<td>Binonoan</td>
<td>94</td>
</tr>
<tr>
<td>Cawaynin</td>
<td>28</td>
</tr>
<tr>
<td>Dinahican</td>
<td>25.3</td>
</tr>
<tr>
<td>Gumian</td>
<td>166.97</td>
</tr>
<tr>
<td>Langgas</td>
<td>5.8</td>
</tr>
<tr>
<td>Maypulot</td>
<td>12</td>
</tr>
<tr>
<td>Silangan</td>
<td>42.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>858.12</strong></td>
</tr>
</tbody>
</table>

Source: Infanta CLUP, 2002

nicipality. Fifty-five are private owners and 15 are Fishpond Lease Agreement (FLA) holders (ISO, 2007). Table 1 lists the hectarage of aquafarms per barangay in the municipality.

The figures mentioned above are, however, refuted by leaders of different POs and some local residents. They claim that there have been illegal expansions of fishponds that entailed clearing of vast mangrove areas. Arnulfo Cruz, head of Samahang Ipinagtatanggol ng Kapakatanan (SIPAKAT) (Movement to Protect Mangrove Areas), asserts that both the Department of Natural Resources (DENR) and BFAR have loosely enforced the law that concerns the protection of timberland, contributing to the existence of many illegal fishponds in the municipality. He relates that:

The fishponds that were constructed in various provinces violated laws and the DENR and BFAR are not paying attention to it. The reason why I said that was because when we conducted our investigation with the DENR, we discovered that many fishponds were constructed in timberland areas, beyond the areas allowed by the BFAR. It (fishpond constructions and operations) began in the 1970s. DENR and BFAR can no longer rescind the contracts and demolish the fishponds even if we were requesting for it. They reason that those fishpond operators spent much for the development of their fishponds. That’s the reason why up to now, they are still renewing their FLAs when they have supposedly finished their contracts already. They continue to occupy their fishponds even now.

Tata Max, who is the president of the Binulasan Fisheries and Aquatic Resources Management Association (BFARMA), shares Mr. Cruz’ sentiments. According to Tata Max, there are many fishpond operators in Infanta who illegally expand their fishponds. He also laments the “inefficiency” of BFAR to regulate the operation of these fishponds that are under FLAs. Tata Max also alleges that the DENR and the LGU are not effective in implementing RA 8550 in Infanta. RA 8550, or the Philippine Fisheries Code, stipulates the ban in the cutting of mangroves for fishpond purposes.

Mario Rona, head of the Binonoan Development Cooperative (BIDECO), also expresses his dismay over the lack of commitment of both DENR and BFAR in protecting mangrove areas in Infanta against illegal expansion of fishponds. BIDECO is another PO that is based in Barangay Binunoan that is also concerned with the protection of mangroves in Infanta. He narrates:

When we realized the value of mangroves, we knew that its destruction would also greatly affect us. Foremost, mangroves provide breeding grounds for fish. There are many benefits that will be derived from mangroves if it will not be destroyed. There are various laws drawn up by our government like Presidential Decree 704 that prohibits illegal fishponds. Now, we have RA 8550 that contains all the provisions that disallow the destruction of mangroves. Despite these, however, destruction of our mangroves
continues. This is happening not only here in Binonoan but in the whole of Infanta.

The sentiments of Cruz, Tata Max and Rona reflect the important role of government institutions, operating at different scales, in the implementation and monitoring of various environmental laws.

This research is focused in Barangay Binulasan (Figure 2). This village has experienced massive mangrove conversions to fishponds starting in the 1960s. Binulasan is a coastal barangay in Infanta that is bounded by the Polillo Strait in the east and Barangay Antikin in the west. Its vast mangrove area serves as a source of livelihood for the local people. Barangay Binulasan was chosen as the research site because of the active movement towards mangrove protection and conservation. Moreover, the area is moving towards the application of proper technology, like aquasilviculture, to effectively utilize their common mangrove areas (kapakatangan/ pakat).

