GLOBALIZATION AND NEOLIBERALISM IN ECUADOR:

THE EXPANSION AND EFFECTS OF THE COMMERCIAL TUNA FISHING INDUSTRY

by

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Between the 1980s and early 2000s, Ecuador's commercial tuna fishing industry evolved from an insignificant player in the global marketplace to the third largest tuna fishery in the world. The reasons behind this dramatic expansion are integrally linked to economic globalization and more specifically, the proliferation of neoliberal economic policies throughout Latin America and Ecuador. In this thesis, I link neoliberal reforms, such as increased capital mobility, free trade agreements, and export-led development, to the rapid growth of Ecuador's tuna fishery, centrally located in Manta. I then explore the place-based effects of these reforms by elucidating the social and environmental impacts of the tuna industry. I argue that while there have been some benefits, such as economic growth and job creation, expansion of Manta's tuna fishery has exacerbated local inequalities, created serious environmental problems, and led to new workplace challenges for employees in the industry.

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CHAPTER I

INTRODUCTION

In 1999, Ecuador surpassed Mexico as the largest exporter of tuna fish in Latin America, making it the third most important exporter in the world (behind Thailand and Spain) (Hernández et al. 2007). The dramatic expansion of Ecuador's commercial tuna fishing industry in the 1990s and early 2000s, which allowed it to overtake Mexico, is integrally linked to the adoption of neoliberal economic policies. These processes, which integrated Ecuador into the global marketplace, facilitated the flow of foreign capital into the country, and promoted the exportation of natural resources have had significant implications for Manta, the center of Ecuador's tuna fishing industry. This thesis explores the place-based effects of neoliberalism by documenting the growth of Ecuador's tuna fishing industry and analyzing how Manta has been affected, socially and environmentally, by the growth.

I seek to accomplish two main goals in this thesis. First, by describing the local, national, and international structural conditions that encouraged the expansion of Manta's tuna fishery, I demonstrate how a geographic perspective that considers various factors such as physical features, economic policies, and human agency, can explain the growth of the tuna industry. Second, this thesis adds to the literature that looks at place-based effects of neoliberal economic restructuring by documenting the social and environmental impacts of the expansion of Manta's tuna fishery. I argue, that while there have been some significant benefits for Manta, such as economic growth and job creation, expansion of the tuna fishery has exacerbated local inequalities, created numerous

environmental problems, and led to new workplace challenges for employees in the industry.

This introductory chapter begins with a brief discussion about the significance of this case study and then situates the research project in the literature on economic globalization and neoliberalism in Latin America. The chapter then provides some background information on Manta, the study site, before setting forth the specific research questions which guide this project.

Why Ecuador's Tuna Industry as a Case Study?

Frequently, when I explain to people that I am studying Ecuador's commercial tuna fishing industry I get a response along the lines of, "wow, you must really like fishing," or, "what's so interesting about tuna fish?" The reality is I am interested in globalization, international development, and environmental issues surrounding natural resource extraction. More generally, as a geographer, I am interested in studying how macroeconomic phenomena are experienced at the community level and the impacts that they can have on people's daily lives. Ecuador's tuna fishery is a case study to examine these broader themes.

As this thesis will demonstrate, globalization lies at the root of the development of Manta's tuna fishery. The promulgation of free trade agreements, the emergence of new international divisions of labor, increased capital mobility, and other international, national, and regional transformations all enabled the fishery to become capitalized and industrialized. This case study also provides insight into international development issues since the expansion of the tuna fishery is seen by many as an opportunity for

economic prosperity and urban development in Manta. Finally, as a valuable natural resource, studying a tuna fishery provides an opportunity to understand some of the social and environmental implications of natural resource extraction.

While there are numerous case studies that could be used to study these larger issues, Ecuador's tuna fishery offers an important and significant contribution to the literature for several reasons. First, the development of Ecuador's tuna fishery has been a tremendous economic success (so far anyway). It has created many new opportunities for Manta's residents and allowed the city to continue to grow, even during times of national economic crises, and emerge as one of Ecuador's most important economic centers. This is noteworthy because many economic development projects have not been nearly so successful in Ecuador, which has been plagued by economic, social, and political turmoil for decades.

This case study is also significant because it demonstrates the global interconnectedness and mobility of certain industries. The tuna industry is particularly interesting because it depends not only on factors such as cheap labor and relatively weak environmental laws, but more importantly, access to raw materials. This is different from many other industries which can have raw materials easily imported from all around the world. Thus, the site location for a viable tuna fishery has some unique prerequisites.

Finally, Ecuador's tuna fishery is an important case study due to the fact that it is a poorly studied sector of the Ecuadorian economy. While other natural resource exports from Ecuador such as oil, bananas, cut flowers, and shrimp have been studied extensively (see for example Sawyer 2004; Wunder 2001; Korovkin 2003; Parks & Bonifaz 1995), there is little current research that looks specifically at the tuna fishing industry. This is a

notable omission since tuna fish now represent one of Ecuador's more important natural resource exports (though it pales in comparison to oil). Also, studying a fishery, especially one where the fish travel great distances and do not remain in Ecuador's territorial waters, presents unique management challenges as compared to the study of bananas or shrimp, for example. In sum, Ecuador's tuna fishery offers a chance to provide insight into the successful growth of a new industry (at least economically speaking), provide insight into the mobility of industries in an increasingly globalized world, and fill a gap in the literature on Ecuador's natural resource extracting sectors.

Economic Globalization and Neoliberalism in Latin America

Globalization is often used as a 'catch-all term' to represent all the 'goods' and 'bads' of contemporary society; as Peter Dicken notes, "such sloppy usage has rendered the term almost meaningless," (2004: 5). While globalization encapsulates many different processes (e.g. cultural, political, social), the main emphasis for this thesis is on economic globalization. Thus, I use the following definition of economic globalization to more succinctly describe one particular aspect of globalization: economic globalization is, "the integration of national economies into the international economy through trade, direct foreign investment (by corporations and multinationals), short-term capital flows, international flows of workers and humanity generally, and flows of technology," (Bhagwati 2004: 3). Additional aspects of economic globalization include a loss in degree of control at the local level and greater economic interdependence (Mittelman 2001). While some people will point out that there has been international trade and global interconnections for thousands of years, contemporary globalization (defined

roughly as beginning in the 1970s), "appears to be qualitatively different to international networks in the past," (Cloke et al. 1999, quoted in Murray 2006: 14).

With contemporary economic globalization there has been an expansion in world trade, increased transnational participation, a growing interconnectedness of global financial markets, and intensive economic interdependence. Enabled by new technologies and financial instruments, huge sums of capital are moved around the world instantly, information travels faster than ever, and reduced costs of communication and transportation have led to more international interactions and engagements (Keohane & Nye 2000). This contemporary economic globalization has profoundly reshaped the international economy and, in many cases, has led to a shift in the location of production and manufacturing facilities from the global North ("developed countries") to the global South ("developing countries").

There are intense debates about the pros and cons of contemporary economic globalization. Questions such as, who benefits and who is worse off, and does globalization create more winners or losers, remain very controversial. On the one hand, the World Trade Organization (WTO), the greatest proponent of free trade, argues that trade liberalization (a key component of economic globalization) is the answer to reducing poverty, encouraging sustainable development, and advancing peace and stability (WTO 2009). According to the WTO, benefits of free trade include reducing the cost of living, raising incomes, stimulating economic growth, and encouraging good government. Jagdish Bhagwati (2004) adds that economic globalization promotes growth which can reduce inequalities and improve environmental problems.

Conversely, there is a significant body of literature that suggests that economic globalization and trade liberalization exacerbates regional inequalities, increases poverty, has serious adverse environmental impacts, and disproportionately benefits the North at the expense of the South (Rivas 2007; Dunn 2009a; Larrea 2006; O'Brien & Leichenko 2003). Massey (2005: 6) refers to the, "grim inequalities of today's hegemonic form of globalization." Also, Dunn (2009b) notes that while there is research to suggest that economic globalization exacerbates inequalities between countries, this research often fails to consider how inequalities within countries are affected. This thesis adds to the literature that examines the pros and cons of economic globalization by studying how the expansion of Ecuador's tuna fishery impacts the environment, inequalities *within* Manta, and economic growth. Unfortunately, as I demonstrate, there is no easy answer to the question about whether or not economic globalization is 'good' or 'bad' since there are clearly both benefits and challenges. Therefore, it becomes important to consider who the winners and losers are when considering the merits of economic globalization.

In Latin America, the defining characteristic of contemporary economic globalization has been the implementation of neoliberal reforms beginning in the 1970s and 80s. Neoliberal reforms encouraged foreign direct investment in Latin America, promoted the export of natural resources, privatized state owned industries, and encouraged countries to create a "friendly" business climate. The following chapter provides a detailed overview of the history, impacts, and debates surrounding neoliberalism in Latin America. For now it is important to understand that, as I illustrate in Chapter IV, neoliberal reforms enabled the growth of Ecuador's tuna fishery and are thus largely responsible for any benefits or costs associated with the expansion.

Situating Manta

Manta, located in the Manabí province on the central coast of Ecuador (see Figure 1) (all Figures are in Appendix A and all Images are in Appendix B), is the county's fifth largest city. The population has expanded rapidly, from just over 23,000 people in 1950, to 100,000 people in 1982, to its current population of 260,000 (though some unofficial estimates suggest the population is over 300,000) (Ortiz 2010). It is worth nothing that Manta's rate of growth has been much faster than average in Ecuador largely due to people migrating into the city for jobs in the tuna industry (see Figure 2). Manta is the third most important city economically with some of the largest (by revenue) companies in Ecuador (following Quito and Guayaquil) (World News 2011). While the commercial tuna fishing industry is undoubtedly the main driver of the economy, other important sectors of the economy include the artisanal fishing industry, tourism, the chemical industry, and shipping. The city's geographic location (more about this in Chapter IV) makes it an ideal place for fishing and a deepwater port.

Manta has largely been isolated from the economic, political, and social turmoil that has troubled the rest of the country largely due to strong economic growth, fueled by the tuna fishing industry, and a relatively homogenous population (there are very few indigenous peoples or Afro-Ecuadorians in Manta). The city has emerged as one of Ecuador's more happening places to be with an active night-life, big shopping centers, five star hotels, and beautiful beaches.

Manta has a long history of being closely linked to the ocean, which has provided food, jobs, recreational opportunities, and inspiration for artists and poets for centuries (see Images 1-3 and Figure 3). This city has been an important fishing hub since pre-

Columbian times. In fact, before the city of Manta was given its name by Spanish explorers in the 1500s (Manta was named after the local indigenous group, the Mantenses) it was known to the natives as Jocay, which literally translates into, "house of the fish," (Palma 2004). Fishing had always been subsistence-based and did not emerge as an industrial activity until the late 1950s. However, in the past fifty years, and especially since the early 1990s, Manta's tuna fishing industry has undergone a profound transformation and evolved as an important industry at the national level as a significant generator of foreign revenue and job creation.

This research project was guided by two overarching questions. First, what factors (and at what scales) caused Manta to evolve from a small fishing village to a global player in the tuna fishing industry? And second, how did this evolution impact Manta's residents and the environment? The following specific questions served to guide this research project:

1. What were the local, national, and international factors that enabled Manta to become one of the most important locales for tuna fishing in the world?
2. What new opportunities and/or challenges has the commercial tuna fishing industry created for Manta's inhabitants? Who are the 'winners' and the 'losers'?
3. What, if any, are the environmental impacts of Manta's commercial tuna fishing industry?

The remainder of this thesis is dedicated to contextualizing and answering these questions. Chapter II reviews the literature on neoliberalism within which this project is situated. Chapter III explains my research methodology and discusses some of the challenges that I encountered during my field work. Chapter IV details the expansion of Manta's tuna fishery, thus addressing the first research question. Chapter V recounts, in

as unbiased way as possible, both the positive and negative social and environmental impacts of the expansion of Manta's tuna fishery (research questions two and three). The concluding chapter includes a discussion and my interpretation of the findings and explains what this case study adds to the broader literature on the impacts of neoliberal reforms in Latin America and Ecuador. It also considers the long-term prospects of Manta's tuna fishery and potential challenges it may face in the future.

CHAPTER II

NEOLIBERALISM IN LATIN AMERICA AND ECUADOR

> The neoliberal development model has brought about a massive deterioration of living standards, growing income disparities, environmental destruction, an erosion of national sovereignty and the undermining of equity-producing policies. […] With hindsight neoliberalism may well be perceived as one of the greatest and most elaborate deceptions in modern history (Nef & Robles 2000: 28, 43)

In order to understand the expansion of Ecuador's commercial tuna fishing industry and to contextualize the social and environmental impacts it has had in Manta, it is necessary to situate the growth of the industry in the context of the national and international neoliberal economic and political paradigm in Latin America. This chapter provides an analysis of the neoliberal policies that have been implemented in Ecuador and throughout Latin America starting in the 1970s. It also reviews the literature that documents the social and environmental impacts of neoliberalism in Latin America. Chapter IV provides more detail about specific neoliberal reforms in Ecuador and how they facilitated the expansion of Manta's tuna.

This chapter is divided into four sections. The first section reviews the successes and failures of import substitution industrialization, the development model that preceded neoliberalism in Latin America. The second section explains the core tenets of neoliberalism, the theories behind it, and reviews the process by which neoliberalism became the dominant economic and political paradigm in Latin America by the 1980s. The third section reviews the literature that documents the impacts of neoliberal policies

in Latin America. The fourth section explains how neoliberal policies were implemented in Ecuador and looks at specific impacts there.

Import Substitution Industrialization in Latin America

In order to understand the context that neoliberal reforms were adopted in Latin America, it is important to understand the failures of import substitution industrialization and how that led to the implementation of neoliberalism in Latin America. With the 1930s world depression it became clear to Latin American governments that the export-oriented growth model that they had been adhering to in the modern/liberal period (1880-1930) was not sustainable. In the modern/liberal period, Latin American countries relied on exporting primary product to the global North and with export earnings would import manufactured products from the North (Jackiewicz & Quiquivix 2008). As markets in the global North contracted following the Wall Street crash in 1929, Latin America's export markets disappeared, which resulted in economic recessions, an increase in poverty, social unrest, and debt defaults for Latin American countries (Green 2003). Export-oriented growth had failed to bring about the prosperity its proponents claimed that it would and important substitution industrialization (ISI) was introduced as an alternative development model.

The theoretical foundations for import substitution came from the United Nation's Economic Commission for Latin America and the Caribbean (CEPAL), which concluded that since the free market approach had failed, the state needed to intervene. This idea was largely inspired by John Maynard Keynes, the inspiration for the New Deal economics in the United States following the Great Depression. Keynes argued that the

private sector's decisions did not always lead to the most efficient macroeconomic outcomes and therefore the state should play a more central role in regulating the economy in order to meet goals such as the elimination of abject poverty and full employment (Thorsen & Lie 2006). During the important substitution era (1930s – 1980s), Latin American states invested heavily in national infrastructure, imposed price controls, subsidized food and other basic necessities, nationalized key industries (e.g. oil and utilities), and imposed import taxes to protect national industries. As a result, the period from the 1950s to the 1980s saw Latin America's industrial output increase six times and standards of living were on the rise for many, but not all people (Green 2003). However, the impressive economic growth, that even outpaced Western countries for some time, was not to be sustained.

Despite decades of impressive economic growth, important substitution had some significant shortcomings. One particularly noteworthy disparity during ISI is that there was a profound geographical unevenness in development; governments focused almost all of their efforts on industrializing and modernizing urban areas while rural areas languished. There was also a degree of uneven development *within* cities. While commercial districts and middle/upper-class neighborhoods flourished, parts of a city that were considered to be unrelated to its economic success (e.g. peripheral slums or subsistence-based agricultural or fishing activities) tended to be ignored by city planners and government officials. The emphasis on industrialization and manufacturing led to impressive growth in Latin American cities but ignoring rural areas and 'unrelated' parts of the city was problematic since that is where most of the region's poor people lived. As a result, disparities between the rich and poor increased dramatically and millions of

people began migrating to cities in search of economic opportunities, which had the result of inhibiting the ability of cities to effectively provide basic services for all of the residents (Green 2003; Miller 2007a).

Another problem with ISI was that a reliance on heavy machinery and capital from the North to support the region's industrialization caused many counties to accrue significant debt. During the 1970s in particular, Latin American countries borrowed heavily as commercial banks in the North were looking for places to invest the billions of petrodollars that oil producing countries had come into when oil prices began to rise in the early 1970s (Harvey 2005). In what Green (2003: 29) refers to as the "dance of millions," petrodollars poured into Latin America during the 1970s in the form of low interest loans under the (mistaken) assumption that countries are too big to fail and thus a safe investment. By the end of the 1970s, increasing inequalities, inflation, and a dependency on foreign capital had more and more people doubting the effectiveness and long-term viability of ISI (Perreault & Martin 2005).

The beginning of the end of import substitution industrialization started in 1979 when, following another steep rise in oil prices, inflation was becoming a serious problem in the global North. In order to stop the inflationary trends in the United States, Paul Volcker, the Chairman of the US Federal Reserve (1979-1987), raised interest rates, which caused an economic recession in the United States. As interest rates rose, Latin America's previously manageable debts (which had flexible interest rates), skyrocketed at the same time Latin America's export markets were shrinking. The result was a severe debt crisis and the beginning of the "lost decade" in Latin America, which began in 1982 when Mexico became the first country to default on its debt payments (Harvey 2005).

Latin America's debt crisis, called a "blessing in disguise" by one World Bank official, provided an opportunity for the International Monetary Fund and World Bank (with strong guidance from the United States and Great Britain) to introduce neoliberal economic policies to Latin America (Green 2003: 30). It was the end of ISI and the beginning of neoliberalism in Latin America that led to new economic policies which enabled the growth of Manta's tuna fishing industry.

The Rise and Proliferation of Neoliberalism in Latin America

Neoliberalism originally emerged as an economic theory during the 1950s and 1960s as an alternative economic and political development model opposed to ISI. As an economic project, neoliberalism calls for the liberalization and deregulation of economic transactions within and, more importantly, between countries, the privatization of state owned enterprises, and the introduction of market-oriented management practices meant to reduce the role of public sector in regulating the economy (Jessop 2002). As a political project, it seeks to "roll back" state intervention associated with the Keynesian welfare state, thus reducing the state's role in the provision of social services and eliminating restrictions on corporate practices (i.e. deregulation) (Jessop 2002: 454; Perreault & Martin 2005).

Peet and Hartwick (1999) identify three sources where the neoliberal economic model emerged from. First, the monetarist economics of Milton Friedman, the University of Chicago, and the Institute of Economic Affairs in Britain, all of which argued that inflation and indebtedness (macroeconomic problems) stem from excessive government spending. Second, the new classic liberalism of economists like Friedrick

von Hayek who supported Smithian and Ricardian economic principles and argued against socialist ideas. And third, political and economic ideas that supported laissez-faire and individualism and were supported by right-wing organizations like the American Heritage Foundation. By the late 1970s to early 1980s, neoliberalism had emerged as the dominant economic model throughout much of the world. Under strong pressure from the United States under President Ronald Reagan (1981-1989) and the United Kingdom under Prime Minister Margaret Thatcher (1979-1990), the International Monetary Fund and World Bank began promoting the neoliberal agenda with earnest (Kohl & Farthing 2006).

The International Monetary Fund (IMF) and World Bank are the two international financial institutions that receive the most credit (or blame) for the implementation of neoliberal economic and political policies in Latin America during the 1980s and 1990s (although other banks, such as the Inter-American Development Bank, also played an important role). While many people tend to conflate the agendas of the IMF and World Bank, their missions are slightly different. The IMF is more concerned with short term economic stabilization in contrast to the World Bank, which is more concerned with long term issues like structural adjustment and development projects. Based on the ideas of monetarism, the IMF operates under the principle that inflation is a tax on the poor and needs to be kept under control no matter the social costs. Loans from the IMF come on the condition that states takes steps to reduce the size of their government, privatize state owned enterprises, deregulate industry, and open their borders to foreign trade, investments, and capital flows (Harris & Seid 2000).

The World Bank, on the other hand, is known for funding large scale development projects (e.g. dams and other infrastructure projects) or for structural adjustment loans that seek to implant a market economy. Loans from the World Bank come on the condition that governments deregulate the labor market and encourage labor "flexibility" (i.e. short term contracts, lower wages, and more subcontracting), implement tax reforms, liberalize the financial markets, and privatize state owned enterprises (Green 2003). It is important to note that unlike the United Nations which operates under a system of one nation one vote, the IMF and World Bank operate on the basis of one dollar one vote. Therefore, wealthier countries such as the United States and the United Kingdom have a disproportionate amount of influence in the policies of these organizations. While Ecuador's tuna fishing industry did not receive any IMF or World Bank loans, certain conditions in loans that Ecuador's government received, such as labor flexibility and fewer restrictions on capital flows, did play an important role in the expansion of the tuna industry (much more on this in Chapter IV).

In addition to the IMF and World Bank, the World Trade Organization (WTO) (known as the General Agreement on Tariffs and Trade (GATT) until 1995) is another very important organization that played an integral role in restructuring the world economy (Nef & Robles 2000). The WTO's purpose is to ensure that "conditions for 'free trade' are maintained throughout the world," and in doing so it encourages free markets and export-led growth to complement the neoliberal agenda (Harris 2000: 145). The idea behind trade liberalization has its roots in David Ricardo's theory of comparative advantage, which argues that each country should focus on producing the goods for which it has the greatest, "natural or artificial advantages," (e.g. climate,

natural resources, or more recently, cheap labor) and then exchange those goods for commodities from other countries (Ricardo 1821: 137). In theory, this system will generate profits and raise the standards of living for both trading parties while simultaneously promoting peace and stability and encouraging sustainable development (WTO 2009). Critics of trade liberalization argue that it is nothing more than an excuse for more developed countries to take advantage of cheap labor, lax environmental laws, and abundant natural resources that can be found in the global South (Dunn 2009a; 2009b).

As noted above, it was the Latin American debt crisis which began in 1982 that led to the widespread implementation of neoliberal economic and political policies in the region. When commercial loans to Latin American governments dried up in the 1980s, governments that were unable to rein in spending were forced to turn to the IMF and World Bank for loans to keep their economies afloat (Perreault & Martin 2005). While commercial loans during the 1970s came with few limitations on how the money was spent, loans from the IMF and World Bank were only granted to governments that adopted neoliberal economic and political reforms. Thus, it was IMF and World Bank loan conditionalities that formally ushered in neoliberal reforms to Latin America. However, it is important to point out that neoliberal policies in Latin America were not single-handedly implemented by the IMF or the World Bank. The elite in Latin America saw a potential to expand their economic and political control through neoliberal reforms and facilitated the implementation of the policies (Green 2003). By the 1990s neoliberal reform policies were known as the Washington Consensus (see Kohl & Farthing 2006 for a list of the ten defining principles of the Washington Consensus) and had emerged as the

hegemonic development discourse that was being implemented in almost every Latin American country (though not without resistance).

The IMF and World Bank, in conjunction with local elite, took a three staged approach to implementing neoliberal reforms in Latin America: stabilization, structural adjustment, and increasing export-led growth (Green 2003). Stabilization, in drawing from Milton Friedman's monetarist principles, saw inflation as the greatest obstacle to economic recovery. Therefore, governments were pressured to cut public spending on social services like health care, education, and food subsidies that became so common in the 1970s. They also raised interest rates and devalued their currency in order to generate a trade surplus which was used to keep up with debt payments. Structural adjustment programs sought to introduce a market economy in order maximize the allocation of resources. Additionally, governments were pressured to privatize state firms (a way to reduce inefficiencies and generate capital), cut labor costs, and reduce government spending on subsidies and tax credits. Finally, promoting export-oriented growth was seen as a way to generate revenue to pay off national debts. Governments actively encouraged the private sector to develop/expand new export products (e.g. tuna) and find new export markets. In order to promote export-led growth, import and export tariffs were reduced or eliminated (i.e. trade liberalization) and restrictions on capital flows were eased to encouraged foreign investors to bring new technologies and capital to Latin America (Nef & Robles 2000; Green 2003).

Critiquing the impacts of neoliberal reforms in Latin America has been the topic of a significant body of scholarly work and, while some still tout the benefits of economic neoliberalism (Bhagwati 2004; Wolf 2004) much of the literature documents adverse

social, environmental, political, and even economic impacts of neoliberal reforms in Latin America (Babb 2005; Harris 2000; Radcliffe 2005; Sawyer 2005). The following section reviews some of the literature that criticizes neoliberalism and documents its impacts in Latin America.

Impacts of Neoliberalism in Latin America

Neoliberal reforms in Latin America have been blamed for numerous adverse social and environmental impacts such as declining wages, an increase in poverty, greater inequalities, a decline in states services, and environmental impacts such as deforestation and water and air pollution. The environmental problems stem from greater pressures to extract primary resources (e.g. mining, logging, fishing) and the relocation of pollution intensive industries to Latin America (Perreault & Martin 2005; Klak 2008). As Green (2003: 171) puts it, "Although the rich have had a vintage two decades [1980s - 1990s], most of the region's people are poorer and more insecure: their homes, communities, schools, and hospitals are collapsing around them, and their cities, towns and villages are increasingly polluted."

Structural adjustment programs in the 1980s and 1990s that sought to reduce labor costs and, "get the prices right," led many Latin American countries to reform labor laws. Consequently, wages declined, the power of trade unions was reduced, unemployment rates rose, and many people were forced to seek jobs in the informal sector (Green 2003; Babb 2005; Laurell 2000; Weeks 2000). Labor sector reforms have had a disproportionate impact on women who have been increasingly integrated into the work force but are also still expected to maintain their domestic work (Radcliffe 2006; Lind

2002). For example, Julie Cupples (2005: 314) documents how neoliberal restructuring in Nicaragua has increased the work burden for low-income women and forced them to take on a "double shift of paid and domestic work." Those working in the public sector have also been particularly affected by government spending cuts that have led to massive layoffs (Gwynne & Kay 2000).

In addition to detrimental labor reforms, market-oriented economic reforms meant to promote export-led growth and expand the private sector's involvement in the economy has led to an increasingly large gap between the rich and poor within countries (Huber & Solt 2004; Laurell 2000; Green 1996). Boron (quoted in Harris 2000: 148-149) explains, "Neoliberal policies have augmented the share of the very rich in the national income … [and] tend to magnify the strength of the dominate classes." Also, the privatization of state owned enterprises (meant to promote "efficiency") has led to price increases of many services such as electricity and water which particularly hurts the poor (Perreault 2005).

While the rich are consolidating their wealth, there is evidence that neoliberal reforms have actually increased poverty rates in Latin America. Structural adjustment programs that require government spending cuts on public services such as health care, education, and welfare programs as well as the removal of subsidies on food, transport, and energy has led to an increase in the number of people living below the poverty line (Gwynne & Kay 2000; Green 2003; Laurell 2000). In an analysis of poverty in Latin America, Kay (2006: 456) observed that, "[structural] adjustment policies exacerbated poverty as government expenditure on social welfare and subsidies for basic foods and other essential commodities were cut back quite drastically." It is becoming increasingly

clear that economic growth will not automatically alleviate poverty but that a more egalitarian access to assets is critical for reducing poverty (Ibid).

In addition to the adverse social impacts of neoliberal reforms in Latin America there is ample evidence that points to adverse environmental impacts of neoliberal reforms. Trade liberalization has led to the deregulation of trade and investment and pressured governments to maintain weak environmental regulations (Babb 2005). Both Sawyer (2004) and Gerlach (2003) have documented how neoliberal reforms in Ecuador have pressured the government to expand oil drilling operations in the Amazon with devastating environmental implications (not to mention the impacts on the indigenous peoples living in the region). Furthermore, neoliberal policies regarding the environment that seek to enclose environmental commons tend to exclude traditional users while providing the opportunity for capital accumulation for private companies (Perreault & Martin 2005). For example, Perreault (2005) documents how Bolivia tried to privatize water rights in 2002 and exclude traditional resource users (although attempts to do so failed due to widespread opposition). Promoting export-led growth (especially when the exports are primary products) can also put extraordinary pressure on a country's natural resources. Schurman (1996) documents how neoliberal reforms in Chile encouraged an expansion of the shellfish industry which eventually led to its collapse when the fish were overharvested.

In sum, neoliberal reforms such as trade liberalization, privatization, and government spending cuts have had numerous detrimental social and environmental impacts throughout Latin American. While the social and environmental impacts of neoliberalism have been severe, Green (2003) does point to one success of neoliberalism

in Latin America: the ability to get inflation under control. The following section summarizes how and when neoliberal reforms were implemented in Ecuador and reviews some of the specific impacts and challenges they have created for Ecuadorians.

Neoliberalism in Ecuador

Ecuador, much like the rest of Latin America, adhered to the ISI development model following the Great Depression. However, by the 1980s and especially the 1990s, Ecuador's government was taking aggressive steps to implement neoliberal reforms (though reforms were met with significant opposition from Ecuadorians). In order to understand the political and economic situation in Ecuador that led to the implementation of neoliberal policies beginning in the 1980s, a brief review of Ecuador's 1970s oil boom is important.

Following the discovery of oil in Ecuador in 1967 and the completion of Ecuador's first oil pipeline in 1972, Ecuador underwent a decade of rapid economic growth. While oil revenues in 1971 made up less than one percent of Ecuador's total exports ($1.2 million), by 1974 they accounted for 65 percent of Ecuador's export earnings ($792 million) (Hanratty 1989). Oil revenues allowed the military government (1972-1979) to promote nationalism by keeping taxes low, heavily subsidize fuel and food, expand public-sector employment, and increase government-sponsored welfare benefits. Government spending throughout the 1970s increased so dramatically that by 1978 half the government's budget was being spent on food and energy subsidies and credits (Gerlach 2003).

When Ecuador returned to a democracy in 1979 (a peaceful transition though there was growing discontent with the military government in power), the outgoing head of state, Poveda Burano, proudly pointed to a 540 percent increase in exports and a 500 percent increase in per capita income as evidence of strong economic growth throughout the 1970s. What he failed to mention was that when oil revenues were insufficient to maintain the high level of subsidies that Ecuadorians had become accustomed to, or to support the import-substitution model of economic growth Ecuador had been adhering to, Ecuador had borrowed heavily from commercial banks abroad (tapping into the flow of petrodollar loans pouring into Latin America during the 1970s). Using oil reserves as loan guarantees, Ecuador's debt increased from $209 million in 1970 to $4,167 million in 1980. By 1982 Ecuador's debt equaled 60 percent of its GDP (Gerlach 2003; Sawyer 2004).

When international oil prices fell in the 1980s Ecuador suddenly lost millions of dollars in revenues that the government had come to rely on in the 1970s. The high level of government spending on subsidies and social welfare programs in the 1970s became economically impossible to sustain but politically impossible to change. When Mexico defaulted on its debt payments in 1982, signaling the beginning of the Latin American debt crisis, Ecuador, unable to reign in state spending, was forced to turn to international financial institutions such as the International Monetary Fund and the World Bank for badly needed loans to keep its economy afloat (Green 2003).

In 1983, Ecuadorian President Osvalo Hurtado (1981-1984) negotiated Ecuador's first IMF loan agreement and put Ecuador, "on the road to neoliberalism," (Hey & Klak 1999: 70). Holding true to IMF policies discussed above, the loan was made on the

condition that Ecuador's government cut spending on education, healthcare, subsidies, and cut public sector jobs. However, public opposition in the form of strikes and protests forced Hurtado to cancel some of his proposals to cut subsidies and led him to implement new social programs (though they were seriously underfunded). For the next two decades, neoliberal reforms continued to be introduced in Ecuador. While the implementation of neoliberal reforms in Ecuador did not come without resistance (especially from the highly organized indigenous organizations), reforms progressed throughout the 1980s and 1990s until neoliberalism gradually became the hegemonic economic and political development model (Hey & Klak 1999).

Ecuadorian presidents signed six loan agreements with the IMF between 1985 and 1994, always with the condition that various neoliberal reforms were adopted (Green 2003). Ecuador was forced to devalue its currency, cut spending on welfare programs, and privatize some state owned industries (though popular opposition made this very difficult and politically dangerous). In order to attract foreign investors, Ecuador reduced tariff rates, introduced tax and financial liberalization reforms, cut minimum wages, and implemented labor law reforms to, "increase flexibility and eliminate rigidities unattractive to foreign investors," (de Janvry et al. 1994: 79, quoted in Hey & Klak 1999: 76). As discussed in more detail in Chapter IV, these changes were critical to enabling the expansion of Manta's commercial tuna fishing industry.

Hey and Klak (1999) identify four reasons for the continued implementation of neoliberal reforms in Ecuador, despite widespread resistance to them. 1) Financial causes: Ecuador experienced multiple economic crises starting with the 1982 Latin American debt crisis and was forced to turn to the IMF and World Bank for loans. As

Hey and Klak (1999: 90) explain, "the massive foreign debt of countries like Ecuador… provides the environment within which international development agencies can enforce a neoliberal transition." 2) Regional and global ideological factors: As neoliberalism emerged in the 1980s and 1990s as the hegemonic economic and political project, neoliberal reforms were depicted as a, "global wave that Ecuadorians dare not miss," (Hey & Klak 1999: 84). 3) A perceived lack of alternative: With the failure of ISI and the collapse of the Soviet Union, neoliberalism was seen as the only alternative; "there is no alternative [to neoliberalism]," (Former Ecuadorian President Osvaldo Hurtado, quoted in Hey & Klak 1999: 85). Also, despite an increasingly active and critical academic left in Latin America, they had not come up with an alternative macroeconomic policy to neoliberalism. 4) Weakness of popular opposition: Despite protests against neoliberal reforms, Congressional gridlocks and broken campaign promises left Ecuador's electorate in a weak position to get more that short-term concessions from the government in power.

The implementation of neoliberal reforms in Ecuador has had similarly devastating impacts as in the rest of Latin America. By 1999, nearly two decades after neoliberal reforms were first implemented in Ecuador, government spending on education was a mere 0.7 percent of the government's budget (down from 5.5 percent in 1981) and spending on public health was less than two percent of the national budget (down from ten percent in 1981). Meanwhile, government debt payments had reached 45 percent of state expenditures in 1999. In 2000, over 70 percent of Ecuador's population was living in poverty (90 percent in rural areas), a figure nearly twice the 36 percent average in Latin America (Gerlach 2003). The unemployment rate had increased from

four percent in 1980 to 15 percent in 1999 while the underemployment rate had risen from 31 percent to 46 percent during the same time frame (Zamosc 2004). Inequalities also increased so that by 1999 Ecuador's richest 20 percent owned 73 percent of the nation's wealth (Gerlach 2003).

The economic indicators for Ecuador were also bleak. Inflation ranged between 23-91 percent from 1982 and 2000 and GDP percent growth was dismal. Between 1982 and 2000 GDP percent growth was negative for eight years and only higher than two percent in three years (Green 2003). Adding to the problems, Ecuador's politicians were notoriously corrupt; Ecuador was named Latin America's most corrupt county in 2000 by Transparency International (Transparency International 2000). As a result of the deteriorating social and economic condition, between 1995 and 2000 two million Ecuadorians (16 percent of the population) left the country to seek economic opportunities in places like the United States and Spain (Gerlach 2003).

While these macroeconomic and macrosocial indicators present a troubling situation in Ecuador, in order to fully understand the impacts of neoliberal reforms it is important to examine how they are experienced by individual communities and households (Radcliff 2005). This task has been taken up by several academics working in Ecuador. For example, through detailed ethnographic work, Sawyer (2004) details how neoliberal reforms in Ecuador increased pressure on the government to increase oil extraction in the Amazon region to boost revenues which would be used to meet debt payments. This resulted in devastating environmental impacts, as well as social and cultural implications for Ecuador's indigenous peoples (see also Treakle 1998 and the 2009 film *Crude*). Others, such as Zamosc (1994; 2004) and Bebbington (2000; 2004),

point to the adverse impacts of neoliberal inspired land reforms on indigenous livelihoods in the Andean region. This literature provides a detailed and important analysis of the impacts of neoliberal reforms in Ecuador's Amazon and Andean regions and is especially informative about the experiences of Ecuador's indigenous peoples with neoliberal reforms. However, there are few studies that consider the impacts of neoliberal reforms on non-indigenous peoples living in the coastal region of Ecuador.

As a result of this gap in the literature, a closer examination of neoliberal reforms in Manta will be valuable for elucidating the social and environmental implications of reforms in a region that has been largely overlooked. Manta is a particularly interesting case study because unlike other coastal cities (or any Ecuadorian city for that matter), while most of Ecuador was plagued by economic crises and popular mobilizations in the 1990s, Manta, "underwent a boom," and "had become a modern city by the end of the 1990s (Gerlach 2003: 144). Therefore, not only is there a lack of empirical data that documents the impacts of neoliberal reforms in Ecuador's coast region, but Manta has actually had much better luck with the implementation of neoliberal policies than the rest of Ecuador. The two main reasons for this "boom" have to do with a dramatic expansion in Manta's commercial tuna fishing industry (made possible by neoliberal reforms) and the presence of a U.S. military base in Manta from 1999-2009 that pumped millions of dollars into the city. While the presence of a U.S. military base did lead to some new development projects (such as a remodeled airport and several new schools and health care facilities), the tuna fishing industry has been more important for Manta since its presence has been more long term.

Given the long list of adverse consequences of neoliberal policies throughout Latin America and Ecuador, more research is necessary to determine if Manta really has escaped the negative impacts of neoliberal reforms. If it has, then how did it accomplish this success? After describing my research methodologies in the following chapter, Chapter IV explains how specific neoliberal reforms facilitated the expansion of Manta's tuna fishery before Chapter V documents specific impacts in Manta.

CHAPTER III

METHODOLOGY

In order to understand how Manta and its residents have experienced the growth of its tuna fishing industry, I spent five weeks living there during the summer of 2009 conducting fieldwork. This fieldwork, in conjunction with the research and literature reviews I conducted before I traveled to Ecuador, serves as the "data" for my thesis. In this chapter I describe the process that I undertook to arrive at this thesis topic and then elaborate on my research methodology. I also discuss certain issues of power relations in my project and some of the challenges I encountered during my time in Manta.

Conception of the Research Project

As I began the process of coming up with a specific research project I was guided by several overarching personal interests and goals. First, I wanted a topic that would allow me to study how a specific place is impacted and transformed by international phenomena. From previous experiences traveling abroad and several international research projects I was aware that what happens is one place is influenced by events in other parts of the world. I was interested in studying how these phenomena are reflected on the landscape of a particular place. My second guiding interest was a desire to work with marginalized groups of peoples. Previous experiences in Kenya, Nicaragua, and Ecuador had made me acutely aware of the unique challenges marginalized people face and it was their stories that I was most interested in hearing and telling. Finally, my concern for environmental problems motivated me to find a case study that would allow

me to study social *and* environmental issues since I know that both are intricately linked. Prior to starting graduate school, during the summer of 2008, I spent nearly three months living in Ecuador and became very interested in various contemporary social, political, and environmental issues in the country. My familiarity with the country and language ultimately encouraged me to return to Ecuador to conduct research for my thesis.

After an extensive literature review and reflecting on my previous experiences in Ecuador, it became clear that studying Ecuador's tuna fishing industry would be an ideal case study for my thesis. It fulfilled my interest in studying how international processes affect a specific location because, as I will demonstrate, it was international economic restructuring that facilitated the expansion of the industry. There was also the prospect of working with marginalized peoples since my preliminary research suggested that poor salaries and challenging workplace conditions were common in the tuna industry. Finally, while other extractive industries in Ecuador have been extensively studied, there was little recent research on the tuna fishing industry.

While this project was guided by my interests, it was also influenced by my experiences and conversations in Ecuador. My preliminary research indicated that there were serious environmental and social concerns in the tuna industry and that there was little research on the topic. Meanwhile, conversations with Ecuadorians confirmed the need for more research and I was frequently encouraged to pursue this topic.

Research Design

Designing a research project is a detailed process that involves consideration of the goals of a study, the theoretical framework, methodological procedures, logistical

issues, and personal interests (Flick 2004). For this project I use a specific case study for the basic research design. By choosing a specific case study I attempt to demonstrate how a particular place, Manta, has been impacted and changed by global processes.

I adhere to a post-structuralist and feminist approach for my theoretical framework. In following the post-structuralist framework I recognize that "no single representation of reality can be the *only* true one, or the *only* accurate one, or the *only* one that reflects reality because other cultures will always have alternative, and equally valid, ways of representing and making sense of that part of reality," (McKee 2003: 10-11). Post-structuralism also encourages "self-contextualization and reflexivity" for a researcher (Pratt 2000a: 625). In other words, it is important to consider power relations between the researcher and the research participants and to recognize that the 'truth' one presents is impacted by this power dynamic. Thus, I recognize that my findings are unavoidably affected by my personal and cultural values and the power dynamics that were present during the data collection phase.

Also in accordance with post-structuralist and feminist theorists, I accept that all knowledge is situated (Rose 1997). I agree with other scholars and reject the idea that scientific research is disembodied, neutral, or objective (Barnes 2000). On the contrary, knowledge is embodied; it is important to recognize the nature of inquiry and that there may be differences of interpretation. Knowledge is also partial and no one can have a full and objective perspective on a subject. As Haraway (1991: 195, quoted in Barnes 2000: 743) explains, "the knowing self is partial in all its guises, never finished, whole, simply there and original; it is always constructed and stitched together imperfectly."

In accord with feminist scholars I share a commitment to make women more visible and acknowledge the social construction of knowledge (Lawson 1995; Pratt 2000b). As Sundberg (2003: 182) notes, "knowledge [is] a social process that is fully imbricated in the webs of power relations we call 'society.'" In my fieldwork I sought to understand women's perspectives and experiences with Ecuador's tuna fishing industry. In fact, of the thirteen interviews I conducted, five of them were with females working the fishing industry (jobs in the fish processing facilities are almost always filled by women).

Power Dynamics and Positionality of Researcher

One of the greatest challenges a researcher has to deal with is learning to negotiate unequal power relations, especially when a research project crosses cultural boundaries (Sundberg 2003). It is critical to understand and reflect on how gender, race, ethnicity, education, class, nationality, and age can affect the dynamics between interviewer and interviewee and to remember that in almost every case it is the researcher that is in control (Dowling 2005). As McLafferty (1995: 437 quoted in Rose 1997: 307) explains, "except in rare cases, the researcher holds a 'privileged' position – by deciding what questions to ask, directing the flow of discourse, interpreting interview and observational material, and deciding where and in what form it should be presented." Understanding how information and 'knowledge' is presented and interpreted by the researcher is also important (Brannen 2004).

While McDowell (1992: 409) encourages the researcher to take their positionality into account and actually "write this into our research practice," this is very difficult to

do. As a white, male, well-educated researcher from the United States there was a notable power dynamic between me and the people I was working with in Ecuador. I was in a privileged position to be able to travel to Ecuador and study a topic that I chose while many people I interviewed struggled to make ends meet. Several people noted how easy it was for me to travel to Ecuador while they would have to wait years before getting a visa to travel to the United States.