Binulasan was among the rural areas in the country where massive conversion of mangroves to fishponds took place when the government granted open access privilege to fishpond developers through FLAs in the 1960s. Records of the MAO of Infanta show that there are about 151 hectares of private brackish fishpond in the barangay (Table 2). This represents 17.60% of the total aquaculture hectarage in Infanta. Residents of the barangay have expressed diverging views with regard to the issue of aquaculture expansion and operation. This provides a good venue for examining and situating experiences and responses of local communities to the promotion and employment of aquaculture as a rural development strategy. In this juncture, I will elaborate on the struggle that the people of Binulasan had against the political figure that illegally operated a fishpond in the area.

Using political ecology as lens, this study examines how multi-scalar development strategies, plans, policies and programs on aqua-

---

**Figure 2. Barangay Map of Binulasan, Infanta**

[Map of Barangay Binulasan, Infanta]
Table 2. List of Aquafarms in Barangay Binulasan

<table>
<thead>
<tr>
<th>Operator</th>
<th>Address</th>
<th>Species Cultured</th>
<th>Area (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onesimo Fortonado</td>
<td>Brgy. Ingas</td>
<td>Bangus</td>
<td>15</td>
</tr>
<tr>
<td>Lauro Isidro</td>
<td>Manila</td>
<td>Bangus</td>
<td>40</td>
</tr>
<tr>
<td>Ron Crisostomo</td>
<td>Brgy. Binulasan</td>
<td>Crab/Sugpo</td>
<td>8</td>
</tr>
<tr>
<td>Gavino Quinto</td>
<td>Brgy. Binulasan</td>
<td>Crabs</td>
<td>3</td>
</tr>
<tr>
<td>Octavio Kalalo</td>
<td>Manila</td>
<td>Bangus</td>
<td>48</td>
</tr>
<tr>
<td>Ronato Sacdalan</td>
<td>Brgy. Binulasan</td>
<td>Bangus</td>
<td>35</td>
</tr>
<tr>
<td>Benigno Mendoza</td>
<td>Brgy. Binulasan</td>
<td>Bangus</td>
<td>2</td>
</tr>
<tr>
<td>Reynaldo Joya</td>
<td>Antipolo, Rizal</td>
<td>Crab</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>151</td>
</tr>
</tbody>
</table>

*Source: Source: Infanta CLUP, 2002*

culture and mangroves bring about degradation of local environments, with empirical focus on the case of Infanta where the growth of aquaculture industry had infringed on the livelihoods of coastal dwellers.

Methodology

The primary data in this paper draws from a field research that I conducted in April and May 2006 and in July 2007. I conducted taped interviews with over 40 individuals, which are mostly in Tagalog. I then transcribed the interviews fully and translated some of them to English. Each of these interviews lasted for about an hour to an hour and a half. Most of the interviews were done in the houses of the interviewees. Some of the interviewees were members of the Binulasan Fisheries and Aquatic Management Association (BFARMA). Most of them reside in Centro, a sub-unit of the village that is considered as the center of the barangay. I also interviewed those who were either current or former caretakers of fishponds. They mostly reside in Sitio Saba, which is located near the mangrove areas. I was also able to interview five fishpond operators, one of whom lives in Barangay Abiwin and is operating on a commercial scale, another one is renting his fishpond to the mud crab cooperative in the barangay and the other three are backyard fishpond operators. The small number of fishpond operators that I was able to talk to stemmed from the unavailability and inaccessibility of fishpond operators and caretakers for interview. Most of the operators are not from Infanta while many caretakers reside in the fishponds, which are located very far from the community and can only be accessed by boat. There is also difficulty in communicating with some of the caretakers who are living nearby because most of them are from the Visayas. They find it very hard to communicate in Tagalog, the vernacular used in Infanta. There were also some refusals from village residents to grant me an interview and they did not want to respond to some questions. Their unwillingness to talk may be attributed to a controversial case that happened in 2001 that involved an influential political personality from Metro Manila who engaged some of the local people in a legal battle over a fifteen-hectare abandoned fishpond in Sitio Saba in Binulasan. I use the narratives of the local people on this issue to investigate the responses of the local people to aquaculture expansion as a rural development strategy. I used pseudonyms to ensure confidentiality and protect the identities of my respondents.