While it is impossible to erase the uneven power dynamic I took some steps to try and (at least partially) offset the uneven relationship. The main strategy I employed was conducting all of my interviews with one other person (always an Ecuadorian and often times a women) present. I benefited from the help of two 'research assistants,' one male and one female, as I conducted interviews (I use the term loosely since they were not formal research assistants and received no compensation). The female was particularly helpful when I was interviewing women as I sensed that they were more comfortable having another female present (and sometimes participating) in the interview. During interviews I was always outnumbered by Ecuadorians and when interviewing women I was also outnumbered by women. Nevertheless, their remained an uneven power dynamic and since it was unavoidable the next best thing I could do was be cognizant of it and be as sensitive and conscious of it during interviews.

By explaining the theoretical framework that guided this study I am admitting that I am not an unbiased observer and that the knowledge that I have gained has unavoidably been affected by my positionality as a researcher. I also recognize that the story I present in this thesis is influenced by my cultural lens. By discussing the uneven power

dynamics that were impossible to avoid, I at least seek to identify them and remain cognizant of my position and power as a researcher as opposed to ignoring them.

Shaped by the above theoretical underpinnings, I employed qualitative research methods, including interviews, participant observation, and textual analysis during my fieldwork in Ecuador. As Smith (2004: 164) explains, "Method is important because it is regarded as the way in which knowledge is acquired or discovered and as a way in which we can 'know' what is real." The purpose of qualitative research is to understand how the world is viewed, experienced, and constructed by people. It seeks to understand problems from the perspective of the local population and can help identify intangible factors such as social norms, socioeconomic status, or gender roles (Mack et al. 2005). Qualitative researchers also acknowledge that there is no 'real' world but that it is shaped by the relationship between researchers and their subjects (Smith 2000).

Given my goal of understanding the perspectives and experiences Manta's residents have had with the growth of the tuna fishing industry qualitative research methods were most appropriate. I knew that, despite my best efforts to prepare for my fieldwork, I still had a lot to learn and qualitative methods would be the most effective way to identify issues that may not have been obvious to me at the start of my research. In other words, I did not want my fieldwork to be limited to what I already knew about Ecuador; I wanted to leave some opportunity for the research participants to bring unforeseen factors to my attention. For example, while I knew that there were concerns about overfishing, I had not adequately considered the water and air pollution coming from the fish processing facilities until the issue was brought to my attention during fieldwork.

Interviews

The interviews I conducted in Manta served as the most important source of information for this thesis. Interviews are an important way to gather a variety of opinions and experiences and can provide information that is unavailable from other sources. In an effort to let the interviewee play a role in guiding the interview, I used semi-structured interviews. Semi-structured interviews gave me the opportunity to ask multiple participants a similar set of questions and thus gain multiple perspectives on the same topic. However, there was also ample opportunity for interviewees to shift the direction of the interview to topics that I may have overlooked (Dunn 2005). Due to my limited contacts when I arrived in Manta, I used snowball sampling to meet new people to interview. I conducted a total of thirteen semi-structured interviews with people from wide-ranging backgrounds in order to collect a diversity of opinions. Interviewees included women working in fish processing facilities, men working on fishing boats, a university professor, a doctor, and other community members. All interviews were conducted in Spanish. No compensation was offered to any interviewees.

While I had intended to record interviews, it quickly became clear to me that this was not appropriate largely due to the sensitivity of the information people were talking to me about. For example, a crew member on a fishing boat talking about corruption he has witnessed would have been at risk of losing his job (or potentially worse) if what he told me was not kept confidential. Instead of recording interviews, I took extensive field notes. To protect the anonymity of the people I interviewed, pseudonyms are used throughout this thesis.

Participant Observation

Participant observation is an important approach that can be used to gather complementary evidence to interviews and to develop a "geography of everyday experience," (Kearns 2005: 195). Participant observation includes careful listening, visual observations, and even smelling one's surroundings (many parts of Manta had a noticeable smell of fish). In contrast to interviews, participant observation is a more informal type of interaction. The types of observations that I conducted in Manta are known as "uncontrolled observations," meaning that they are not restricted in the sense of only observing prescribed phenomena (Kearns 2005). As is the case with interviews, it is important to remember that what one "observes" is influenced by the researcher's positionality (Ibid).

In the five weeks that I lived in Manta, I was always "observing" my surroundings and the way people interacted with each other and their surroundings. Particularly valuable opportunities for participant observation came while I was a spectator during soccer games at community gatherings in Manta and as I spent hours exploring the city by foot. As I walked around the city I was able to more clearly understand the taken-for-granted class divisions in the city and it became evident that working-class people would not visit certain parts of the city.

Textual Analysis

Finally, textual analysis in the form of newspapers, government documents, local archives, and other relevant 'texts' supplemented the interviews and participant observations. Textual analysis provides a unique way to "obtain a sense of the ways in

which, in particular cultures at particular times, people make sense of the world around them," (McKee 2003: 1). In adhering to the post-structuralist approach to textual analysis, I am not concerned about the 'accuracy' or 'truthfulness' of texts, but more in the stories that the text tells and the underlying assumptions. It is important to consider not only what a text includes but also what is omitted or overlooked.

In Manta, I read two newspapers daily, *El Mercurio* and *El Universo*, and also searched the newspaper's online databases for the past twenty years using key word searches. Newspaper articles gave me an interesting perspective on the way in which the community perceived the presence of the tuna fishing community and provided insight into any social or environmental problems from the processing facilities. In addition to newspapers, fishing industry magazines and newsletters provided another perspective on issues in the tuna fishery. Finally, city archives and locally-published books allowed me to better understand changes in the tuna fishing industry over the years and how the community's perceptions of the industry also changed over time.

Research Rigor

Ensuring the rigor of research is a critical component of any research project. Documenting the various stages of the research process, comparing sources against each other, and using "checking procedures" with the participant community are all ways to work towards ensuring rigor in the research process (Bradshaw & Stratford 2005). I prepared for my fieldwork by taking a class in qualitative research methods and practiced such methods with local research projects in the U.S. before my fieldwork in Manta. While I was in Manta I took detailed notes and carefully documented all my interactions

while I was there, taking the necessary procedures to ensure that anonymity of my participants was ensured. I also maintained communication with several community members in Manta in order to seek clarification of questions that have come up during the writing and interpretation phase of the project.

Research Challenges

Fieldwork almost always presents certain unanticipated challenges and this project was no exception. One of the greatest challenges I confronted was ensuring my personal safety while I was in Manta. While I did not realize this when I arrived in Manta, I quickly found out that the tuna industry is plagued by several intimidating problems. For example, cocaine from Columbia is often transported to Ecuador and then shipped to the U.S. or Europe in tuna fish cans or fishing boats because it is easier to export it from Ecuador than Columbia. I was warned not to talk about this subject while in Manta and to avoid certain parts of town, especially the areas where the working class people live and where the fish processing facilities are located. While I did not end up avoiding these areas completely, I did make sure I was accompanied by someone else when in the more dangerous areas.

Another challenge I encountered is that the tuna fishing industry is extremely competitive and businesses are reluctant to share information with locals let alone foreign researchers. While I had hoped to see the inside of a fish processing facility this proved to be impossible (even though one of my 'research assistants' knew the owner of a fish processing facility). It turns out its almost impossible to see the inside of a processing facility, even for locals; tours are restricted for potential customers only. Additionally,

there were private organizations in Manta that represented the tuna fishing industry that would not even let me into the office to talk with them. I was told through an intercom that they could not help me (my Ecuadorian assistant was also denied access). While the secrecy and safety issues I encountered made my research slightly more difficult to conduct, in the end I feel I was still able to put together an accurate and relatively complete picture of Manta's tuna fishery.

While I do not claim that my research findings represent the *only* truth, I have been careful to ensure that I took the necessary steps to ensure that my findings do represent *a* truth. Five weeks of fieldwork is not enough time to completely understand the complex dynamics of any city or industry. However, after five weeks in Manta I gained a relatively clear understanding of how the commercially tuna fishing industry has grown and changed over the years and I learned a great deal about many of the social and environmental issues the city now faces.

CHAPTER IV

THE DEVELOPMENT AND EXPANSION OF ECUADOR'S COMMERCIAL TUNA FISHING INDUSTRY

While Ecuador is currently the capital of tuna fishing in the Americas, the industry has not always played such an important role in the coastal city of Manta. Beginning in the 1950s, Manta's commercial tuna fishing industry underwent a roughly thirty year period of growth with only modest increases in tuna catches, fleet size, and fish processing facilities. However, after a period of rapid growth beginning in the early 1990s, Ecuador surpassed Mexico in 1999 with more tuna fish captured, processed, and exported than any other country in the Americas. This chapter begins by briefly explaining the significance of the commercial tuna fishing industry for the city of Manta, and more generally for Ecuador. It then explains the factors that led to the development of Manta's commercial tuna fishing industry in the 1950s with a focus on the structural conditions that enabled the rapid expansion of the industry in the 1990s. Given the numerous factors that affected the development of Manta's commercial tuna fishing industry, this chapter is divided into three sections that evaluate: 1) local factors (i.e. within Manta), 2) national factors (i.e. within Ecuador), and 3) international factors which have affected the growth of Manta's commercial tuna fishing industry. While not all factors fall neatly into these three categories, I use this breakdown to roughly organize the various factors by scale.

Manta's Commercial Tuna Fishing Industry

Manta is the center of Ecuador's commercial tuna fishing industry with 95 percent of operations based out of its port (Palma 2004). The tuna fishing fleet in Manta consists of approximately 85 commercial fishing vessels, ranging in capacity from 100 tons to over 1200 tons, and are some of the most technologically advanced fishing boats in the world (IATTC 2010).[1] Most of the commercial fleet is composed of purse seiners, fishing boats that capture tuna by setting a huge net around a school of fish and then hauling the tuna on board (see Image 4). Though there are some longline fishing boats that catch tuna with baited hooks, I focus on purse seiners in this thesis since they make up the majority of Manta's fleet. The three main species of tuna that are caught are yellowfin (*Thunnus albacores*), bigeye (*Thunnus obesus*), and skipjack (*Katsuwonus pelamis*).

Manta is also the site of more than thirty fish processing facilities (although five control 94 percent of the market) that can process up to 450 tons/day of raw tuna into cans, aluminum foil pouches, loins, pet food, and other products for export (de la Fuente 2007). These fish processing facilities range in size from several dozen employees to several thousand employees. While tens of thousands of people are employed directly between the fish processing facilities and the fishing boats, thousands more are employed in companies that provide services to the tuna fishing industry in areas such as banking, transportation, security, vessel and machinery maintenance, and other services. One study suggested that for every one job that tuna fishing or processing creates, another seven jobs are created to provide a range of services to the industry (Duran et al. 2008).

[1] There are thousands of smaller, more traditional fishing boats that fish out of Manta as well though tuna is not a common catch for them.

While estimates vary, most agree that between 70-80 percent of Manta's population lives either directly or indirectly from the tuna fishing industry (Pers. Comm. A. Gonzales 2009; M. Acosta 2009). Lucia Fernandez De Genna, chairman of the Chamber of Commerce in Manta, estimates that, "for every dollar in circulation [in Manta], around USD 0.70 comes from tuna fishing," (Morello 2011).

While the commercial tuna fishing industry is of critical importance to Manta's economy, it plays a much smaller, yet not insignificant, role in Ecuador's national economy. All non-petroleum exports are overshadowed by oil exports which make up fifty percent of Ecuador's export revenues (Economist Intelligence Unit 2010). When including oil, tuna exports account for nearly five percent of Ecuador's export revenues (Ibid). However, oil revenues aside, tuna exports are roughly equal with shrimp exports for being the second and third most important non-oil exports, each making up roughly ten percent of non-oil export revenues (bananas are the most important with twenty-five percent) (Duran et al. 2008; Hernández et al. 2007). While oil is still Ecuador's most important export product, tuna export revenues have increased significantly in the past twenty years with national efforts to reduce dependency on oil revenues. Canned tuna exports were worth $815 million in 2008, the highest ever, though the values dropped to $632 in 2009 (Ortiz 2010).

Ecuador's Position in the Global Tuna Industry

Ecuador's commercial tuna fishing industry is not only of local and national importance but it is a significant player in the global tuna fishing industry. Ecuador is the largest Andean producer and accounts for more than half the region's total tuna catch

(Columbia is the region's second largest producer) (Corey & Babula 2002). Also, as noted above, Ecuador's tuna fishing fleet is the largest in the Americas, with the greatest cold storage capacity (an indication of market size), the greatest processing capacity of any country, and largest fleet (Trutanich 2005). Ecuador catches over 27 percent of all tuna in the Eastern Pacific Ocean (EPO) while Mexico is second with 20 percent and Venezuela is third with 12 percent (Bowen 2009). Beyond the Americas, Ecuador is the third largest exporter of canned tuna in the world with roughly ten percent of the global market (Thailand is number one with thirty-four percent of the global market and Spain is number two with twelve percent of the global market) (Hernández et al. 2007).

While Ecuador's commercial tuna fishing industry is by far the most important driver of economic growth in Manta and is also a significant player in the global tuna industry, this is a relatively recent phenomenon. The following section explains how Ecuador's tuna fishing industry has changed since it began in the 1950s.

Growth of Ecuador's Tuna Industry

As discussed in the Introduction, fishing has been a traditional activity for coastal Ecuadorians, and especially those from Manta, since prehistoric times. Fishing was, and still is, an integral part of the local culture, but until the 1950s fishing was for local consumption; there was no export industry. However, beginning in the 1950s everything began to change as a commercial tuna fishing industry was established in Manta. As de la Fuente and Vélez note, "fishing was an art, occupation, passion, and hobby for the Mantenses, but it was not a highly rentable activity until the beginning of the 50s, when the [first] canning enterprise INEPACA was established," (2003: 70). Between the 1950s

and the early 2000s Manta would evolve from a small fishing village with little industrial activity to one of the fastest growing cities in Ecuador with the third most important commercial tuna fishery in the world.

Manta's commercial tuna fishing industry did not evolve into a global player overnight. While the first fish processing facility was established in Manta in 1950s, the fishing fleet at the time was still very small and not technologically advanced. Tuna were caught by local fishers using canoes and *lanchas,* small wind-powered boats, with line and hook fishing. In the 1960s, Van Camps, a U.S. company, built Manta's second fish processing facility and several more were established during the 1970s (Hernández et al. 2007). As fish processing facilities were established (usually financed with money from abroad) there was an increase in demand for the raw tuna product which prompted an increase in the size and technological capabilities of Manta's fishing fleet. During the 1960s boats began to be outfitted with nets and canoes were being replaced by more *lanchas* which slowly began replacing their sails with small outboard motors. By 1977, the first fiberglass boat was introduced in Manta and they quickly began to replace the heavy wood-hulled boats that were previously being used (de la Fuente & Vélez 2003). Also during the 1970s, metal hulled boats were slowly being introduced as were larger boats with new technologies (e.g. refrigeration and larger nets with winches) that enabled more efficient fishing and allowed boats to spend more time at sea without having to return to land to unload their catch.

Throughout the 1980s, the holding capacity of boats continued to grow; boats that could hold up to 200 tons became increasingly common. By the 1990s, the largest boats could hold 1200 tons of tuna and could fish for up to two months without returning to

Manta. From the early 1980s to 2002 the total capacity of Manta's tuna fleet increased from 20,000 tons to 80,000 tons (Hernández et al. 2007). Further improvements in technology throughout the 1990s, such as better navigation equipment, helicopters (to help find the fish), and improved fuel efficiency, all played a critical role in the expansion and increased profitibility of Manta's fishing fleet (Ibid.). Figure 4 shows the increase in tuna catches between 1959 and 2007 and especially the rapid increase in catches beginning in the 1990s.

While Manta's tuna fishing industry began to expand in the 1950s the growth was slow. During this time period the abundant tuna fish off the coast of Ecuador were largely captured by foreign fishing fleets, mainly from the United States. However, by 1999 Ecuador's tuna industry had undergone a significant transformation and emerged as one of the more important locations for tuna fishing in the world. In the remainder of this chapter, I explain how and why this transition occurred. I argue that it was a confluence of local, national, and international factors which enabled Manta to become the tuna fishing capital of the Americas. I explore various factors at these three different scales and explain how the factors combined to create the structural conditions necessary for the expansion of Manta's tuna industry.

Local Factors

Geographic Location

Manta is perfectly situated for tuna fishing due to its close proximity to some of the most abundant fishing grounds in the Pacific Ocean. In order to understand why Manta's location is so ideal, a brief discussion of the physical geography off the coast of

Manta is warranted. The confluence of two ocean currents off the coast of Ecuador and Peru, the cold Peru Current (also known as the Humboldt Current) and the warm Equatorial Current, (also known as the El Niño Current) creates ideal habitat conditions for tuna fish. When the Peru Current, which flows north from the South Pacific Ocean, meets the Equatorial Current, which flows south along the west coast of Central America, the two currents are pushed westward, towards Asia, by the prevailing easterly (i.e. from the east to the west) winds associated with the Inter-Tropical Convergence Zone along the equator (see Figure 5). The location where these two currents meet and begin to flow westward is off the coast of Peru and Ecuador. As these two currents begin to flow westward, upwelling occurs to replace the westward movement of water. This upwelling brings nutrient-rich waters to the surface which provides an abundance of nutrients for small fish which are the primary food source for tuna fish (see Caviedes 2001 & Anda-Montañez 2004 for more on this topic).

In addition to the confluence of currents that provide tuna fish with an abundant food supply, the Galápagos Islands, situated 500 miles off the coast of Ecuador (but included in Ecuador's exclusive economic zone), provide an important breeding ground for tuna, among many other species (Novy n.d.). In sum, the ocean currents in conjunction with the Galápagos provide the idea habitat and breeding grounds for tuna and thus they are found in a great abundance off the coast of Ecuador. As early as 1886, oceanographer John Buchanan observed, "No waters in the ocean so teem with life as those on the west coast of South America," (quoted in Barber & Kogelschatz 1990: 27).

In conjunction with an abundance of tuna stocks, fishing off the coast of Ecuador is also relatively safe with severe storms being a rare occurrence (Middleton 1977).

Furthermore, due to geological factors, the water off the coast of Ecuador gets deep very fast making Manta the ideal site for a deep water port. The port is an important transportation hub allowing Manta to easily distribute its tuna products around the world (Middleton 1977; de la Fuente & Vélez 2003).[2] While some countries have managed to develop a viable tuna fishing industry without such ideal access to the raw product that Manta has, as the industry became more competitive in the 1980s and 1990s, fishing boats and processing facilities were increasingly relocating to places that were closer to the raw product in order to save time and money in transportation costs.

Infrastructure in Manta

While Manta's geographic location is ideal for the development of a tuna fishing industry, a successful tuna fishing industry also requires significant infrastructural support. Manta now has the necessary infrastructure, but it took many years and serious lobbying by fishery proponents for it to acquire everything. A reliable water source is one of the most critical needs for tuna fish processing since it is used for cooking and cleaning the fish. However, until the 1960s all water was transported into the city by burro or truck since Manta has no natural year round water supply and receives only a limited amount of rainfall (Middleton 1974). It was the growing demand for water from the tuna fish processing facilities that eventually led Manta to take the necessary steps to secure a reliable water source via dams and water piping from the mountains to the east of the city (Brooks & Brooks 1967). Additional infrastructure needs, such as a port and

[2] Manta is located directly on the coast, unlike Ecuador's other major port city, Guayaquil, which is located 40 miles upriver from the coast. Manta is also only 25 miles from the international shipping lane in the Pacific Ocean, significantly closer than Guayaquil, which gives it easy access to international markets (Palma 2004).

dock facilities to unload the fishing boats, roads to transport the fish to the processing facilities, electricity, waste disposal, and an airport to help distribute the final products were not readily available in Manta in the 1950s and 60s. However, by the 1990s Manta had the necessary infrastructure for a globally competitive tuna fishing industry.

A pivotal step towards securing the required infrastructure occurred when Manta's Cámara de Industrias, (Industrial Chamber) was established in 1965 (de la Fuente & Vélez 2003). This organization has significant influence in deciding which development projects to purse in Manta and while not designed as an organization to support the commercial fishing industry, it has evolved into that over the years. The majority of the chamber's members are representatives from the tuna fishing sector which has meant that development projects over the years have tended to disproportionately benefit the fishing industry, often at the expense of Manta's less developed neighborhoods. For example, Manta is said to have the best runaway in Ecuador yet the streets in half the city are in desperate need to repair (Ibid). City agencies and planners have, and continue to, put economic growth ahead of social programs and more evenly distributed urban growth.

Arguably the single most important infrastructural requirement for the tuna fishing industry is a port complex. While the need for port facilities was originally enumerated in 1928 by Manta's Cámara de Comercio (Chamber of Commerce), Manta's port was not opened until 1968. Realizing the importance of a port facility for the development of Manta and frustrated with the lack of action being taken by the city to build a port, Manta's residents organized a three day strike in 1958 until the city's government finally signed a contract for a port to be built (de la Fuente & Vélez 2003).

Numerous delays turned the three year project into a ten year project and the port was not officially inaugurated until February 1968 (Middleton 1978). As one interviewee told me, "Manta has developed, but we have had to fight for it," (Pers. Comm. A. Gonzales 2009). While the struggle to get the port built may seem to contradict the point made in the previous paragraph about the city being active in promoting projects to help the tuna fishery, it was not really until the 1970s and 1980s that the city began to actively promote development projects to increase the efficiency and size of the industry.

Manta's Port Authority, which was established to run the new port facilities, ended up with significant influence over which parts of Manta would be further developed (much like the Industrial Chamber). Not surprisingly, it has tended to promote projects that benefit the commercial fishing industry and port activities over traditional fishers in Manta. This agency has become very powerful over the years and has developed a reputation for being heavy handed, sometimes being referred to as the "Mafioso" (Middleton 1988). The Port Authority and Industrial Chamber have had a disproportionate influence over development projects in Manta, a factor that has benefited the commercial fishing industry at the expense of other parts of Manta whose development is considered "unrelated" to fishing and port activities.

Labor Force in Manta

Due to the labor intensive nature of the commercial tuna fishing industry, especially when it comes to fish cleaning and packaging, having an adequate (and cheap) labor pool is critical to success in the competitive industry (Barclay 2009). While Manta already had a sizable labor pool, it was further augmented by people migrating to coastal

cities, and especially Manta, beginning in the 1970s, from Andean and coastal rural communities. With arable land increasingly hard to come by in the Andes and the declining importance of Ecuador's banana industry in rural coastal areas, some people began moving to cities looking for new employment opportunities. They were also attracted to cities by the prospect of more economic mobility and a more modern lifestyle (Miller 2007a). Since Guayaquil, at this time (its image has been improving), was seen as a big and dangerous city, mid-size cities like Manta were especially popular for migrants (Middleton 1979). Therefore, Manta's labor force was more than sufficient to meet the needs of the expanding commercial tuna fishing industry. The cheap labor costs in places like Ecuador and Thailand played an important role in attracting the tuna fishing industry away from places like the United States (and more recently Puerto Rico) where labor is significantly more expensive. While I include this discussion of labor in the section of *local* factors, there are national and international factors that encouraged this migration. Clearly, the various geographic scales are not mutually exclusive and that what happens at the international or national scale has ramifications at the local scale.

Local Entrepreneurs

With the infrastructure for the tuna fishing industry in Manta largely in place by the 1970s, the groundwork had been laid for the industry to expand. However, the expansion in the 1990s would not have happened without the foresight and risks taken by entrepreneurs in Manta who saw an opportunity to grow the fishery. As de la Fuente and Vélez (2003: 87) note, the growth of the tuna fishing industry in Manta was, "not the result of a government decision or development plan, but a growth initiated with a new

generation of business managers willing to develop an industry that until then had been under exploited." One local entrepreneur in particular, Agustín Jiménez, played a particularly significant role in the expansion of Manta's tuna fishing industry during the 1990s. Sensing an opportunity with the declining role of the tuna fish processing industry in San Diego (see International Factors below), Jiménez proposed a joint venture with StarKist. Jiménez would open a new canning facility in Manta (Empesec) and contract fishing vessels to supply the tuna if StarKist agreed to manage the facility, provide the capital for new fishing vessels, and distribute the product. According to Jiménez, "the availability of labor, infrastructure and raw material supply… guaranteed efficiencies for the new venture's operations," (Hernández et al. 2007: 83). Empesec quickly evolved into the most successful and largest tuna processing and exporting facility in Manta and currently accounts for 45 percent of Ecuador's tuna exports (Duran et al. 2008).

While factors such as Manta's geographic location and infrastructure laid the foundation for the development and expansion of Manta's commercial tuna fishing industry, Jiménez, in conjunction with StarKist, provided the capital and gumption that made Manta a significant player in the global tuna fishing industry during the 1990s. While all the local factors detailed above are important, other national and international factors also played key roles in the development and expansion of Manta commercial tuna fishing industry.

National Factors

In order to understand the development of Manta's commercial tuna fishing industry and especially the rapid growth of the industry in the 1990s, it is important to consider the national context in which the industry was developing. While Chapter II discussed some of the more general experiences that Ecuador has had with neoliberal economic restructuring, the following section explains in more detail specific policies and events that impacted the tuna fishing industry. Particular attention is paid to the impacts of trade liberalization and specific free trade agreements which were central to the expansion of the tuna industry.

Trade Liberalization and Structural Reforms

During the 1990s Ecuador's government (with strong encouragement from the IMF and World Bank) took aggressive steps to reduce barriers to foreign trade. From 1990 to 1993 average import tariffs fell from 37 percent to 11-12 percent while the maximum tariff fell from 290 percent to 20 percent (see Figure 6) (Duran et al. 2008). This reduction in import tariffs was important for the tuna fishing industry since all the equipment used in the fish processing facilities and for the fishing boats is imported, mostly from the United States or Europe.

In addition to reducing import tariffs, Ecuador signed three free trade agreements that were particularly important to expanding tuna exports. In 1990, Ecuador signed the Andean Generalized System of Preference (GSP) with the European Union (EU), which allowed Ecuador to export tuna in any form (cans, pouches, frozen loins, etc.) to the EU duty free. The GSP is a temporary (i.e. it has to be renewed) preferential export tariff

system, "through which the EU grants total or partial franchises to the exportations of the majority of the development countries… to favor its development and growth," (European Commission 2010). While many countries have GSP agreements with the EU, the Andean GSP (which applies to Venezuela, Columbia, Ecuador, Bolivia, and Peru) specifically aims to, "favour the Andean Region exportations so that in this manner the invested budgets by these countries to fight against the drugs traffic might be compensated," (Ibid.).

Following the GSP, in 1991, Ecuador signed the Andean Trade Preferences Act (ATPA) with the United States. The ATPA was a free trade agreement between the United States and the Andean countries of Columbia, Ecuador, Peru, and Bolivia that was meant to encourage economic opportunities in drug-producing countries so they could expand their economic growth while combating drug production at the same time. While tuna was not included in the ATPA, when this free trade agreement was renewed and expanded in 2002 under a new name, the Andean Trade Preferences and Drug Eradication Act (ATPDEA), tuna in aluminum foil was included due to intense lobbying efforts by StarKist, Jiménez, and the Ecuadorian government.[3] As I explore in more detail below, StarKist was just beginning to develop the technology to process tuna in foil packages in the early 2000s so had a lot to gain if it was included in the ATPDEA. Ecuador could now export an unlimited quantity of tuna in foil pouches to the U.S. duty free (previously the tariff rate had been between 12.5 percent and 35 percent).

[3] Canned tuna was not included due to lobbying efforts by American companies in American Samoa, Asian tuna fish processors, especially in Thailand and the Philippines, and Pacific Island nations because they were concerned that if canned tuna was included Ecuadorian canned tuna would flood the market and undercut them. There was less opposition to tuna in aluminum foil since it was such a new product and few places were processing it into foil pouches in 2002 (U.S. House of Representatives Press Release 2002).

The third free trade agreement was signed in 1993 when Ecuador joined with members of the Andean Community to eliminate all trade barriers between them (Duran et al. 2008).[4] While not all Andean Community countries are an important market for Ecuador's tuna exports, Columbia is a significant importer of Ecuadorian tuna; nearly ten percent of Ecuador's tuna exports go to Columbia (Hernández et al. 2007). The Andean Community free trade agreement played an important role in boosting tuna exports since Ecuador could export an unrestricted amount of tuna to Andean countries in any form.

Duty free access to the U.S., EU, and Columbia was critical in enabling Ecuador to remain competitive in the global tuna industry. While the International Factors section below further discusses the implications of these two free trade agreements in more detail, I want to reiterate that they were signed during the period when Ecuador was fully embracing the neoliberal doctrine. This is an important consideration when linking changes in Manta to neoliberal reforms. While free trade agreements are international in scope, I have included a discussion of them in the National Factors section since they would not have been signed without national support.

Government reforms that liberalized capital and foreign direct investment in the 1990s were also important for facilitating the expansion of Manta's tuna fishery since so many of the fish processing facilities and fishing boats are owned by international companies. In 1991, the Andean Community adopted Decision 291 which took steps to open Andean countries up for foreign direct investment (FDI) (which made it easier for companies to invest in Andean countries) and capital account transactions (which made it easier for companies to transfer their profits to another country). Following the Andean

[4] Columbia, Ecuador, Peru, and Bolivia comprise the Andean Community.

Community, Ecuador passed the 1997 Law on Promotion and Guarantee of Investment and approved a new constitution in 1998 which included measures to liberalize FDI. Consequently, foreign investors were treated the same as national investors and were given guarantees against expropriation and superiority of international treaties above national laws (Duran et al. 2008).

Given Ecuador's history of political and economic instability and its reputation for being one of the more corrupt countries in Latin America, guarantees to protect international investors were important for encouraging more investment in Ecuador. FDI in Ecuador's natural resources industries increased from $359 million between 1993-1995 (two percent of GDP) to $1,150 million between 2001-2005 (four percent of GDP). However, most of this money (~80 percent) was for the mining industry, especially oil (Duran et al. 2008). Nonetheless, FDI from European and American companies in the tuna fishing industry throughout the 1990s and the early 2000s was vital for the expansion of the industry and led to an increase in the size of the fishing fleet as well as an increase in the number of fish processing facilities. It is worth noting that in the fishing industry only, FDI needs to be approved by the National Fishing Institute but that prerequisite seems to have had little impact on the flow of FDI to the industry (Hernández et al. 2007).

Efforts to Diversify Exports

Manta's commercial tuna fishing industry also benefited from efforts by the national government to diversify exports and to decrease its reliance on oil revenues. A decline in oil prices in the 1980s, coupled with an earthquake in 1987 that destroyed

Ecuador's only pipeline, plunged Ecuador into an economic crisis (Office of the U.S. Trade Representative 2005). The 1980s economic crisis made clear the shortcomings and risk involved in relying on one product for such a significant portion of export earnings. Consequently, the Ecuadorian government began to take steps to encourage export diversification and promote nontraditional exports.

Growth in the Manabí province was seen as an important way to balance out an overreliance on oil from the Amazon region and to geographically spread development projects throughout Ecuador (Middleton 1977). While nontraditional exports such as roses, vegetables, and tuna were encouraged starting in the 1980s, Ecuador continues to rely on exporting primary products (oil, bananas, shrimp, coffee, cacao, flowers, and tuna make up 90 percent of Ecuador's exports). This reliance on primary product exports has lead to significant pressure of Ecuador's natural environment (the environmental implications for the commercial tuna fishing industry are explored in Chapter V) (Larrea 2006).

Government Support for Tuna Industry

While the national policies explored above were not specifically aimed at the fishing industry, there were several policies enacted and agencies formed that made it clear that the national government was encouraging growth in the fishery sector. One example is the enactment of Ecuador's Law on Fishing and Fisheries Development (No. 178 of February 12, 1974) that provided the fishing sector with subsidized loans so boat owners could upgrade from wood to metal hulled boats (Duran et al. 2008). Another example is the establishment of the National Institute of Fisheries (Instituto Nacional de

Pesca) (INP) in 1960 (Decree 582-A). This agency, founded with support from the Food and Agriculture Organization of the United Nations, established quality control rules for tuna products and certified tuna fishers and processors. The establishment of this organization was critical for fish exporters because importing countries in the European Union and U.S. have high standards for food imports and require exporters to meet certain quality control standards. Without an organization like the INP guaranteeing the quality of Ecuador's tuna exports it would have been harder to export tuna abroad (Duran et al. 2008). Another national agency that was, and remains, important for managing the fishing industry is the National Council for Fisheries Development (Consejo Nacional de Desarrollo Pesquero). This agency is responsible for developing a national fisheries policy and works closely with INP and Inter-American Tropical Tuna Commission (IATTC) to set catch quotas and to determine which species can be exploited and at what levels.

Government policies and agencies all helped with the development of the tuna fishing industry but direct government financing also played an important role. Financing was available through the National Finance Corporation (Corporación Financiera Nacional) (CFN), which received money from multilateral financial institutions, to buy boats and start up processing plants. Money from CNF was used by Jiménez, among others, to expand the tuna industry (Hernández et al. 2007).

In sum, there were various national factors the influenced the growth of Ecuador's tuna fishery and Ecuador's national government played a critical role in enabling the expansion. While not all policies, such as trade liberalization or export diversification, were directly aimed at expanding tuna exports, others factors such as government loans

and developing the INP were directly aimed at the tuna fishing industry (Duran et al. 2008). Without support from the national government it is unlikely that Manta's commercial tuna fishing industry would have grown into the nationally and internationally important industry that it is today.

International Factors

While the factors outlined above were very important to the development and expansion of Manta's commercial fishing industry, it is also important to consider various international factors and how they influenced the local and national factors. As Eni Faleomavaega, U.S. congressman for American Samoa notes, "the bottom line is the global tuna industry is intertwined. What happens in one region affects another," (quoted in Haig-Brown & Warren 2002: 26). This section explores the following international factors that shaped Manta's tuna fishery: 1) global reorganization, 2) demand for dolphin safe tuna, 3) tuna in foil packages, and 4) market access.

Global Reorganization

Beginning in the 1960s, though accelerating throughout the 1970s and 1980s, fishing fleets and processing facilities were moving from the North to tropical and subtropical fishing grounds. Canning facilities were moving from places of consumption (e.g. the EU and U.S.) to countries that were close to tuna fishing grounds, had low corporate taxes, and cheap labor costs (Ababouch & Catarci 2007). Factors such as expanding the exclusive economic zone (EEZ) of countries to 200 miles in 1982 (formalized with the United Nations Convention of the Law of the Sea), the dismantling

of tariffs and quotas under the GATT/WTO, and regional or bilateral trade agreements all had an important impact on restructuring the international tuna fishing industry.

Until the 1980s, most of the demand for tuna in the U.S. had been met by the American tuna fishing fleet, based out of San Diego. However, as tuna stocks in the northeastern Pacific were being depleted, San Diego's fleet had to travel farther south in the Pacific Ocean increasing operating costs and time significantly. The rising cost of labor in San Diego was also driving up operating expenses (Hernández et al. 2007). With operating costs on the rise in San Diego, investors began moving canning facilities to places like Thailand, Puerto Rico, American Samoa, and Ecuador where labor cost were significantly lower and there was easy access to fish stocks.

With the decline of San Diego's tuna fishing industry, many of the commercial fishing boats that were no longer being used in California were transferred to Ecuador. During the 1980s and 1990s most of "new" fishing boats in Manta's fleet were actually retrofitted fishing boats from California that had been modified, updated, and overhauled in Panama, an important site for commercial tuna fishing boat maintenance and construction. From 1980 to 2002, Ecuador's tuna fleet capacity increased four-fold, from 20,000 tons to almost 80,000 tons.[5] Due to the cost of new tuna fishing boats (several million dollars), the availability of cheaper, used fishing boats was very important for the expansion of Manta's fleet. Also, if it was not for rising operational costs in San Diego, it is unlikely that processing facilities would have relocated to places like Manta since they were already established in the U.S. To reiterate, the shift of the commercial fishing

[5] By 2002 the Inter-American Tropical Tuna Commission put a ban on the entry of new fishing vessels in the Eastern Tropical Pacific in attempt to limit pressure on the tuna fish stocks. Fishing capacity was limited to those boats that were registered at that time with the inevitable consequence that the future growth of tuna exports will have little opportunity to grow.

industry from California to places like Ecuador, Puerto Rico, and Thailand was not an *expansion* of the global tuna fishing industry so much as a *reorganization*; the total number of fishing boats and fish processing facilities did not increase significantly, but rather relocated from one place to another place.

With San Diego out of the picture (San Diego's last cannery closed in 1984), Puerto Rico and American Samoa became increasingly important global players due to low labor costs, close proximity to fishing grounds, and because they can export to the U.S. duty free (Bonanno & Constance 1998). However, in the last ten years, rising labor costs have made these two countries less than desirable locations for international tuna fish processors that continually seek the cheapest places to operate. Also, since Ecuador and other countries can now export to the U.S. duty free, they have lost that comparative advantage. In 2001, StarKist closed its canning facility in Puerto Rico because of rising operational costs, especially labor, and transferred its operations to Ecuador (Corey & Babula 2002). Meanwhile, American Samoa has been losing thousands of jobs in the tuna fishing industry over the past several years due to rising labor costs. In 2009, Chicken of the Sea closed its cannery in American Samoa leaving over 2,000 people without jobs. StarKist has also been cutting jobs in American Samoa and now employs roughly 1,000 people in tuna canneries, down from a high of 3,000 in 2008 (Manufacturing.net 2010). Fishing boats have also been relocating elsewhere, closer to the new processing facilities.

In the always competitive tuna industry, the major companies, StarKist, Chicken of the Sea, and Bumble Bee, are continually seeking the cheapest places to operate. As globalization accelerates and companies do not need to locate operations at the site

consumption, production is becoming increasingly place-less. In the past two decades tuna companies have relocated from the U.S. to Puerto Rico and American Samoa and then to Ecuador and Southeast Asia as operating costs change. As Bonanno and Constance (1998: 112) explain, "the tuna industry is a classic example of capital avoiding dependency on high-cost labor, by-passing state regulations that restrict accumulation, and sourcing low-cost production sites." This global reorganization has led to a dramatic expansion in Ecuador's tuna fishing industry since it has ideal access to fishing grounds, affordable labor rates, and duty-free access to the world's largest tuna consuming countries.

Demand for Dolphin Safe Tuna

Another important factor that contributed to the shift of tuna fishing fleets from the U.S. to Ecuador and Southeast Asia had to do with the controversy over incidental dolphin catches that occur frequently when fishing for tuna. Rising concerns over dolphin mortalities by U.S.-based environmental groups during the 1960s led to the passage of the Marine Mammal Protection Act of 1972 (MMPA). The MMPA mandated the elimination of dolphin kills for all U.S. tuna fishing boats. Given that the law only applied to U.S. fishing boats, this law led many of the U.S. fishing boats to relocate to Latin America and Southeast Asia where they still had access to Pacific Ocean tuna populations but would not be required to meet the requirements of the MMPA. Consequently, the U.S. tuna fleet shrunk from 93 boats in 1981 to 35 boats in 1988 (Bonanno & Constance 1998).

Then, in 1984 in an effort to control international tuna fleets, the U.S. Congress added two amendments onto the 1972 MMPA. Now tuna could only be imported into the U.S. if the exporting country had implemented a dolphin protection plan and if incidental dolphin mortalities were as low as those in the U.S fishing fleet. To complement the MMPA an additional law concerning tuna, the Dolphin Protection and Consumer information Act (DPCIA) was passed in the U.S. in 1990. This law forbade selling tuna that was not certified "dolphin safe" in the U.S. Consequently, the U.S. imposed an embargo on tuna imports from countries such as Mexico and Venezuela (two of the more important Latin American tuna exporters) and from "intermediary countries" such as Costa Rica, Italy, Japan, Spain and others, that may have processed tuna that was not caught in a dolphin safe manner (Ababouch & Catarci 2007). These laws led to a decade of lawsuits and contentious relations as Mexico and other Latin American countries claimed that the U.S. was violating international trade agreements. The laws had little impact on Southeast Asian counties because dolphin bycatch[6] is less of an issue in the Western Pacific where different species of tuna, which are not followed by dolphins, are primarily caught.

Without going into all the details of this controversy (for more details see Bonanno & Constance 1996; 1998), one very important thing to note is that while Mexico, Venezuela, and other countries, were fighting the U.S. tuna embargos in court, StarKist (mainly based in Ecuador) took the necessary steps to become the first dolphin-safe certified company in Latin America. While tuna bycatch was a significant issue for

[6] The term bycatch refers to the incidental catch of non-target species. This is, when fishing for tuna, if dolphins, sharks, or other non-tuna species were caught they would be considered bycatch. Bycatch is considered to be a major threat to marine species and the World Wildlife Fund has identified it as a priority conservation issue.

Ecuador's fleet, relatively simple and inexpensive technological adjustments were made to drastically reduce dolphin mortalities and earn Ecuador a "dolphin-safe" certification. While Mexico and Venezuela resolved their dispute with the U.S. by 1992, a two year embargo on Mexican and Venezuelan tuna provided Ecuadorian tuna exporters an opportunity to become established in U.S. markets. The U.S. embargo on Venezuelan tuna between 1990 and 1992 led the Venezuelan tuna fleet to decline from 118 boats in 1988 to 32 boats in 1992 (Bonanno & Constance 1998). Mexico's fleet also declined significantly and the stage was set for Ecuador to replace Mexico as the most important tuna fishing country in Latin America by 1999.

Tuna in Foil Packets

The introduction of new fish processing technologies and equipment in the early 2000s that enabled tuna fish to be packaged in aluminum foil pouches instead of cans also played a role in the expansion of Manta's tuna industry. In the mid 1990s, an international equipment manufacturer was developing the equipment to package tuna in airtight aluminum foil pouches and approached StarKist to see if they wanted to adopt this new processing technique. StarKist jumped at the opportunity and the first processing facility with this technology was established in Manta, Ecuador. As previously noted, StarKist had been encouraged to begin operating in Manta by Jiménez. However, it is unlikely that without the capital provided by StarKist Jiménez would have been able to afford the expensive new equipment. By 2001, the new equipment was installed and tuna in foil pouches was immediately popular with consumers. StarKist, now referred to as the "pioneer in the discovery of airtight tuna packaging," (Hernández

et al. 2007: 84) played an important role in increasing Ecuador's prominence in the global tuna fishing industry due to the huge popularity of this new tuna product.

Largely due to the high cost of the new processing equipment, Ecuador maintained a monopoly over tuna in foil pouches for two years, long enough to establish itself in the global markets and make it difficult (though not impossible) for other processors to get established.[7] It is also worth noting that this new technology was particularly attractive to companies like StarKist since it greatly increased the value added to fresh tuna. The popularity of tuna in foil pouches led to an increase in demand for raw tuna at StarKist's fish processing facility in Manta, which prompted boat owners to buy new, larger boats or upgrade existing ones (Hernández et al. 2007).