Resisting Development?
A Community Struggle for Magrove Protection

On May 30, 2000, a former politician from Metro Manila (henceforth referred to as the Mayor) filed for a Fishpond Lease Agreement (FLA) for a then abandoned fishpond formerly owned by a certain Colonel Castro covered by FLA 4460 issued by the BFAR on December 5, 1985. The Mayor’s fishpond workers wantonly cut full-grown mangroves in the area despite the non-issuance of legal papers approving his de-
velopment of fishpond in the area. He also built a concrete rest house in the middle of the cleared mangrove area. The Mayor was only issued a conditional permit to operate based on ‘humanitarian reasons’ after he spent money constructing dikes in the contested 15-hectare land. BFAR data on existing fishponds with FLAs in Infanta, however, showed that the area was fully developed and stoked with samaral, milkfish, shrimp and mud crab in when the inspection was done in 2001. Officials from related offices of the local government unit (LGU) and the Community Environment and Natural Resources Office (CENRO) declared the fishpond construction illegal.

On February 8, 2001, about 1,500 locals from different areas in Infanta as well as other concerned citizens and personalities from other areas in Quezon, including the Congressman then, officials and staff of the Integrated Community Development Assistance Incorporated (ICDAI), BFARMA, SIPAKAT and some officials of the Sangguniang Barangay (Barangay Council) and the LGU, gathered to demolish the dikes of the 15-hectare illegal fishpond occupied by the Mayor. According to those who participated in the demolition, particularly members of BFARMA, personalities and organizations involved secretly planned for this activity. They said they had to plan for effective strategies that they would employ in ousting the Mayor from their barangay. This was because the Mayor was a powerful personality whose ties include tight friendship with, and most especially, a former President of the Philippines. They even arranged for some local and national media personnel to cover the activity. This was because they believed that if many people would know about their struggle through the media, many concerned groups and citizens would eventually rally behind them and support their cause. Consequently, the Mayor’s armed workers in the fishpond were not able to prevail over the 1,500 people strong mob that demolished the Mayor’s fishpond (PDI, cited in One Ocean, 2001). The Mayor filed a case against the locals for trespassing, malicious mischief and damage to properties. The local people, in turn, filed a case against the politician for the illegal cutting of mangrove areas. The legal battle between the politician and some local people is not yet over at the present.

This issue was met with different responses from different actors in the local community. Fishpond owner Tata Aldo, for instance, cites this case as an example of a “distorted view on development”. He argues that fishpond industry in the area should be rationalized. He claims that views on mangroves should be that of “dual justice” which is “conservation of our existing mangrove resources, and at the same time utilizing and converting them to economic use”. Residents from Sitio Saba, whose main household earnings come from agriculture and from being employed in the fishponds, share the same views. These employment are, among others, dike building, fry gathering, harvesting and installing of pens where applicable. Many of them were former fishpond caretakers.

Tata Aldo’s concern on development views and programs differ from those of the residents with respect to the discourses of his arguments. Local people who are opposing aquaculture development in the area base their resistance on economic displacements that they believe they would suffer. Those who are supportive of the aquaculture industry likewise think about the economic benefits that could be derived from the industry. Tata Aldo’s contention is based on theoretical underpinnings that reflect views that are separate from the everyday politics and needs of the local people.

Those who vehemently opposed the Mayor’s conversion of mangroves were mostly those who believed that such happenings exclude many local people from accessing their pakan (common mangrove areas), which is key to their economic survival. Most of them are from Centro, the sub-village that is the center of the barangay. The residents of Centro are highly politicized. This may be attributed to numerous factors. The fact that many residents of Centro have college education and work experiences outside Binulasan (for instance, the barangay captain worked as a community organizer in ICDAI, while another

Katigbak, Evangeline O. MSc, Dept. of Geography, University of the Philippines Diliman
residents organized and headed a labor union in a factory in Manila) may have contributed to the expression of their active stand regarding the issue of mangrove conversions. Florence, for instance, was initially appointed as secretary of BFARMA because of her college education. Moreover, because a majority of the Sangguniang Barangay (village council) members are from Centro, many of them are exposed to various trainings and seminars that pertain to leadership, empowerment and many other relevant matters. Most of them are also members of BFARMA, which remain to be at the front of the continuing struggles over the mangrove areas. Mara and Tata Max, for instance, fervently contested the politician’s fishpond development on grounds that the local people will be barred from entering their pakat. They state, respectively:

We fought collectively to throw him (the Mayor) out of our mangrove areas because he will be the only one who will benefit from it… on the other hand, if the propagules that we planted will be inhabited by fish, the village people will all benefit from it. That’s why we will not allow our mangroves to be converted.

I am not in favor of converting mangroves to fishponds because the village people are disadvantaged whenever mangroves are converted to fishponds. If illegal fishponds are able to operate because they are powerful, they have documents… what happens, eh? It should definitely be converted back to its original state, that’s our opinion… We can look for fish and crab fry in the mangroves. And if we will be able to ask funds from the government for our projects, we will be paid for maintaining the mangroves. So why would we want it converted? No, we will plant trees instead.

Mara’s and Tata Max’ strong reaction against the conversion of mangrove stands to fishponds reveal that many of them are highly politicized and opinionated. It reveals that there are local actors who would not take perceived injustice passively but will stand up for their rights and make their voices heard. Their statements likewise show that the struggle against the Mayor has a high economic orientation. They were concerned that the local residents will not be able to partake of whatever benefits can be derived from mangrove conversions.

The local people oppose the conversion of mangroves to fishponds primarily because they feel excluded from the benefits that can be derived from aquaculture development. This feeling is not unfounded. In Lucas’ case, for example, he thinks that only big players in the aquaculture industry, especially those who have huge amounts of capital will benefit from aquaculture. He shared that he operated a backyard fishpond. This was just so he can have additional income for his family. When the Mayor started constructing his fishpond, which was adjacent to Lucas’, the Mayor blocked the water source of Lucas’ fishpond. When he raised the issue to the barangay council, the Mayor was adamant and insisted that Lucas just accept the money that he was offering as compensation for “damages”. The operation of big capitalists therefore threatens the livelihoods and source of living of small players in the aquaculture industry.

Not only are the economic benefits occupying central position in these issues. Many local people also voiced out views, which are indicative of the high environmental awareness of many residents in the barangay. Cris, for example, states:

Mangroves are the breeding ground of fish. First, if the area is forested, their roots become the breeding ground of crabs, tiger prawns, shrimp, fish and shellfish. It becomes their habitat because bigger fish are unable to feed on the smaller ones. That is one importance of mangroves. Second, big mangroves trees are able to control strong winds. Hence, the impact of very strong winds would
be less in the community. Second, mangroves are also able to control floods. It controls tsunami. Strong currents of water will not be able to easily flow in the barangay nor different things that are carried away by floods. For example, when the current is flowing directly to the community, mangroves will be able to control it. Third, of course, it gives the local people extra income. This is because, again, mangroves are breeding ground of fish and other resources that they sell in the market.