Market Access

Now that the StarKist facility in Manta had the technology to process tuna in aluminum pouches, the next step was to ensure that they had market access to the United States. This market access came when the Andean Trade Preference and Drug Eradication Act (ATPDEA) was signed in 2002 and tuna in foil pouches was granted duty-free access to the U.S. While the inclusion of tuna in the ATPDEA allowed tuna in foil pouches to be exported to the U.S. duty free, the Andean Generalized System of Preferences permitted the export of all forms of tuna to the EU duty free (European Commission 2010). While the ATPDEA is an important free trade agreement for the Ecuadorian tuna fishing industry, it only benefits the few companies that have the capacity to process tuna into foil pouches. The GSP on the other hand benefits all

[7] Thailand now plays an important role in processing tuna in foil pouches.

Ecuadorian tuna fish exporters since all forms of tuna are included in the agreement. Tariff-free access to the EU, the world's largest consumer of canned tuna was critical for expanding Ecuador's tuna exports and with the increase in demand for raw tuna by the processing facilities it also encouraged growth of the fishing fleet. During the 1990s, tuna exports to the EU grew ten times (Corey & Babula 2002).

Market access to the EU and U.S. with the Andean GSP in 1990 and the ATPDEA in 2002 were perhaps the most important factors in enabling the expansion of Ecuador's commercial tuna fishing industry. One study about the Ecuadorian tuna industry noted that, "all of the interviewed [Ecuadorian] entrepreneurs identified market access as a key element for tuna industry development. In fact, they said that without the ATPDEA and the EU's Generalized System of Preferences, there would not have been any important growth in tuna exports," (Hernández et al. 2007: 93). Given the importance of this market access, the long term viability of Ecuador's tuna fishing industry is heavily dependent on continued duty-free access to the U.S. and EU, a topic that will be returned to in final chapter of this thesis.

Conclusion

Ecuador's commercial tuna fishing industry has undergone a profound expansion since the early 1950s, and especially in the past twenty years, and is now the third most important tuna exporting country in the world. As detailed above, there were a variety of factors that enabled Manta to become such an important location for tuna fishing. Local factors such as Manta's ideal geographic location and labor supply combined with national policies to encourage export diversification and enable more foreign investment

in Ecuador. Concurrently, international factors such as a reorganization of the global tuna fishing industry and the dolphin safe tuna controversy also facilitated the growth of Manta's tuna fishery.

As I have attempted to demonstrate above, the development and expansion of Manta's commercial tuna fishing industry did not occur in isolation from what was happening in the rest of Ecuador or the rest of the world. Neoliberal economic restructuring during the 1990s played a critical role promoting policies that enabled the expansion of Manta's fishing industry. A core tenet of these policies, trade liberalization, was perhaps the single most important factor in the expansion. Given the competitive nature of the industry, without Ecuador's tariff-free access to the EU and U.S., Ecuadorian tuna would not have been nearly as competitive with tuna from Southeast Asia where labor costs are lower. In sum, a geographical perspective that explores phenomena at multiple scales is vital for understanding the expansion of Manta's tuna industry. Without this perspective, the global interconnectedness of the industry could have been overlooked. Now that this chapter has explained the reasons behind the growth of Manta's tuna fishery, the following chapter explores the various social and environmental consequences of this growth.

CHAPTER V

THE BENEFITS AND CHALLENGES OF MANTA'S TUNA FISHING INDUSTRY

The development of Manta's commercial tuna fishing industry has created many opportunities *and* challenges for the city and its residents; a paradox that makes passing an overall positive or negative judgment on the industry difficult. For example, the rapid expansion of the Manta's tuna fish processing facilities and a corresponding increase in the size of the fishing fleet has created thousands of new job opportunities, a positive trend. However, many of these new jobs present challenges, such as unsafe workplace conditions or an increase in work burden, especially for women. This chapter reviews both the benefits and challenges that have resulted from the development and expansion of Manta tuna industry. The goal of this chapter is to present both the pros and cons and less about concluding whether the pros outweigh to cons or vice versa; the concluding chapter provides more discussion on that issue.

Potential Benefits of Manta's Commercial Tuna Fishing Industry

My research has identified three primary benefits from Manta's tuna fishing industry (although it is clear that not everyone benefits equally): 1) New employment opportunities, 2) Urban development, and 3) Economic growth (primarily for Manta but to some degree for Ecuador as a whole). However, it is worth noting that I list these as *potential* benefits, since there are problems with all of these "benefits" which I describe in the following section. While urban development and economic growth sound positive

(and are for some people), they simultaneously create challenges as the benefits are not evenly distributed.

New Employment Opportunities

For a country where 50 percent of the workforce is underemployed, new job opportunities are an important way to improve the socio-economic well-being of its residents (U.S. Department of State 2009). Thus, perhaps the greatest benefit of Manta's commercial tuna fishing industry has been the thousands of jobs that it has created (though, as discussed below, there are some drawbacks to these jobs). Since Manta serves as Ecuador's primary port for commercial tuna fishing boats and the primary location for fish processing facilities, there are job opportunities working on boats (generally males) and in fish processing facilities (predominately females). Additionally, there have been many spin-off businesses that provide services for the fishing industry and have created thousands of additional jobs. For example, there are maintenance jobs for people to repair boats, nets, and other heavy equipment, jobs selling and transporting fish, and jobs for security guards and cleaning services at the fish processing facilities. Due to this multiplier effect, the commercial tuna fishing industry, directly and indirectly, employs tens of thousands of Manta's residents (though an exact number would be very hard to estimate).

While jobs working on fishing boats are an important source of employment for men, many of these jobs are filled by people that have abandoned their traditional fishing boats to work on a commercial boat. In other words, many jobs on the commercial tuna fishing boats are not *new* job opportunities but are actually just a shift in employment.

However, Manta's fish processing facilities have created many new job opportunities in the formal sector, especially for women. It has been estimated that fish processing facilities provide as many as 18,000 job opportunities for women in Manta (de Genna 2001).

While previously many women worked in the informal sector and earned less than minimum wage, jobs in the formal sector guarantee at least minimum wage. During interviews I conducted with two different women that worked in fish processing facilities, both mentioned that they worked in the informal sector, either cleaning houses or washing clothes, before they were able to secure a job in a fish processing facility (Pers. Comm. C. Lopez & E. Alvarez 2009). While both spoke about some adverse consequences of their new jobs (see the Negative Impacts section below), they were happy to be making more money to help raise their family or support elderly parents that no longer worked.

While there are some workplace hazards associated with jobs in the tuna industry, Ecuador has relatively good labor regulations. Also, jobs in the fishing industry are considerably safer than working in other industries in Ecuador (e.g. cut flower or banana sector due to heavy pesticide use). Since tuna is a product meant for human consumption and most of Ecuador's tuna is exported to the U.S. and EU, importers often require certain workplace standards are met to ensure that processing facilities are clean and that the tuna is of satisfactory quality. Serious accidents involving fatalities are very rare in processing facilities or on fishing boats and Ecuador continues to take measures to improve its labor laws and workplace regulations. Ecuador's 2008 constitution grants even more worker rights, such as a 15-day paternity leave and it forbids the previously

common practice of hiring workers on short-term contracts. The minimum wage has also increased over the past couple years to $264 per month, but it is still considered to be inadequate to support a family (Office of the U.S. Trade Representative 2009).

In sum, Manta's commercial tuna fishing industry has played a critical role in providing employment opportunities and a *relatively* safe workplace environment for thousands of Manta's residents (significant challenges persist which I discuss in more detail later). However, it is important to add that due to the difficulties involved in seeing the workplace firsthand, the true nature of workplace conditions are hard to verify. I have had to rely on a four key informants and secondary sources for my information.

Urban Development

When Rhoda and Earle Brooks lived in Manta for two years from 1962-1964 as Peace Corps volunteers, the city was without a water supply or paved streets and many of its 38,000 residents lived in structurally unsound bamboo shacks (Brooks & Brooks 1967). Manta was not considered to be of any national significance; there was little industrial activity and few opportunities for economic growth. However, after several decades of sustained growth, especially in the past twenty years, Manta has emerged as a prominent and (relatively) modern city in Ecuador. As one newspaper article noted, "Before Manta was at the margin of national authorities and representatives, now it is seen as a progressive and future looking city with national and international companies," (El Mercurio 2001). While there are several contributing factors to the rapid urban development that Manta has undergone in the recent decades, the growth of the

commercial tuna fishing industry and the development of the requisite infrastructure has played the most important role in catapulting Manta forward into the 21st century.

When the tuna industry began to establish itself in the 1960s, Manta could barely provide the necessary infrastructural requirements required (e.g. adequate water supply, docks, a means to efficiently transport the finished product). However, as discussed in Chapter IV, the level of influence that Manta's Port Authority and the Industrial Chamber exerted over urban development allowed Manta to develop the infrastructure for an internationally competitive fishing industry. The Port Authority pushed forward projects to build better and larger dock facilities and pave roads that linked the port complex, the fish processing facilities, and the airport. They also improved the quality of services such as running water and electricity (de la Fuente & Vélez 2003). While the primary concern for the Port Authority was to ensure the port was modern and run as efficiently as possible, it also promoted other city-wide projects such as road paving, building sidewalks, improving trash pickup and disposal, and reforesting the hills surrounding Manta (Ibid). There is no doubt that in attempt to meet the infrastructural needs of the commercial tuna fishing industry many of Manta's residents received important benefits.

Notwithstanding the important benefits that accompanied the tuna fish industry-led development, it is important to point out that Manta's urban development has been very uneven. As Middleton (1988: 362) observes:

> If one were to look down on the port complex and that strip of developed land bordering the avenue from an upper floor of one of the high rise buildings in downtown Manta, one could not help being impressed by the physical transformation of the city. One could feel pleased at Manta's progress. If one were, however, to cross the floor of the magnificent edifice, and gaze inland, one would discover another Manta with unpaved and half paved streets, a couple of recently built structures, a few modern

> homes, but a very great number of weathered, split-bamboo homes. The other face of development. The undelivered promise.

Middleton observed a "chaotic and sporadic" street paving program that was primarily interested in improving port activities and associated commercial interests rather than "unrelated" aspects of Manta's growth (Middleton 1979). Since Middleton was making these observations in the 1970s and 80s, before the rapid expansion in the commercial fishing industry in the 1990s, I wanted to see if this pattern of uneven development persisted throughout the period of rapid growth.

My interviews with residents and observations confirmed that the pattern of uneven development Middleton (1988) described has persisted in Manta during the recent period of growth since the 1990s. The two parts of Manta, the commercial center and the industrial center, are in fact clearly separated by a dry river bed (except for a couple months a year during the rainy season) that runs through the city and unofficially serves as the division between the upper/middle class residents and the lower-class residents (see map in Figures 7 and 8). The area to the northwest of the river bed (red circle on the maps) is the commercial part of town with the port, banks, government offices, five star hotels, department stores, night clubs, and nice restaurants. There is also a beautiful clean beach, Playa el Murcielago, with shade awnings for rent, ocean-side restaurants, volleyball nets and soccer goals, and paved walkways (built with funding from the Port Authority in 1998) (see Images 5-7). As one moves inland, there are more residential areas for middle and upper-class residents and newly constructed gated communities, further separating the classes (see Image 8). The commercial area has paved streets, regular trash pickup (and street cleaners for litter), reliable water supplies and electricity, and is relatively safe.

However, cross the dry river bed to the neighborhoods of Los Esteros and Tarqui and one encounters a remarkably different picture (green circle on the maps). There is a beach that artisanal fishers use to unload their catches but it is largely unmaintained by the city; there is no dock, it is littered with rotting fish parts and trash, and the water is so polluted from the aging sewage system that no one will swim there (see Images 9-11). The limited efforts that the city has made to clean up the beach and help the fish merchants failed to meet expectations. In 2008, in attempt to clean the beach up and keep it more sanitary, the city built concrete booths with running water for fish merchants to sell their fish (these were to replace wooded carts without access to water). However, the quality of materials used were of such poor quality that the sinks were all rusted before they had even been used by the merchants (see Images 12 & 13). In the end, people were more upset with the city about feeling ignored and disrespected than they had previously felt (Pers. Comm. A. Gonzales 2009).

Bordering the water front and just inland in Tarqui and Los Esteros are the tuna fish processing facilities. They are intentionally located away from the commercial district due to the overpowering smell of fish and air and water pollution concerns (Pers. Comm. A. Gonzales 2009). The one processing facility that is located to the west of the river bed (see black box in Figure 7), INEPACA, was the first to be built back when Manta was a much smaller city. Now it is the most controversial facility since its close proximity to downtown brings the pollution and smell to close to the commercial district for some residents to be comfortable. Further inland from the processing facilities is where Manta's working class residents who work in the fish processing facilities and on

the fish boats live (residents that used to live along the waterfront were relocated to make way for processing facilities).

These neighborhoods have a markedly different feel to the area across the dry river bed. While most of the streets are paved, many are in disrepair and cars are forced to swerve around huge potholes. Houses are generally in much worse condition and built out of less structurally sound building materials (see Image 14). Trash pickup is unreliable, aging sewage infrastructure means much of the waste water is dumped into the ocean untreated, and there is a lingering, unpleasant stench from the fish processing facilities. The area is also much more dangerous and I was encouraged to avoid it all together (though I did make a couple trips with people that lived there).

In sum, while some areas of Manta have benefited greatly from the arrival of the commercial fishing industry and the accompanying urban development, other parts of the city have received few benefits and continue to languish. As Middleton noted (1988) and I observed, there is a clear class division between the two parts of the city with little mixing. The fact that Manta's Port Authority appears to have more influence on city planning that the Municipal Council is certainly part of the explanation for this uneven development. In order to ensure that the development boom that Manta has been experiencing benefits more people in the city, it is important for city planners to do more to ensure that money for urban development is spread throughout the city and does not just go towards projects that enhance the productivity of the commercial tuna fishing industry.

Economic Growth

In addition to creating thousands of new job opportunities and promoting urban development (albeit unevenly), the fishing industry has transformed Manta into an economically powerful and significant city in Ecuador. As de la Fuente and Vélez (2003: 70-71) point out:

> The industrialization of fishing detonated a process that besides incorporating groups of organized workers – men and women – to the labor environment, strengthened the number and size of ships, stimulated the sale of accessories, fishing provisions and fuel, [and] gave work to the shops and improved transport. With the presence of the first factories, Manta started to imperceptibly distance itself from the other Manabitan cities. An economic cycle began to form that added value to primary products that, within time, would generate an internal flow of money circulation, in other words, an incipient own economy.

Manta is now the largest city in the Manabí province with the fastest rate of economic growth. The national economy has also benefited. As Ecuador works to encourage the growth of nontraditional exports and to reduce dependency on oil as its primary earner of foreign revenues, money generated by the tuna industry has been important for the government (Industria Conserva 2007). Tuna exports now constitute just under five percent of export earnings, a small amount compared to oil but not insignificant (Economist Intelligence Unit 2010).

An added benefit of Manta's commercial tuna fishing industry is that it has proven to be fairly resistant to economic crises since world demand for tuna has been steadily rising. When Ecuador experienced one of its worst financial crisis in 1999 (for more on the economic crisis see Jokisch & Pribilsky 2002), Manta, driven by the tuna industry, weathered the crisis relatively well. While hundreds of thousands of Ecuadorians were fleeing the country, others, mostly from within the Manabí province,

flocked to Manta in search of a job in the fishing industry. As one magazine noted in reference to the 1999 economic crisis, "While the rest of the country experiences the worst depression of the century, foreign capital continues to arrive in Manta and the future looks bright," (Ecuador Pesquero, n.d.).

While economic crises have yet to have any serious impact on Manta's economy, a decline in productivity of the tuna fishery could be devastating for the economy. Therefore, it is important that Manta does not fall into the same trap that Ecuador has fallen into at the national level by relying too heavily on one primary product for export. While the city of Manta is taking some steps to promote other sources of revenue earning (e.g. tourism) the commercial tuna fishing industry still drives the local economy.

Negative Impacts of Manta's Commercial Tuna Fishing Industry

Despite the aforementioned benefits that the commercial tuna fishing industry has brought to Manta, there are also new challenges and costs related to the industry. This section will analyze the following four negative impacts that have resulted: 1) Social and cultural impacts, 2) Workplace challenges, 3) Impacts on Manta's artisanal fishing community, and 4) Environmental impacts.

Social and Cultural Impacts

While new job opportunities in the fishing industry provide an important opportunity for Manta's residents to earn more cash, these jobs are often accompanied by difficult social and cultural changes. For example, while women employed in the fish processing facilities earn more money, many also struggle to deal with the extra work

burden since most are still expected to keep up their domestic duties such as cooking, cleaning, and raising children or looking after elderly family members. Camila Lopez, a 21 year old mother of two with a handicapped father, explained how she worked from 6am until 4pm cleaning fish and when she got home, exhausted from a long work day, she was still expected to cook dinner, clean the house, and look after her children and handicapped father. Since starting work in the fish processing facility, she has been suffering from chronic fatigue and persistent stomach pains because she never has enough food to eat. Nevertheless, she felt compelled to work at the fish processing facility in order to raise the extra cash needed to raise her children and help take care of her father.

Another woman, Elena Alvarez, a 20 year old with no children who worked in a different fish processing facility, also talked about the extra work burden since taking her new job a year ago. She explained that she worked from 7am until 5pm five days a week and was still expected to carry out all the domestic chores at home. She also spoke about struggling from constant exhaustion and suffering from stomach problems due to lack of food. While both women were struggling from the extra work burden they were not really complaining and gave the impression that were resigned to carry on, seemingly accepting the extra work as a necessity in order to earn the money they needed to survive (more on workplace conditions below).

In addition to challenges for women working in processing facilities, the hard work for men on the fishing boats and their long absences away from home is difficult for families. The schedule for men working on the commercial fishing boats usually includes two month long fishing trips at a time with only about a week at home between

trips. One woman, Maria Acosta, whose husband used to work on a tuna fishing boat, recounted how when he was working she would usually only see him for 25-30 days a year. These long absences from home strained many marriages and could be challenging for kids who grew up with little presence from their father.

A strong culture based around drinking has emerged when men are in Manta since drinking is forbidden when the boats are at sea. Maria, now part owner of a tuna fishing boat, explained to me how the departure of her boat had to be delayed a day because after she paid the crew their advance the day before the boat was scheduled to leave, they partied so hard and drank so much that they were "useless" the next day. A series of bars near the port complex is where most of the fishermen hang out in town and is the site of frequent bar fights. Long absences away from home and heavy drinking when men at home are a couple of the adverse social and cultural implications relating to the commercial tuna fishing industry in Manta.

Workplace Challenges

Despite the benefits that jobs in the fishing sector have brought to Manta, these jobs are also associated with a number of workplace afflictions. Generally speaking, life on the fishing boats for the men is tolerable. Juan Tórrez explained that the work is hard but efficient organization helped and the accommodations and food were decent enough. Despite some risk of injury that comes from working on a boat with heavy equipment, large nets, and ammonia (used to freeze the tuna fish), injuries are infrequent (though they do happen). Conversely, jobs in fish processing facilities present some more serious health threats.

An interview with Dr. Anita Véliz Lucia, who works at a health clinic in Los Esteros (where as many as 80 percent of the residents work in the tuna fishing industry), noted that the most common workplace afflictions for those working in fish processing facilities include increased rates of bronchitis and asthma, chronic fatigue, gastrointestinal problems, insomnia (especially for those who work the night shift), nerve damage, and chronic muscle pain. Bronchitis and nerve damage are common because workers, usually men, move back and forth regularly between extremely cold freezers, where tuna is stored, and the hot factory floor without adequate safety equipment to protect their lungs or skin. Dr. Lucia also explained that many employees suffer from increased rates of asthma and allergies due to the poor air quality in the fish processing facilities.

Women cleaning and packing tuna fish spend long days standing on concrete floors, performing repetitive tasks, with only a 30 minute lunch break. The short lunch break is considered inadequate by many workers since it is (or at least was) common in Manta (and most other parts of Ecuador) to take an hour or two for lunch (the most substantial meal of the day) so all family members can return home and eat together. Work in processing facilities has been linked to constant muscle pain, chronic fatigue, and general aches and discomfort for employees. Gastrointestinal are common too, especially for women, due to improper nutrition or lack of food intake (in part due to the loss of the opportunity to return home for a more substantial lunch with family). Dr. Lucia estimated that as many as 40 percent of women are malnourished and usually eat only one meal a day.

Two employees that work in fish processing facilities, Camila Lopez and Elena Alvarez, confirmed the workplace afflictions that Dr. Lucia described. Camila, whose job is to clean tuna fish, explained how workplace conditions were very hot, crowded, and generally uncomfortable. She described how swollen feet, sore muscles, stomach problems, and cuts from fish bones were a fact of life in the tuna fish processing facilities. Elena, who operated a machine that canned tuna, explained how her job was easier then cleaning fish, but that she still suffered from swollen feet, sore muscles, and stomach problems. Working in a facility that uses ammonia to keep fish frozen also presents some risk. While they are not common, there have been accidents that led people to breathe unsafe amounts of ammonia. These incidences usually lead to hospitalization but some have resulted in deaths. Overall, serious accidents are rare and most workplace afflictions are not life threatening. Nevertheless, working conditions in tuna fish processing facilities can pose significant long-term health risks and are responsible for causing significant discomfort for employees.

In addition to these workplace afflictions, the pay that workers in fish processing facilities receive is less than what it costs to live. Consequently, these new job opportunities are doing little to raise the standard of living for the majority of Manta's residents. The competitive nature of the global tuna fishing industry means that fish processing facilities generally only pay employees the required minimum wage. Ecuador's minimum wage, $264 a month as of January 2011, is still below the living wage (the estimated cost of an individual's basic necessities) of $350 a month in 2011 (La Hora 2010). Therefore, even though many men and women have a new job in the formal sector, they are still very poor and struggling to make ends meet.

Camila explained that not only does she only make minimum wage, but sometimes she is required to work overtime without extra compensation, a violation of Ecuador's labor laws. Also, while there is a law in Ecuador that requires companies to distribute 15 percent of yearly profits among employees, interviewees explained to me that tuna fish processing companies (as well as companies in other sectors) use legal loopholes to avoid having to distribute any money. The counter argument has been made that Ecuador's economy already has too much government control and fewer regulations and taxes would boost investment and promote job growth. The Heritage Foundation (2011) ranks Ecuador's economic freedom as "repressed" (the least free category), and argues that this is making it harder for the private sector to compete.

Impacts on Manta's Artisanal Fishing Community

As previously mentioned, Manta is a city with a long history of fishing that dates back thousands of years. While the artisanal fishing community has morphed over the years and begun to incorporate new technologies, it still has a strong presence in Manta with roughly 10,000 fishers working on almost 3,000 artisanal fishing boats (de la Fuente & Vélez 2003; DIGEIM 2004). Fish caught by the artisanal fishing fleet are generally not exported, but instead constitute much of the fish that is consumed within Ecuador. While the artisanal fishing industry is not nearly as economically profitable as the commercial fishing industry, it does employ thousands of people and comprises a very important aspect of the local economy. However, competition from the commercial fishing industry has been eroding the ability of artisanal fishers to sustain their traditional livelihood.

While artisanal fishers catch a variety of fish species, tuna has historically been one of the most prized fish for them since they are so valuable. During the 1950s and 60s, when Manta was slowly developing a commercial tuna fishing industry, it was the traditional fishing fleet that provided the tuna for fish processing facilities. However, when larger, more technologically advanced fishing boats began arriving in Manta in the 1970s, the increased competition was too much for the artisanal fishing boats to handle; tuna now makes up a very small portion of their catches. The increased competition from commercial fishing boats, in conjunction with declining tuna fish stocks, has meant that artisanal fishing boats now catch less valuable fish species. Thus, their already meager incomes have been shrinking even more.

With the expansion of the commercial fishing industry since the 1960s, the fish that the traditional fishers used to catch close to shore (i.e. within 15-20 miles) have now been almost completely depleted (many of these non-tuna fish are used for bait for commercial boats) and artisanal fishers are forced to fish farther out at sea (Palma 2004). Adding to the problem, pollution from fish processing facilities and Manta's inadequate wastewater treatment facilities (see Environmental Impacts below) has led to increased contamination of coastal waters which has also been driving fish stocks farther out to sea. As fish become harder to catch close to shore, artisanal fishers have been forced to modernize their fishing boats. For the last couple decades they have been replacing their small wind-powered wood-hulled boats with bigger boats with motors in order to access the fish. This means that they are now spending much more money buying and maintaining their boats and outfitting them for each fishing trip (Pers. Comm. A. Gonzales 2009).

Twenty years ago a fishing trip would take one to two days and cost about $50 for supplies that would yield $40 in profits per fisherman (there was also a lot of fishing that took place right from the shore which is impossible to do now) (Pers. Comm. A. Gonzales 2009). However, trips now take three to four days and increased costs for fuel, supplies, and boat and net maintenance means that profits have been steadily eroded; sometimes a trip may even lose money if the fishing is not good. Trips are also more dangerous now because the small boats are more vulnerable to storms and rough seas the farther they are from land. Longer trips with greater operational costs have been eroding the profits of artisanal fishers and contributing to their pauperization over the past several decades (Strobosch 1984).

With the declining profit margin for artisanal fishers, many have chosen to abandon their traditional methods of fishing and work on commercial tuna boats. Thus, while there are still thousands of artisanal fishers in and near Manta and it is unlikely that they will disappear in the near future, the number of artisanal fishers has been declining over the years. This decline means that many people formerly employed in the artisanal fishing industry, such as ship builders or fish vendors, have lost their jobs. Furthermore, as artisanal fishers are increasingly incorporated in the commercial fishing industry and become more integrated into capitalist markets, social relations between fishers are becoming strained and a way of life for thousands of Mantaneses is slowly being lost (Strobosch 1984).

Despite this negative prognosis, there are relatively simple ways to improve conditions for artisanal fishers. During an interview with Antonio Velásquez, a professor at Universidad Laica Eloy Alfaro De Manabi, Manta's university, he explained how

something as simple as a community freezer could help the artisanal fishers. This would give them the capability to store their catches if prices were unfairly low while they waited for the prices to rebound. He also noted how there was little organization and representation for artisanal fishers and that if they were better organized they would be more successful in gaining government support for projects like building a freezer or a dock. While Velásquez explained how he had approached the appropriate government agencies with various proposals to help the artisanal fishing community, he expressed frustration with the fact that they rarely funded his proposed projects and continued to provide little assistance for the artisanal fishing community.

Environmental Impacts

In addition to the above social impacts, Manta's tuna industry has caused significant environmental concerns. These impacts are divided into three categories: 1) Overfishing and declining fish sizes, 2) Bycatch and illegal fishing, and 3) Water and air pollution. These issues pose a threat to the long-term viability of Manta's commercial tuna fishing industry, the overall health and vitality of the ocean, and the health of Manta's residents.

Overfishing and Declining Fish Sizes

Overfishing and declining tuna sizes are an increasing concern throughout the Eastern Pacific Ocean (EPO), a fact that was confirmed by interviews that I conducted in Manta and by fisheries data compiled by the Inter-American Tropical Tuna Commission (the agency responsible for regulating the tuna fishery in the EPO). During interviews

with two men that work on fishing boats, Juan Tórrez and Manuel Guillen, both described how tuna are increasingly hard to find and that the size of fish has declined noticeably in the past decade. Juan added that in the past they would throw back small fish and only keep the larger ones; now they keep everything. Maria Acosta explained how in the past, her 100 ton boat would almost always return from a trip filled to capacity. Now she's happy if it returns 80 percent full and sometimes it comes back less than 50 percent full. The decline in fish is an increasing concern for fish processing facilities. D. Ivo Cuka, who works for Marbelize S.A., said in an interview for the magazine Industria Conserva (2007: 18), "Ecuador's tuna fleet is in a bad situation because of the shortage of tuna." Dña Isabel Andrada, from Tecopesca, added that, "the tuna industry, both the fishers and processors are suffering from low catches," (2007: 12).

Declining tuna catches have been a growing issue since the late 1990s and while efforts to reduce fishing can be unpopular, most people in the industry now recognize the importance of regulating tuna fishing. An important resolution (Resolution on the Capacity of the Tuna Fleet Operating in the Eastern Pacific Ocean, Resolution C-02-03) was passed in 2002 when the IATTC established a total vessel capacity of 158,000 cubic meters for all boats fishing in the EPO and prohibited the entry of new vessels or increased capacity of existing vessels (Federal Register 2010). Seasonal fishing bans have also been used since 2002 to limit fishing efforts. While the first ban in 2002 was for one month, as the problem of declining tuna stocks has becoming increasingly severe, the length of the ban has been extended. By 2010 the ban was 59 days and in 2011 the ban will be 73 days (King 2009). Due to limited dock space and in order to reduce disruption for fish processing facilities, boats choose to adhere to the ban during two

different times during the year (August-September or November-January). Only boats class four (182-272 ton capacity), five (273-363 ton capacity), and six (greater than 363 ton capacity) are required to follow the ban (ATUNEC 2009).

Despite problems that the ban has caused for the tuna fishing industry, strong support for the ban is evidence of how serious the shortage of tuna is for Manta's tuna industry. When the magazine Industria Conserva (2007) interviewed four representatives from different companies all agreed that the ban was a good idea. D. Rodrigo Aguado Valle, from Conservas Ideal, summed up the prevalent sentiment towards the ban: "Without doubt, the protection of the resource [tuna] requires the adoption of measures like the ban that we currently have in the Eastern Pacific Ocean which paralyzes all tuna fishing activities," (Industria Conserva 2007: 16). The president of the Ecuadorian Chamber of Tuna Processing Industries, Carlos Calero, added that, "a ban of two months means loses in every sense, but in the long run there will be many benefits," (ATUNEC 2009: 6). Both fishermen I interviewed, Juan and Manuel, agreed that it is important to have adequate fishing regulations and bans to ensure the long-term vitality of the tuna fishery even though it means they do not make any money fishing during the ban.

Fisheries data also suggests that tuna are increasingly scarce and smaller in size. However, the data has certain ambiguities since it is very difficult to effectively monitor tuna which travel 1000s of miles. Further complicating the issue of determining stock vitality are climatic and ocean conditions. In particular, the El Niño and La Niña climate pattern has been shown to impact tuna in the EPO. While this is not the place to thoroughly explore this issue (for more information see Lu et al. 2001; Miller 2007b) it is worth nothing that climatic conditions do have a noticeable impact on tuna stocks in the

EPO. Since the stock assessment for each of the three main species that Ecuador's fleet catches, yellowfin, bigeye, and skipjack is different, their current status is described individually below.

The most recent research by the IATTC suggests that yellowfin tuna are being exploited near the maximum sustained yield (MSY) and that the average weight of yellowfin tuna has been fairly consistent over the years (an indicator of stock stability). However, uncertainties about the level of stock recruitment mean it is possible that the current level of fishing is above MSY and there is mounting evidence that purse seining has had "moderate" impacts on spawning biomass (IATTC 2010). While the data are not conclusive, it appears yellowfin tuna are at best fully exploited (if not overexploited) and any increase in fishing effort could have negative consequence for the long-term stability of the fishery.

Skipjack tuna are currently considered to be "moderately exploited." Data suggests that the catch rates are at or slightly above MSY while the average weight and length of skipjack has been declining since 1985. While the IATTC notes that there is currently, "no management concern," the declining weight and size is a potential concern for the future as is the constantly increasing exploitation rate (IATTC 2010).

Bigeye tuna are the most vulnerable species and are considered endangered by the International Union for the Conservation of Nature (WWF 2007). Fishing efforts have significantly reduced the total biomass and average size of bigeye in the EPO. The greatest threat comes from the increased use of fish aggregating devises since 1993, which has led to significantly higher catch rates for juvenile bigeye (more on fish

aggregating devises below). Current catches are estimated to be 17 percent above MSY (IATTC 2010).

While Ecuador's tuna fleet does not bear all the responsibility for the threat to tuna stocks, since it has the largest fleet in the EPO it has a significant impact. Ecuador has been actively involved with the IATTC and supports management measures (like the ban) in part because the country has the most to lose if tuna stocks become depleted and can no longer support a viable commercial industry. I return to this issue and the future prospects for Ecuador's tuna fishery in the Conclusion chapter.

Bycatch and Illegal Fishing

In addition to concerns about declining tuna stocks, bycatch (the incidental catch of non-target species) is a serious concern in the tuna fishery. As discussed in Chapter IV, dolphin bycatch used to be a major concern in the EPO but efforts to reduce it have been very successful. Public concerns and greater enforcement has also reduced incidental catches of turtles, which are more often caught by longlines than purse seiners. As Juan explained, when too many dolphins or turtles are caught in the net the crew makes an extra effort to free them, sometimes even deploying swimmers to help. However, he added that sharks are still caught more often than they should be but enforcement over shark bycatch is less strict (though still technically illegal). Juan went on to say that sometimes, if an unacceptable amount of dolphins, turtles, or sharks are caught, instead of paying a steep fine, the boat captain will bribe the international observer on board (observers are required on all class six boats) since a bribe is cheaper than a fine.

While demand for dolphin safe tuna has altered fishing methods in a way which has drastically reduced dolphin mortalities, new fishing techniques are causing a different problem. Previously, fishing boats would search the ocean for tuna, often using dolphins as an indicator of where tuna are, since they tend to swim together. When a school of tuna/dolphins was located, nets would be set and both tuna and dolphins were caught. In attempt to reduce dolphin mortalities, boats are trying to avoid setting nets around tuna and dolphins and are now using fish aggregating devises (FADs) to help find tuna. Tuna tend to congregate around floating materials in the ocean, and while previously boats relied on natural floating objects (e.g. logs or floating seaweed), FADs are human-made objects that serve the same purpose. To try and make tuna fishing dolphin-safe, the use of FADs has been increasing yearly. In 1994, 1,899 FADs were deployed to catch tuna in the EPO (68.6 percent of all floating objects around which fishing took place); by 2009, 6,750 FADs were used (95.4 percent) (IATTC 2010). This increase in use of FADs has caused a significant increase in bycatch since tuna are not the only fish that congregate around FADs.

Of particular concern is the fact that FADs tend to attract juvenile and commercial undersized tunas which adversely affects long-term recruitment levels (Ababouch & Catarci 2007). There are also concerns about other types of bycatch such as sharks, turtles, and numerous other fish types. Approximately ten percent of catches made around FADs are comprised of bycatch as compared to 1-2 percent with the old method (though the bycatch was mostly dolphins) (WWF 2007). While the success of greatly reducing dolphin mortalities is significant, FADs are creating a new problem that needs to be addressed. The IATTC is considering limiting the number of FADs a vessel can

use but no regulations have been imposed yet (King 2009). In attempt to reduce the number of juvenile tunas caught, Ecuador, as of January 2009, requires all class six boats to install a juvenile excluder grid, which allows small fish to escape from purse seine nets (Ministerial Agreement 133) (tunaseiner.com February 26, 2009).

Finally, illegal fishing, especially within the marine reserve surrounding the Galápagos Islands, poses a threat to tuna and other fish species. While fishing within the reserve is illegal, a strong temptation exists to break the law since tuna fish are very abundant in the reserve. The government tries to monitor and patrol protected areas but they have limited resources to do so effectively. One effort that the government has made to try and reduce fishing in marine reserves has been to outfit all class six boats with monitoring chips. These chips relay the position of a fishing boat to a central location where it is monitored and possible to see if a boat illegally enters a marine reserve. However, as Juan and Manuel explained to me, while this is a good idea, smaller boats without chips can still fish illegally in the marine reserves with little chance of being caught. Furthermore, some boats have devised a way to manipulate the tracking chips so that it relays a faulty location to the monitoring agency.

Overfishing, bycatch, and illegal fishing remain a concern for Ecuador and the IATTC. While some steps have been taken to reduce fishing effort and more effectively monitor the fishery, it appears as if the current efforts are not substantial enough to ensure long-term stability. Ecuador, in conjunction with IATTC and other member countries, needs to continue to actively manage tuna stocks in the EPO in order to sustain its commercial tuna fishery and the thousands of people that rely on jobs in the industry.

Water and Air Pollution

While overfishing and bycatch present one type of environmental problem, pollution from fish processing facilities is seriously affecting the air quality of Manta and the water quality off the coast. Unfortunately, I was not able to take water or air samples to document this pollution. However, reports from people living in Manta and other studies documenting the environmental impacts of fish processing facilities (though not from Manta) suggest that the facilities are causing serious damage to the environment and adversely impacting the health of Manta's residents.

During interviews, when the topic of pollution coming from fish processing facilities was raised, the first thing everyone complained about was the foul odor. The neighborhoods where the processing facilities are located, Los Esteros and Tarqui, have a perceptible smell caused by the cooking and drying of fish and the storage and handling of waste products. The odor permeates the air and can cause nausea and persistent headaches (Pers. Comm. Dr. Lucia 2009). Additionally, exhaust and soot (laden with fine particulate matter) spews from fish processing facilities, many of which are operating 24 hours a day, and pollutes the air of the neighborhoods where processing facilities are located. Dr. Lucia explained that people, especially children, living near processing facilities are more likely to develop respiratory problems such as asthma, bronchitis, and allergies due to the poor air quality. Thus, there are health concerns, not just for people who work in processing facilities, but for many more people who happen to live near them. Air pollution from factories not only poses serious health risks for residents but it also threatens to undermine plans to develop a tourism industry since the pollution and smell are considerable deterrents for tourists.

In addition to air pollution, fish processing facilities dump large quantities of untreated waste water and solid waste directly into the ocean. A tremendous amount of fresh water is used to de-ice, thaw, cook and clean tuna as well as clean the processing plant and equipment. Most of the waste water generated from these processes is dumped into the ocean untreated because, as Antonio Gonzales explained, Manta's current water treatment system was not designed to handle so much water from fish processing facilities. This water contains fish blood, guts, and scales (only about 50 percent of a tuna fish is edible) as well as oil, grease, and chemicals that are used to clean and maintain equipment. When this water is dumped into the ocean it can alter PH levels and adds phosphates, nitrates, and other suspended solids to the water which can cause eutrophication and harm marine life (UNEP 2000). Largely due to the practices of Manta's fish processing facilities, the water off the coast of the Los Esteros and Tarqui neighborhoods is so contaminated that no one will swim in the ocean (though it was once a popular beach) and fish can no longer be caught from the shore.

While the water and air pollution from the factories is a problem affecting all of Manta, it particularly affects people living in Los Esteros and Tarqui since that is where the fish processing facilities are located. Ocean currents and a breakwater keep most of the polluted water away from the beach that Manta's middle and upper-class residents frequent and the smell does not travel as far as the commercial part of Manta. Not coincidentally, Manta's lower-class residents live in the more polluted part of town which raises important environmental justice issues.

Conclusion

The development of Manta's commercial tuna fishing and processing industry has transformed Manta from the sleepy, underdeveloped fishing village that Rhonda and Earle Brooks encountered in the 1960s into a relatively modern and economically significant city in Ecuador. The industry has also created thousands of badly needed jobs. These accomplishments notwithstanding, the tuna fishery has also created some serious challenges. Jobs in the industry have created new social challenges as well as health problems. Furthermore, water and air pollution and overfishing threaten the environment and the vitality of the artisanal fishing fleet.

The purpose of this chapter was to explain the positive and negative social and environmental impacts of Manta's commercial tuna fishing industry and not to try and decide whether the pros outweigh the cons or vice versa, which is not a straightforward task (nor a productive one since, as I demonstrate, the pros and cons are unevenly distributed). During interviews people often had a hard time themselves elucidating how they felt about the development of Manta's tuna industry. People would often explain that there job was hard and they were paid poorly but would quickly add that without the tuna industry they would be making even less money washing clothes. Despite challenges the fishing industry causes, the general consensus in Manta is that the tuna industry has been a tremendous blessing and created invaluable economic opportunities. Yet the challenges are not insignificant and threaten to undermine the industry in the future. Clearly there is no simple answer to the question of whether or not the development of Manta's commercial fishing industry is a good or a bad thing. However, framing it as a dichotomy (good *or* bad) is not useful since it ignores the fact that the

benefits are unevenly divided across space and demographics. The final chapter offers some concluding remarks and a look at the future for Manta and its tuna fishery.

CHAPTER VI

CONCLUSION:

DISCUSSION AND FUTURE DIRECTION FOR MANTA

In this concluding chapter I begin by revisiting my research questions and offer a succinct answer to each. I then reflect on what my results add to the literature on economic globalization and the impacts of neoliberal reforms in Latin America and Ecuador. Then, after considering the future of Manta's tuna industry and examining some of the challenges that it will likely encounter in the coming years, I end with a more comprehensive outlook for Manta.

Revisit Research Questions

The answer to my first research question (What were the local, national, and international factors that enabled Manta to become one of the most important locales for tuna fishing in the world?), is laid out in Chapter IV. Without recounting all the details of that chapter, I want to highlight a couple key points. First, there were numerous factors at various scales that combined to allow Manta to become an important center for tuna fishing. Thus, a geographic perspective that considers the interactions across multiple scales is critical. For example, while Manta's geographic location and local entrepreneurs were critical to the growth to the tuna fishery, it would be a mistake to ignore the role that national factors, such as tax incentives or efforts to diversify exports, played in the expansion. It would also be a mistake not to consider how the global reorganization of the tuna industry in the 1980s and 90s affected Manta or to ignore the

role of free trade agreements, perhaps the most important factor. Finally, it is critical to situate the growth of the tuna industry in the context of the dominant economic paradigm in Latin America during the 1980s and 90s, neoliberalism, which led countries to adopt policies, such as trade liberalization, which facilitated the expansion of Manta's tuna industry.

When considering the second question (What new opportunities and/or challenges has the commercial tuna fishing industry created for Manta's inhabitants? Who are the 'winners' and the 'losers'?), it is clear that there have been numerous opportunities *and* challenge from the tuna industry. While opportunities such as job creation, urban development, and economic growth have benefited some people in some parts of Manta, challenges such as workplace afflictions, negative impacts on the artisanal fishing community, and environmental problems are very serious. Considering who the 'winners' and 'losers' are is important when thinking about the benefits and challenges since some people clearly gain more than others. In Manta, the benefits have disproportionately benefited the middle and upper-class residents at the expense of the working-class. While the working-class has received modest benefits from urban development (though not nearly as great as the benefits received by the middle and upper-class), they have also been forced to deal with increased water and air pollution, an increase in work burden, and declining fish stocks for artisanal fishers. Furthermore, the working-class, despite being integrated into the formal sector, remains impoverished, while the upper-class reaps most of the economic benefits and increasingly isolates itself from the industrial sector of the city and working-class residents (e.g. with gated communities).

In answering the final research question (What, if any, are the environmental impacts of Manta's commercial tuna fishing industry?), I found evidence of very significant environmental impacts coming from fish processing facilities, as well as concerns about declining fish stocks. Air and water pollution threatens the environment and poses a health risk to Manta's inhabitants (especially the poorer residents that live close to the processing facilities). Stricter regulations (and enforcement) are needed to mitigate this pollution. With regard to overfishing and bycatch concerns, while some measures have been taken to address the issue (e.g. seasonal closures), it appears that more aggressive measures will be needed in the future to ensure the long-term stability of tuna stocks in the EPO. Since Ecuador is not the only country that fishes in the area, cooperation with the IATTC and member countries is critical. Again, as with the pollution, the burden of declining fish stocks disproportionately affects Manta's poorer artisanal fishers.