The issue of class is likewise a very important consideration in the collective struggle of the people. Poor local people who cannot boast of any political connections are challenging a very influential political figure. In the Philippine culture, class plays a significant role in both eminent and/or mundane decisions. The wealth and class standing of rich people can afford them favor and other benefits that poor people can never, or could hardly attain. For instance, the Mayor was able to readily operate the 15-hectare contested mangrove area even without approved legal papers while BFARMA, which has applied for Community Based Forest Management Agreement (CBFMA) still awaits the approval of their application for a tenurial instrument after about seven years of going back to and from various offices of the DENR. It was also evident to me during the course of my stay in the area that big capitalists, or fishpond operators who are operating on a commercial scale, are sympathetic to the “loss” of the Mayor while indignant with those “poor” villagers who demolished the fishpond of the Mayor. According to some of them, such protest actions exposed the “arrogance” of the local people who should have just accepted and rejoiced over the fact that an influential political figure such as the Mayor had taken notice of an “unimportant” village like Binulasan.

Collective struggle has been used by many communities in resisting “development” programs that people deem disadvantageous, and in arguing for the collective use of traditional resource areas. Central to the struggle of the residents of Binulasan against the Mayor was the denial of their access to mangrove areas where they get food and fuel wood resources, which are vital for the economic survival of their households. It has been argued in this study that local communities oftentimes stand at the forefront of the fight for mangrove protection because they are the ones who are generally affected by its conversion to other uses. This is especially true among poor households whose income is derived mainly from the resources that they gather from the kapakatanan (common mangrove areas).

Their struggle also highlights the important role of local organizations in staging a big battle (between poor local residents and a wealthy and well-connected politician). ICDAI played an important role in the mobilization by assisting in community organizing and providing technical support. Some of the community organizers of ICDAI assisted concerned residents, particularly BFARMA members, in the planning of the demolition activity. They also coordinated this move with other POs like SIPAKAT and members of the LGU. In particular, the Binulasan Fisheries and Aquatic Resources Management Association (BFARMA) is a community-based people’s organization that is primarily concerned with the protection and proper utilization of mangrove areas in the barangay. Since the Integrated Fisheries and Aquatic Resources Council (IFARMC) mandates every coastal barangay of Infanta to organize local FARMCs, the Barangay Fisheries and Aquatic Resources Council or BFARMC was organized in Binulasan, along with similar organizations in other coastal barangays in Infanta. BFARMC later on became BFARMA at the height of the struggle against the Mayor, from Metro Manila in 2001. This organization has since come at the front of issues that pertain to mangroves not only in the barangay but also in the whole of Infanta and in other coastal towns of Northern Quezon.

Katigbak, Evangeline O.
MSc, Dept. of Geography, University of the Philippines Diliman
Asymmetrical Development

Residents of Binulasan generally see the mangrove areas as a common property resource that should be taken care of. This springs from their view that their *pakat* provides them with supplemental sources of income. This is especially because municipal fishing and farming, which are the major sources of income for many of them, are not steady sources of earnings. They are often subjected to different environmental factors, which are oftentimes beyond their control. For instance, according to some fisherfolks, their catch during the months of April and May are very few because fish are believed to be “pregnant”, if not laying their eggs during these months. Their catch would recover when the northeast monsoon starts. However, big waves during these periods make it difficult for them to catch fish in the sea. A wife of a fisherfolk shared their observations in this regard:

> When it is nearly May, fish are “shy”. I don’t know. Some say they are pregnant. But, it’s true we could not catch anything. Not like during the northeast monsoon. But the problem is that we cannot go out into the sea because of the big waves... –Lyn

Lyn’s comment reveals the importance of mangrove areas to the subsistence and livelihood of the village. It shows the reliance of people on mangrove areas for their economic survival especially when primary sources of income of households are affected by environmental factors that are beyond their control. During the monsoon times, for instance, many of them turn to the mangrove areas to catch fish, crabs, shrimp and shellfish for their consumption. They would also sell whatever is left of what they have gleaned from the mangrove areas. This, however, is limited by the massive conversions of mangrove forests to fishponds in Binulasan. Since fishponds, whether under FLA or titled, are deemed private properties, local residents are unable to access this important resource.