So, what is the general conclusion about the impacts of Manta's tuna industry? Do the benefits outweigh the costs or are the costs greater than any benefits? Unfortunately, this is a much more difficult question to answer than I anticipated. While the challenges and negative environmental impacts may seem like clear evidence that the costs have been greater than the advantages, the importance of the benefits cannot be underestimated, especially for a county that has suffered from decades of economic instability. Furthermore, the general consensus in Manta, even among those that have benefited the least, is that the tuna industry has been a huge benefit to the city and that the negative impacts are overshadowed by the positive ones. Despite the positive views that many of Manta's residents have towards the tuna industry, I do think that improvements

could be made that would allow the benefits to be more evenly distributed and minimize the negative impacts.

Contribution to the Literature

When considering what these results can add to the literature on economic globalization and the impacts of neoliberalism in Latin America it is useful to return to some of the arguments that were outlined in Chapter II. My results support arguments made by others (Cupples 2005; Babb 2005; Weeks 2000) that suggest neoliberal reforms in Latin America have increased the work burden for women. They also support the literature (Huber & Solt 2004; Green 1996) that reveals how neoliberal reforms may actually increase inequalities between the rich and poor which refutes the argument made by the WTO (2009). Finally, in accord with the literature on the environmental impacts of neoliberal reforms (Sawyer 2004; Gerlach 2003; Perreault 2005), there is ample evidence to suggest that the tuna industry has been detrimental to the environment.

However, my results also identify benefits from the expansion of the tuna industry which complicates the issue. Therefore, I agree with Dunn (2009b) when he points out that, trade, and more generally economic globalization, is not a dramatic good or evil. What seems to be the issue is a type of development that is only concerned with economic growth and ignores the social and environmental dimensions (Obrien & Leichenko 2003; Dunn 2009a). In the case of the tuna fishery, the city of Manta and the national government of Ecuador have prioritized economic growth above all other considerations which has led to considerable social and environmental impacts. Thus, I argue that these results support the argument that a more holistic development style that

gives more attention to social and environmental dimensions is critical to ensuring that any costs are minimized and the benefits are more evenly distributed.

Finally, I want to return to the three points I made in the first chapter about why this case study is important. The first point involved considering why Manta has been so successful and stable despite decades of economic, political, and social turbulence that has troubled most of Ecuador. While a complete answer to this question would consider why other parts of Ecuador have had so many troubles (which is beyond the scope of this thesis), it is worth noting a couple of factors that are different about Manta's situation. One factor, Manta's homogenous population, has meant few conflicts between different ethnic groups. Perhaps more importantly, as detailed in Chapter IV, various local, national, and international factors all combined in the 1980s and 90s to create the ideal conditions for the expansion of the tuna industry. This is a critical point to make since some development projects are conceived and implemented from international organizations or national agencies without local support. Thus, the presence of local entrepreneurs and a city that worked hard to develop the tuna industry from *within* was critical to its success. While the national and international factors were also important, I believe that strong local support, something which is lacking in many other development projects, was a key factor in enabling Manta to be so successful.

The second point I made was that this case study is important for explaining the global interconnectedness and mobility of certain industries. As the world becomes increasingly globalized, places of production are being relocated from places of consumption to wherever the goods can be made or processed cheapest. The tuna industry is a perfect example of this as it moved from the U.S. to Puerto Rico to Ecuador.

However, it is also slightly different since the raw material is harder (though not impossible) to move around the world than cotton or electronics parts, for example. Thus, the tuna industry is an example of a mobile industry but one that is also geographically bound to places where tuna can be found.

The final point I made was that Ecuador's tuna industry is a poorly studied sector of Ecuador's economy worth of more research. Thus, this research adds to the literature that exists about Ecuador's other natural resource extractive industries. While the social and environmental impacts from tuna fishing are not as severe as the impacts of petroleum extraction for example, these findings do reiterate the point that relying on primary products to generate export earnings can create significant environmental problems. As tuna now makes up an important part of Ecuador's export revenues, a better understanding of its social and environmental impacts is important.

As this case study illustrates, passing a judgment on the impacts of economic globalization and neoliberalism is not always easy (or productive). After a close examination it became evident that rarely is it possible to say that economic globalization is 'bad' or 'good.' The reality is that there are benefits and challenges to it and determining whether or not the costs outweigh the benefits or vice versa is very difficult. What is clear is that development projects that only consider economic development and do not adequately consider the social or environmental dimensions will create challenges and that the burden of these challenges are likely to be borne by marginalized groups of society. Thus, a more holistic development model is necessary to ensure that benefits are distributed more evenly and costs are minimized.

Future Challenges for Manta's Tuna Industry

Given the importance of the tuna fishery for Manta (remember that between 70 and 80 percent of Manta's residents rely either directly or indirectly on it), it is important to consider the future direction of the industry. I have identified three main challenges (though other ones exist too) that have potential to disrupt the long-term viability of Manta's tuna fishery. First, and perhaps most obvious, the vitality of the tuna stocks is critical. Yet, anecdotal reports and scientific data suggest that there are reasons to be concerned. In 2010, low catch rates led fish processing companies in Manta to lay off hundreds of employees, a troubling sign for the thousands of employees who work in the industry (Morello 2010). However, there are also reasons to be optimistic. Ecuador and the IATTC recognize the issue of declining tuna populations and are taking steps to address the problem (though perhaps not fast enough). If proactive measures are taken to address the bycatch concerns, illegal fishing violations, and declining tuna stocks there is no reason why the EPO tuna fishery cannot be viable for many decades to come. However, these are big 'ifs' and there is reason to be concerned that Ecuador may not have the appropriate resources to effectively monitor and regulate the fishery.

The second concern is the issue of maintaining the market advantage that Ecuador has secured to the U.S. and EU with free trade agreements (ATPDEA and GSP). Both of these agreements must be continually renewed and can expire if the countries do not come to a joint agreement on renewing them. Currently, the GSP is set to expire in 2014, though it will likely be renewed unless relations between Ecuador and the EU change significantly between now and then. Of more concern is the continuation of the ATPDEA. Since 2006 the APTDEA has been renewed regularly, but never for more than

one year. The U.S. seems more interested in pursuing their Free Trade Area of the Americas agenda or, as that seems less likely to succeed, trade agreements with individual countries (as it has done with Peru and Columbia). More recently, U.S. and Ecuador relations have become increasingly strained over issues such as money laundering, President Correa's left-leaning tendencies, the treatment of U.S. companies operating in Ecuador, and the failure to renew a contract for a U.S. military base in Ecuador. These issues have prohibited the two countries from agreeing on a long-term extension of the ATPDEA and there is some doubt about how many more times the agreement will be renewed. The ATPDEA is currently expired (as of February 12, 2011) which means that tuna in pouches exported to the U.S. are being taxed at 30 percent. There is a bill being considered by the U.S. Congress (S. 308) which would extend the ATPDEA until June 30, 2012, but a timeframe for a decision on the bill is uncertain (GovTrack 2011). Some exporters are deferring shipments to the U.S. to avoid having to pay the taxes (Ordoñez 2011).

The third challenge (related to the second issue) is that if it becomes too expensive for fish processing facilities to operate in Ecuador, or too expensive to export the finished product to the U.S. or EU, companies could relocate to a more favorable location in another part of the world. As demonstrated in Chapter IV, the tuna industry is mobile and there is no reason to believe that processing facilities would not leave Ecuador for more favorable conditions elsewhere. Asia is one region where tuna processing could become even more popular. While tuna from Asia is currently taxed 24 percent in the EU, there are talks about extending the GSP there, which would reduce or eliminate that tax. According to Roberto Aguirre, the president of Ecuador's National

Chamber of Fisheries, this could devastate Ecuador's tuna fishery since tuna from Asia is already cheaper to produce due to lower labor costs and fewer conservation measures. If this happens, Aguirre says it will put Ecuador's tuna industry in, "circumstances of danger never seen before," (tunaseiners.com April 26, 2009). Meanwhile, heavy subsidies for the Thai fishery are already affecting Ecuador's tuna exports to the U.S. In 2002, 24 percent of tuna consumed in the U.S. came from Ecuador while 38 percent came from Thailand. By 2008, only seven percent of the tuna consumed in the U.S. came from Ecuador (a 71 percent decline) while 46 percent came from Thailand (a 21 percent increase) (Bowen 2009).

Another factor that could prompt fish processing facilities to relocate is if Ecuador began to enforce stricter environmental regulations for pollution from processing facilities or continued to pass legislation that increased the minimum wage or granted new worker protections and rights. In the internationally competitive tuna industry this could prompt processing facilities to relocate to countries such as Thailand, the Philippines, or Peru when labor costs are lower and environmental regulations are less strict, but there is still ready access to the raw product. In fact Peru has actively been trying to lure tuna fishing vessels from Ecuador to its ports with tax incentives and fuel subsidies (Hernández et al. 2007). This issue and the mobility of the industry presents challenges to regulators in Ecuador because even if they try to enforce more environmental regulations or protections for workers they have to consider that if laws become too strict companies may leave. Given the competitive nature of the tuna industry, transnational organizations or agreements could be beneficial to Ecuador and Peru, as well as other tuna fishing countries. For example, the U.S. and Mexico have the

United States – Mexico Fisheries Cooperation Program to manage fisheries in the Gulf of Mexico (see Cialino 2010 for additional examples of transnational organizing around fisheries). For now however, the future of the tuna industry in Manta is far from secure and there are numerous challenges that it will have to overcome to remain a viable part of Ecuador's economy.

Manta's Future Direction

When considering the future direction of Manta it is important to note that the commercial tuna fishing industry is already operating at maximum capacity since tuna stocks are fully-exploited (if not overexploited). Thus, the steady growth and expansion of the industry and associated benefits for the city will not continue to increase as they did for the past 20 years. However, notwithstanding the challenges outline above, Manta can continue to benefit from the economic activity associated with the tuna industry. In order to make sure that the benefits are more evenly distributed and do not only go to Manta's upper class, it is imperative that city government takes a more active role in ensuring that all of Manta benefits. Supporting development projects that help the artisanal fishers and the less-developed parts of Manta should be encouraged. Additionally, local and national government agencies could expand efforts to ensure that workplace conditions are safe and comfortable for employees and that compensation is adequate.

The environmental problems posed by the fishing processing facilities also need to be addressed. To date, municipal efforts to stop pollution have been limited. While the Ministry of the Environment has taken samples of discharges from fish processing

facilities in Los Esteros, no sanctions have been imposed and the pollution continues unabated (perhaps due to fears that sanctions could encourage companies to leave Ecuador) (tunaseiners.com April 18, 2009a). However, there is reason to believe that Ecuador is trying to become more environmentally responsible as evidenced by its 2008 constitution which includes new protections for the environment. Yet, problems with enforcement persist and more effective enforcement of Ecuador's environmental laws will be necessary to protect Manta's environment. Improving the water and air quality in Manta will be especially important as the city tries to continue to develop and expand its tourism industry.

While the tuna industry continues to be the main driver of Manta's economy, some steps are being taken to diversify the economy. The city is actively promoting itself as a tourism destination for Ecuadorians and international travelers. Manta now hosts an international theater festival, kite surfing competitions, and its port accommodates cruise ships. The city is also promoting itself as a transport center for boat and air cargo from South America to Asia (especially China). The modern port facilities and airport (Ecuador's nicest) are used to support these efforts (tunaseiners.com April 18, 2009b). Finally, the national government has chosen Manta at the site for a new petrochemical complex and oil refinery. The construction and operation of the facilities, which will cost over $10 billion, will generate thousands of jobs and it has been estimated that it will double the population of Manta in 20 years (certainly a topic worthy of further research) (Ortiz 2010).

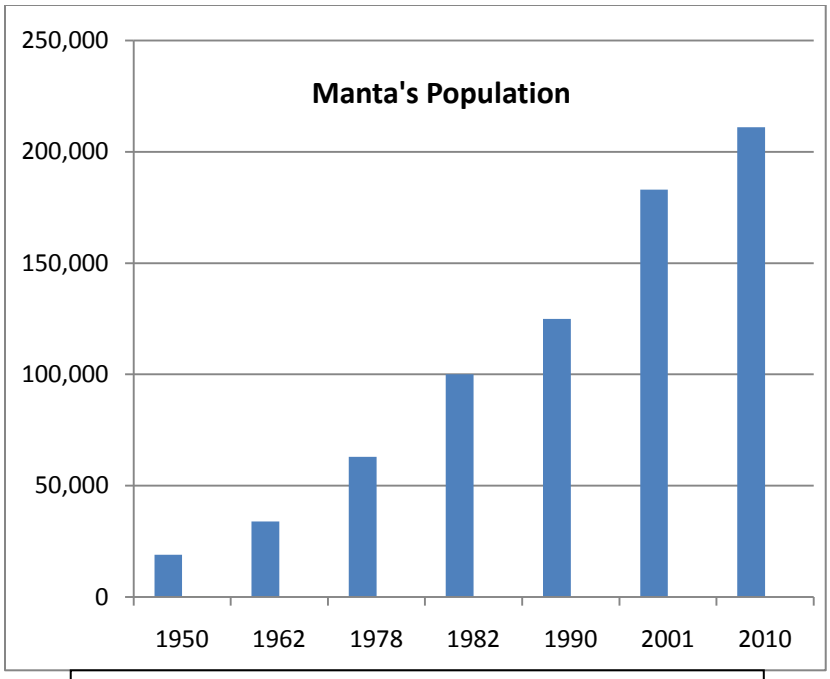
To conclude, Manta and its resident have both benefited and suffered for the growth of the tuna industry. The fact that it has been so difficult to pass an overall

judgment is appropriate since issues related to economic globalization are fraught with debate and contrasting opinions. What is clear is that if Manta wishes to continue to be one of the world's most important locations for tuna fishing some things are going to need to change. Whether or not the city and country can address rising concerns of social and environmental problems remains to be seen. Given the importance of the tuna fishery to the majority of Manta's residents, one can only hope that the city manages to rectify its shortcoming and maintain a socially and environmentally responsible fishery for many years to come.

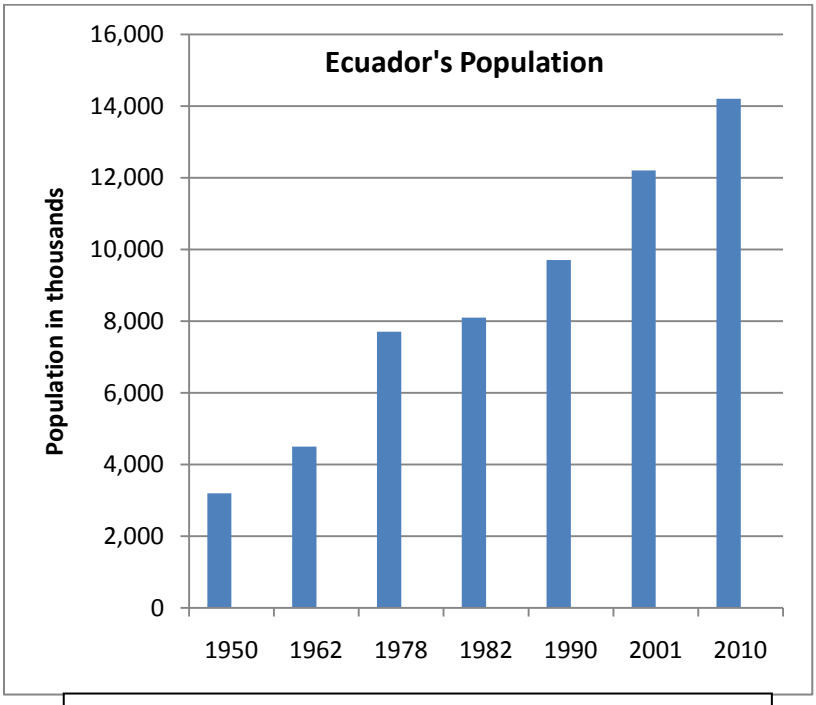
APPENDIX A

FIGURES

Figure 1: Ecuador's four geographic regions, the Galápagos, the Coastal Lowlands, the Andean Highlands, and the Amazon Basin, and the location of Manta. (Fitzgerald 2010)



1990-2010: 69% increase in Manta's population



1990-2010: 46% increase in Ecuador's population

Figure 2: Manta's population growth rate was above average for Ecuador between 1990 and 2010. (Data for charts from Instituto Nacional de Estadistica y Censos)

Figure 3: Manta's official flag, notice the fishing boat. (Gobierno Municipal del Canton Manta 2010)

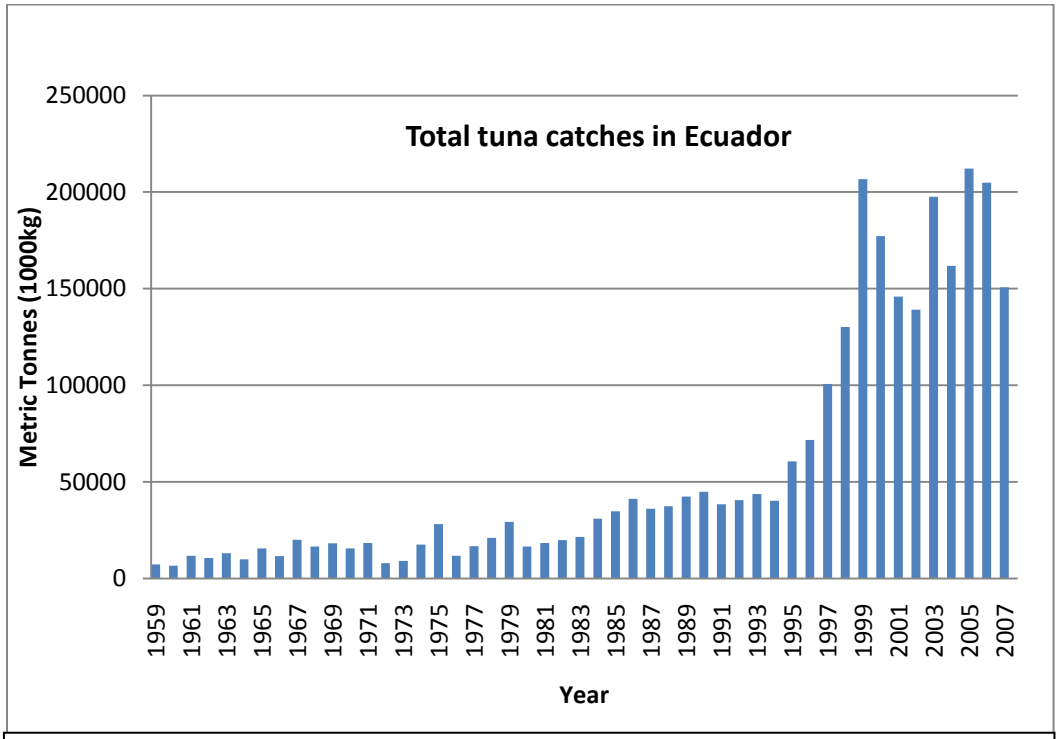


Figure 4: Total tuna catches in Ecuador between 1959 and 2007. Note there is some variability in tuna catches depending on factors such as ocean conditions and the health of the tuna fishery. (Data from FAO - Fisheries and Aquaculture Information and Statistics Service)

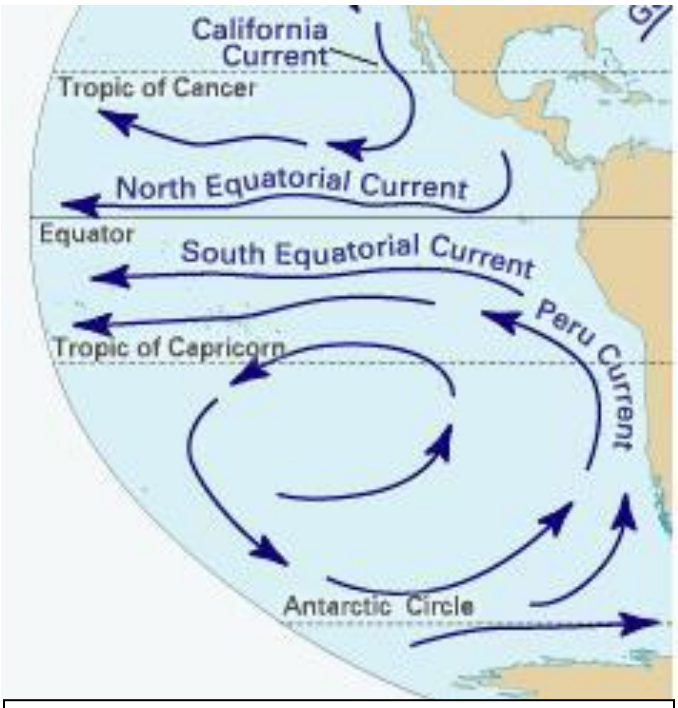


Figure 5: The Peru Current and Equatorial current meet off the coast of Ecuador and Peru and flow west causing upwelling which creates the ideal habitat for tuna. (www.britannica.com)

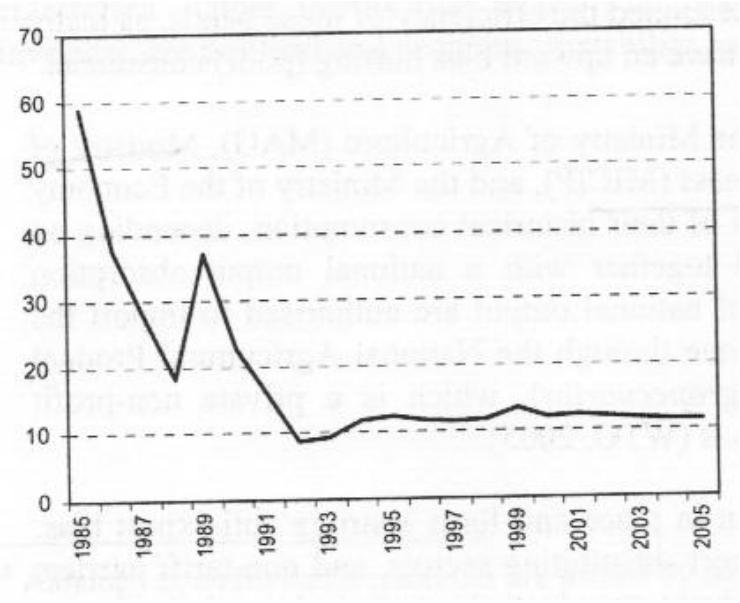


Figure 6: Ecuador's average import tariff rate: 1985-2005. (Duran et al. 2008: 10)

Figure 7: City map of Manta
Red Circle: The commercial area of Manta. Also where the port complex is located
Orange Square: Playa el Murcielago, Manta's up-scale beach, popular with tourists
Blue Line: River bed that separates the two areas of Manta
Green Circle: The working-class neighborhoods of Los Esteros and Tarqui
Purple Square: Beach in Tarqui, used by artisanal fishers (note the images of jet skiers and people on the beach even though no one uses the beach for recreational activities)
Black Boxes: Location of some of the largest fish processing facilities
(Map purchased in Manta; made by the Municipal Government, n.d.)