Meanwhile, some residents noted that the conversion of mangroves to commercial fishponds provides them with employment. They are hired to build dikes of fishponds during the early phase of its construction and whenever dikes need to be repaired. They are paid about PhP150.00 to PhP200.00 (US$ 3-4) a day. This job has become a source of alternative income for some men in Binulasan. However, it would only last for about a month or two, after which, they will be unemployed again. This is oftentimes done under an exploitative system called “pakyaw system” or a contract agreement under which aquaculture workers perform a certain job for a fixed fee (Guste and del Rosario-Malonzo, 2004). Moreover, some absentee owners of commercial fishponds have opted to bring in laborers from their provinces. This practice displaces many male residents of Binulasan who look forward to building fishponds as their ‘sideline’. Caretakers of fishponds are often migrants to the area, too. They are oftentimes unable to integrate in the community because they have to live within the area occupied by the fishponds only.

The BFARMA, which is led by Tata Max, cites a number of disadvantages to the local people once fishponds are allowed to operate in the municipality. According to him, it will displace small fisherfolks who are largely dependent on mangroves for subsistence. Moreover, he mentions that while it had been heralded that fishpond operation will bring jobs for the local people, this has not been the case for many local residents. He cites the example of the Mercado’s family who are from Visayas who brought workers from his hometown. Tata Max argues that the law stipulates that local people should be given priority for employment in local areas. But this is clearly not happening in many areas. When I interviewed the present caretaker in the fishponds of the Mercados’, I had great difficulty with the language barrier. The caretaker is an old man from the Visayas who does not speak the vernacular. His daughter sometimes aid in translating my questions and his answers. However, I find it inadequate, as I was not able to ask...
any further questions. This results in the perception of villagers that such ventures do not help the barangay and the municipality in any way.

The big fishpond operators may be said to benefit the village in the sense that they are able to generate employment for the residents. But the advantages are very minimal. There are operators who import manpower. Are they paying local taxes? I doubt it. Are they paying business taxes? I doubt it. Some of their products may be helpful in ensuring food security here but more often, they sell it in other markets outside Infanta. Are they helping in the security aspect? Again, I doubt it. – Don

The negative views toward private fishponds are aggravated by the inability of the owners to integrate in the community. They are perceived to be indifferent and unjust. Many fishpond owners who live in the community are confined to the areas where their fishponds are located. They are hardly able to blend in with other members of the community. In fact, there are many fishpond caretakers who are still unable to speak the vernacular even if they have lived there for many years already. This is because there are not many opportunities available for them to communicate with other people in the community as they are often always in the location of the fishponds. The fact that many operators are absentee owners also aggravates these negative impressions on them.

The commercial fishponds here are not really beneficial to the community because they jeopardize our livelihood. Their fishponds are sometimes illegal. One operator here, Santos, was not esteemed by the people due to his bad attitude. He was not willing to allow them to rest... – Tata Max

Conversion of our mangroves to commercial fishponds is beneficial only to the owners of the fishponds. The only benefit we village people get from it is when we are hired to construct new ponds. But if the ponds are already constructed, we don’t get anything from them. If, however, they are always open and accessible to us, they will forever be a source of livelihood for us. There are cruel operators who shoot at by-passers when they pass through their ponds late at night. They say that it’s private property. But people were just passing by. There were mothers who tried to catch small fish and happened to step on the dike of their fishpond. She was fired at. Although they did not really aim at people, will you not be terrified. – Laney

Local people are oftentimes repulsed by the arrogance of fishpond operators and caretakers as they hardly participate in barangay activities. Fishpond operators allegedly cut mangrove trees illegally in order to expand their fishponds. BFARMA are particularly disgusted by the fact that many fishpond owners in Infanta, particularly in Binulasan, are doing so without the proper documents. Tata Max indicated that there is one fishpond owner who illegally operates and expands his fishpond, without legal papers in about 77 hectares of timberland. The perceptions that concerned LGU officials are siding with “illegal fishpond operators” aggravates the situation.

Spatialities of their Struggle

The community’s struggle against the Mayor over the 15-hectare mangrove area that was converted to fishpond revealed a divide on how the villagers regard their common mangrove resource in the light of the aquaculture for rural development strategy. Residents of Sitio Saba, the sitio nearer to the private fishponds, are more supportive of the Mayor’s fishpond project. The former caretakers of the fishponds reside here. The residents in the area who oppose such projects believe they were alienated from the mangrove areas that are their supplemental sources...
of income. The residents of Sitio Centro are the ones who actively push for the protection of the mangroves in the barangay. The residents of Sitios Muslim and Boulevard, however, seem to be indifferent to the issue. Both sitios are situated quite far from the mangrove areas. Sitio Muslim is adjacent to Barangay Abiawin and most of the residents are municipal fishers. Sitio Boulevard is adjacent to Barangay Dinahican and most of the residents are also municipal fishers. Inhabitants of both sitios, when asked about conversions of mangrove areas to fishponds, would always point to members of BFARMA as those who are more knowledgeable about the issue.

Conclusion

This study sought to examine and understand the experiences and negotiations of the local people alongside the processes that lead to ecological transformations in their community, particularly the conversion of mangrove forests to fishponds, in terms of the concurring changes in their livelihoods, identities and environment. It situated the responses of different actors in Infanta to the facilitation of the national and local governments of the development of intensive fishery production sites in their community, which results to the conversion of mangrove forests to fishponds. The study likewise analyzed the impact of aquaculture in local communities as illustrated in the many cases of widespread conversion of mangrove ecosystems into fishponds, on the generation and allocation of income and in power representations and relational dynamics between and among genders in the local households. In a bigger context, the study sought to further understand how global market forces, as incorporated into the country’s program on development influence the decision to convert agriculturally productive forest lands particularly mangrove areas to other uses such as fishponds.

This paper also showed that top-down policies on development, which are often done without much consultation to the local people, could at times produce results that are contrary to the desired outcomes. The case of Binulasan pointed to the conflicts that stem from handing in development policies that have been formulated in the national government to the livelihoods and constructions of identities of the local people. The implementation of the ARD, which further tightened the conversion of mangrove areas and rice farms to fishponds, has brought about the marginalization of the local people. It drove away many farmers and fisher folks who depend on common community resources for their economic survival, from the traditional areas of their economic activities and subsistence.

The paper also showed the agency exercised by the local people in arguing for their own rights over common property resources such as mangrove areas, which are impinged on by capitalistic drives (which in this case is aquaculture) that is initiated by the national and local governments in the hopes of further integration in the global economy. Collective struggle of the local population to fight for what they believe is right for them is an important tool to actualize their needs.

The elaboration of the ecological and social impacts of massive conversion of mangroves to fishponds in Infanta adds to the burgeoning literature on this topic. Likewise, it adds to the mounting call for the necessity of a comprehensive mangrove survey in the country in order to fully study the impacts of various development strategies that are being conducted in the rural areas, particularly aquaculture. This call is also to assess the impacts of the fishpond development program in the country that was introduced in the 1950s. The study likewise emphasizes the importance of more researches that look into the plight of fisherfolks in the aquaculture-based communities as affected by the more intensive integration of local economies to the global or international markets.
References


Department of Environment and Natural Resources, Bureau of Fisheries and Aquatic Resources of the Department of Agriculture, and Department of Interior and Local Government. 2001a. Philippine Coastal Management Guidebook no. 5: Managing Coastal Habitats and Marine Protected Areas. Cebu City: Coastal Resource Management Project of the Department of Environment and Natural Resources.


Katigbak, Evangeline O.

MSc, Dept. of Geography, University of the Philippines Diliman


Infanta Municipal Ordinance No. 71 Series of 2002. An Ordinance Providing for the Establishment of a Municipal Fish Sanctuary in the Municipal Waters of Infanta, Quezon Bordering the Coastal Area of Barangay Alitas and for other Purposes.


Republic Act (RA) 8550. Philippine Fisheries Code.


Katigbak, Evangeline O.

MSc, Dept. of Geography, University of the Philippines Diliman