Figure 8: Satellite view of Manta, same key as in Figure 7. (Bing maps 2011)

APPENDIX B

IMAGES

Image 1: Statue of a Yellowfin tuna and a can of tuna with the words, "Manta capital del atún," (Manta the tuna capital) located in a roundabout in downtown Manta. (Author's photo)

Image 2: Monument to Manta's fishermen located in the Tarqui neighborhood. (Author's photo)

Image 3: Mosaic of a tuna boat located under a bridge in Tarqui. (Author's photo)

Image 4: Manta's port facilities with an example of a typical commercial tuna fishing boat. (www.wn.com/manta)

Image 5: Manta's Playa el Murcielago full of tourists and beach chairs with awnings for rent. (Google Earth)

Image 6: Restaurants and tourist shops line Manta's Playa el Murcielago. (Google Earth)

Image 7: Sign recognizing Manta's Port Authority which provided funding for the development along the beach seen in Image 6. (Google Earth)

Image 8: New housing development in Manta for middle/upper class residents. (www.ecuadorliving.com)

Image 9: The beach in Tarqui where artisanal fishers unload and sell their fish. This beach is not used at all for recreational purposes due to water and beach pollution and litter. (Author's photo)

Image 10: Tarqui's beach. Fish scrapes litter the beach. (Author's photo)

Image 11: Unloading one of Manta's traditional fishing boats at the Tarqui beach. Notice the lack of a dock.
(Author's photo)

Image 12: New fish cleaning and vending stations built by Manta's government in attempt to help clean up Tarqui's beach. Though hard to notice in this picture, the sinks are already seriously rusted before they have even been used due to cheap building materials.
(Author's photo)

Image 13: Old fish vending booths that the stands in Image 12 were built to replace. The grey concrete building in the background is a fish processing facility. (Author's photo)

Image 14: Typical housing for Manta's working class residents in Tarqui or Los Esteros. Contrast this image with Image 8. (www.rampant-books.com)

APPENDIX C

INTERVIEWS

Maria Acosta, part owner of tuna fishing boat, August 21, 2009

Elena Alvarez, employee at fish processing facility, September 7, 2009

Juan Castro, Manta school teacher, August 17, 2009

Anita Cruz, Manta school teacher, August 24, 2009

Alberto Gonzales, journalist and teacher, September 4, 2009

Simona Herrera, employee at Manta's Port Authority, September 10, 2009

Camilla Lopez, employee at fish processing facility, September 7, 2009

Alfredo Moreno, employee on a commercial tuna boat, September 2, 2009

Guillermo Ramirez, employee for fish processing company, August 28, 2009

Enrique Romero, employee on a commercial tuna boat, September 2, 2009

Rodriguez Vargas, government employee, August 28, 2009

Antonio Velásquez, professor at Universidad Laica Eloy Alfaro, September 4, 2009

Dr. Anita Véliz Lucia, doctor working at a Los Esteros health clinic, September 7, 2009

REFERENCES CITED

Ababouch, L., & Catarci, C. (2007). Global production and marketing of canned tuna. Joint meeting of tuna RFMOs. Kobe, Japan. Retrieved May 15, 2009, from http://www.tuna-org.org/Documents/other/Kobe%20Report%20English-Appendices.pdf

Anda-Montañez, J., Amador-Buenrostro, A., Martínez-Aguilar, S., & Muhlia-Almazán, A. (2004). Spatial analysis of yellowfin tuna (*Thunnus albacares)* catch rate and its relation to El Niño and La Niña events in the Eastern Tropical Pacific. *Deep-Sea Research II, 51*, 575-586.

ATUNEC. (2009). *Revista: Asociación de Atuneros del Ecuador, 1*(1), Junio.

Babb, S. (2005). The social consequences of structural adjustment: Recent evidence and current debates. *Annual Review of Sociology, 31*, 199-222.

Barber, R. T, & Kogelschatz, J. E. (1990). Nutrients and productivity during the 1982/83 El Niño. In P. W. Glynn (Ed.), *Global ecological consequences of the 1982-83 El Niño-Southern Oscillation* (pp. 21-53). New York: Elsevier Science Publishers.

Barclay, K. (2010). Impacts of tuna industries on coastal communities in Pacific Island countries. *Marine Policy, 34*(3), 406-413.

Barnes, T. (2000). Situated knowledge. In R.J. Johnson, D. Gregory, G. Pratt, & M.Watts (Eds.), *The dictionary of human geography* (pp. 742-743). Oxford: Blackwell Publishing.

Bebbington, A. (2000). Reencountering development: Livelihood transitions and place transformation in the Andes. *Annals of the Association of American Geographers, 90*(3), 495-520.

Bebbington, A. (2004). Movements and modernizations, markets and municipalities: Indigenous federations in rural Ecuador. In R. Peet & M. Watts (Eds.), *Liberation ecologies: Environment, development, and social movements* (2nd ed.) (pp. 394-421). London: Routledge.

Bhagwati, J. (2004). *In defense of globalization.* New York: Oxford University Press.

Bonanno, A., & Constance, D. (1996). *Caught in the net: The global tuna industry, environmentalism, & the state.* Kansas: University Press of Kansas.

Bonanno, A., & Constance, D. (1998). Global agri-food sector and the case of the tuna industry: Global regulation and perspective for development. In P. K. Nandi & S. M. Shahidullah (Eds.), *Globalization and the evolving world society* (pp. 10-126). The Netherlands: Brill.

Bowen, I. P. (2009). The impact of fisheries subsidies on tuna sustainability and trade in Ecuador. A report commissioned by the United Nations Environment Programme. Guayaquil: Ecuador.

Bradshaw, M., & Stratford, E. (2005). Qualitative research design and rigour. In I. Hay (Ed.), *Qualitative research methods in human geography* (2nd ed.) (pp. 67-76). New York: Oxford University Press.

Brannen, J. (2004). Working qualitatively and quantitatively. In C. Seale, G. Gobo, J. Gubrium, & D. Silverman (Eds.), *Qualitative research practice* (pp. 312-324). London: Sage Publications.

Brooks, R., & Brooks, E. (1967). *The barrios of Manta.* New York: Signet Books.

Bury, J. (2005). Mining mountains: neoliberalism, land tenure, livelihoods, and the new Peruvian mining industry in Cajamarca. *Environment and Planning A, 37,* 221-239.

Caviedes, C. (2001). *El Niño in history.* Gainesville, FL: University Press of Florida.

Cialino, K. (2010). *International agreements concerning living marine resources of interest to NOAA fisheries*. Maryland: Office of International Affairs.

Corey, R., & Babula, R. (2002). Fact sheet: Update on the likely impacts of U.S. tariff modification for tuna imported from ATPA beneficiaries. A report by the U.S. International Trade Commission.

Cupples, J. (2005). Love and money in an age of neoliberalism: Gender, work, and single motherhood in postrevolutionary Nicaragua. *Environment and Planning A, 37,* 305-322.

de Genna, L. F. (2001, April 20). 18,000 Mujeres en la actividad. *El Mercurio.*

de la Fuente, R. (2007). *Manta ayer y hoy.* Cuenca, Ecuador: Imprenta Monslave Moreno.

de la Fuente, R., & Vélez, A.T.A. (2003). *Manta, el sueño de un puerto*. Manta, Ecuador: Trama Ediciones.

Dicken, P. (2004). Geographers and 'globalization': (yet) another missed boat? *Transactions of the Institute of British Geographers, 29,* 5-26.

DIGEIM: Dirección general de intereses marítimos de la armada del Ecuador. (2004). *Ecuador y los interés marítimos* (2nd ed.). Quito, Ecuador.

Dowling, R. (2005). Power, subjectivity, and ethics in qualitative research. In I. Hay (Ed.), *Qualitative research methods in human geography* (2nd ed.) (pp. 19-29). New York: Oxford University Press.

Dunn, B. (2009a). Neither free trade nor protectionism but international socialism: contesting the conservative antimonies of trade theory. *Marxist Interventions, 1*, 23-45.

Dunn, B. (2009b). *Global political economy: A Marxist critique.* London: Pluto Press.

Dunn, K. (2005). Interviewing. In I. Hay (Ed.), *Qualitative research methods in human geography* (2nd ed.) (pp. 79-105). New York: Oxford University Press.

Duran, J., Mulder, N., & Ruiz, M. (2008). Facilitating trade and structural adjustment in Ecuador: Experiences in non-member countries. OECD Trade Policy Working Papers, No. 67.

Economist Intelligence Unit. (2010). Ecuador. Retrieved January 13, 2011, from http://country.eiu.com/Ecuador

Ecuador pesquero. (n.d.) La Pesca es mi vida. Manta, Ecuador.

El Mercurio. (2001, March 26).

Encyclopedia Britannica. (2010). Peru Current. Retrieved May 1, 2010, from http://www.britannica.com/EBchecked/topic/453262/Peru-Current

European Commission. (2010). Delegation of the European Commission to Colombia and Ecuador. Retrieved March 19, 2010, from http://www.delcol.ec.europa.eu/en/eu_and_la/economic_relations_spg.htm

Federal Register, The. (2010). Vessel capacity limit in the purse seine fishery in the Eastern Pacific Ocean. Retrieved January 18, 2011, from http://federalregister.gov/a/2010-33228

Fitzgerald, P. (2010). Ecuador regions map. Retrieved May 31, 2010, from http://wikitravel.org/upload/shared/7/7f/Ecuador_regions_map.png

Flick, U. (2004). Design and process in qualitative research. In U. Flick, E. V. Kardorff, & I. Steinke (Eds.), *A companion to qualitative research* (pp. 146-152). London: Sage Publications.

Gerlach, A. (2003). *Indians, oil, and politics: A recent history of Ecuador.* Wilmington, DE: Scholarly Resources Inc.

Gobierno Municipal del Canton Manta (2010). Información municipal de Manta. Retrieved December 14, 2010, from http://www.manta.gov.ec/

GovTrack. (2011). S. 308. Retrieved February 22, 2011, from http://www.govtrack.us/congress/bill.xpd?bill=s112-308

Green, D. (1996). Latin America: neoliberal failure and the search for alternatives. *Third World Quarterly, 17*(1), 109-122.

Green, D. (2003). *Silent revolution: The rise and crisis of market economics in Latin America.* New York: Monthly Review Press.

Gwynne, R., & Kay, C. (2000). Views from the periphery: futures of neoliberalism in Latin America. *Third World Quarterly, 21*(1), 141-156.

Haig-Brown, A., & Warren, B. (2002). Who gets the market? *Pacific Fishing, 23*(8), 24-26.

Hanratty, D. M. (Ed.) (1989). *Ecuador: A country study*. Washington: GPO for the Library of Congress.

Harris, R. L. (2000). The effects of globalization and neoliberalism in Latin America at the beginning of the millennium. *Journal of Developing Societies*, *16*(1), 139-162.

Harris, R. L., & Seid, M. J. (2000). Critical perspectives on globalization and neoliberalism in the developing countries. *Journal of Developing Societies, 16*(1), 1-26.

Harvey, D. (2005). *A brief history of neoliberalism.* Oxford: Oxford University Press.

Heritage Foundation, The. (2011). 2011 index of economic freedom: Ecuador. Retrieved February 22, 2011, from http://www.heritage.org/index/country/ecuador

Hernández, I., Cely, N., González, F., Muñoz, E., & Prieto, I. (2007). The discovery of new export products in Ecuador. A report prepared by Stratega Business Development Services. Retrieved February 1, 2010, from http://www.iadb.org/res/laresnetwork/projects/pr289finaldraft.pdf.

Huber, E., & Solt, F. (2004). Successes and failures of neoliberalism. *Latin America Research Review, 39*(3), 150-164.

IATTC. (2010). Fishery status report no. 8: Tunas and billfish in the Eastern Pacific Ocean in 2009. California. Retrieved January 4, 2011, from http://www.iattc.org/

Industria Conserva. (2007). Asociación nacional de fabricantes de conservas de pescados y mariscoc, No. 66, Junio.

Jackiewicz, E. L., & Quiquivix, L. (2008). Eras and errors: A historical and geographical overview of Latin America's economic and political development. In E. L. Jackiewicz & F. J. Bosco (Eds.), *Placing Latin America: Contemporary themes in human geography* (pp. 17-30). New York: Rowman & Littlefield Publishers, Inc.

Jessop, B. (2002). Liberalism, neoliberalism, and urban governance: A state-theoretical perspective. *Antipode, 34*(3), 452-472.

Jokisch, B., & Priblsky, J. (2002). The panic to leave: Economic crisis and the "new migration" from Ecuador. *International Migration, 40*(4), 75-101.

Kay, C. (2006). Rural poverty and development strategies in Latin America. *Journal of Agrarian Change, 6*(4), 455-508.

Kearns, R. A. (2005). Knowing seeing? Undertaking observational research. In I. Hay (Ed.), *Qualitative research methods in human geography* (2nd ed.) (pp. 192-206). New York: Oxford University Press.

Keohane, R. O., & Nye Jr., J. S. (2000). Globalization: What's new? What's not? (and so what?). *Foreign Policy, 118*, 104-119.

King, M. D. (Ed.) (2009). *International agreements concerning living marine resources of interest to NOAA fisheries*. Maryland: Office of International Affairs.

Klak, T. (2008). Neoliberal exports and regional vulnerability: Overview and critical assessment. In E. L. Jackiewicz & F. J. Bosco (Eds.), *Placing Latin America: Contemporary themes in human geography* (pp.31-50). New York: Rowman & Littlefield Publishers, Inc.

Kohl, B., & Farthing, L. C. (2006). *Impasse in Bolivia: Neoliberal hegemony and popular resistance.* New York: ZED Books.

Korovkin, T. (2003). Cut-flower exports, female labor, and community participation in highland Ecuador. *Latin America Perspectives, 30*, 18-42.

La Hora. (2010, December 26). Empresarios rechazan el aumento salarial.

Larrea, C. (2006). Neoliberal policies and social development in Latin America: The case of Ecuador. Paper presented at the 2006 Congress of Social Sciences and Humanities, York University, June 2. Retrieved May 23, 2009, from http://www.uasb.edu.ec/UserFiles/File/pdfs/DOCENTES/CARLOS%20LARREA/LarreaDolarization2006CERLAC.pdf

Laurell, A. C. (2000). Structural adjustment and the globalization of social policy in Latin America. *International Sociology, 15*(2), 306-325.

Lawson, V. (1995). The political difference: Examining the quantitative/qualitative dualism in post-structuralist feminist research. *Professional Geographer, 47*(1), 449-457.

Lind, A. (2002). Making feminist sense of neoliberalism: The institutionalization of women's struggles for survival in Ecuador and Bolivia. *Journal of Developing Societies, 18,* 228-258.

Lu, H., Lee, K., Lin. H., & Liao, C. (2001). Spatio-temporal distribution of yellowfin tuna *Thunnus albacores* and bigeye tuna *Thunnas obesus* in the Tropical Pacific Ocean in relation to large-scale temperature fluctuation during ENSO episodes. *Fisheries Science, 67,* 1046-1052.

Manufacturing.net. (2010). StarKist begins phase one of layoffs. Retrieved January 13, 2011, from http://www.manufacturing.net/

Mack, N., Woodsong, C., MacQueen, K. M., Guest, G., & Namey, E. (2005). *Qualitative research methods: A data collector's field Guide.* North Carolina: Family Health International.

Massey, D. (2005). *For space.* Los Angeles: Sage Publications

McDowell, L. (1992). Doing gender: feminism, feminists and research methods in human geography. *Transactions of the institute of British Geographers, 17,* 339-416.

McKee, A. (2003). *Textual analysis: A beginner's guide.* London: Sage Publications.

Middleton, D. R. (1974). Neighborhood and city in coastal Ecuador. *Urban Anthropology, 3*(2), 184-199.

Middleton, D. R. (1977). Changing economies in an Ecuadorian maritime community. In M. E. Smith (Ed.), *Those who live from the sea: A study in maritime anthropology* (pp. 111-124). New York: West Publishing Co.

Middleton, D. R. (1978). The growth of a city: Urban, regional, and national interaction in Ecuador. *Urban Anthropology, 5*(2), 125-141.

Middleton, D. R. (1979). Migration and urbanization in Ecuador: A view from the coast. *Urban Anthropology, 8*(3/4), 313-332.

Middleton, D. R. (1988). Development and multiple use: conflict on an Ecuadorian beach. *Urban Anthology, 17*(4), 351-364.

Miller, K. (2007a). Climate variability and tropical tuna: Management challenges for highly migratory fish stocks. *Marine Policy, 31,* 56-70.

Miller, S. (2007b). *An environmental history of Latin America.* New York: Cambridge University Press.

Mittelman, J. (2001). Mapping globalisation. *Singapore Journal of Tropical Geography, 22*(3), 212-218.

Morello, C. (2010, June 23). Ecuador-tuna companies in trouble, poor fishing. Retrieved January 14, 2011, from http://tunaseiners.com/

Morello, C. (2011, January 3). Ecuador-decline in tuna landing due to 'La Niña.' Retrieved January 14, 2011, from http://tunaseiners.com/

Murray, W. (2006). *Geographies of globalization.* New York: Routledge.

Nef, J., & Robles, W. (2000). Globalization, neoliberalism, and the state of underdevelopment in the new periphery. *Journal of Developing Societies, 16*(1), 27-48.

Novy, J. W. (n.d.). Incentive measures for conservation of biodiversity and sustainability: A case study of the Galápagos Islands. A report prepared by the UNEP. Retrieved May 1, 2010, from http://www.cbd.int/doc/case-studies/inc/cs-inc-ec-galapagos-en.pdf

O'Brien, K. L., & Leichenko, R. M. (2003). Winners and losers in the context of global change. *Annals of the Association of American Geographers, 93*(1), 89-103.

Office of the United States Trade Representative. (2005). First report to Congress on the operation of the Andean Trade Preference Act as amended. Washington D.C.

Office of the United States Trade Representative. (2009). Fourth report to Congress on the operation of the Andean Trade Preference Act as amended. Washington D.C.

Ordoñez, F. (2011, February 14). ATPDEA: Ecuadorian exporters fear market loss. Retrieved February 22, 2011, from http://www.ecuadortimes.net

Ortiz, G. (2010). Manta, the world capital of tuna. Retrieved January 14, 2011, from http://ipsnews.net/news.asp?idnews=53982

Palma, J. M. (2004). *Manta, historia de mi tierra.* Portoviejo, Ecuador: Imprenta Ramirez.

Parks, P. J., & Bonifaz, M. (1995). Nonsustainable use of renewable resources: Mangrove deforestation and mariculture in Ecuador. In S. Hanna & M. Munasinghe (Eds.), *Property rights in a social and ecological context: Case studies and design applications* (pp. 75-82). Washington, D.C.: The World Bank.

Peet, R., & Hartwick, E. (1999). *Theories of development.* New York: The Guilford Press.

Perreault, T. (2005). State restructuring and the scale politics of rural water governance in Bolivia. *Environment and Planning A, 37,* 263-284.

Perreault, T., & Martin, P. (2005). Geographies of neoliberalism in Latin America. *Environment and Planning A, 37,* 191-201.

Pratt, G. (2000a). Post-structuralism. In R. J. Johnson, D. Gregory, G. Pratt, & M. Watts (Eds.), *The dictionary of human geography* (pp. 625-627). Oxford: Blackwell Publishing.

Pratt, G. (2000b). Feminist geographies. In R. J. Johnson, D. Gregory, G. Pratt, & M. Watts (Eds.), *The dictionary of human geography* (pp. 259-262). Oxford: Blackwell Publishing.

Radcliffe, S. A. (2005). Neoliberalism as we know it, but not in conditions of its own choosing: A commentary. *Environment and Planning A, 37,* 323-329.

Radcliffe, S. A. (2006). Development and geography: gendered subjects in development processes and interventions. *Progress in Human Geography, 30*(4), 524-532.

Ricardo, D. (1821). *On the principles of political economy, and taxation.* London: John Murray, Albemarle-Street.

Rivas, M. G. (2007). The effects of trade openness on regional inequalities in Mexico. *Annals of Regional Science, 41*(3), 545-561.

Rose, G. (1997). Situating knowledges: positionality, reflexivities and other tactics. *Progress in Human Geography, 21*(3), 305-320.

Sawyer, S. (2004). *Crude chronicles: Indigenous politics, multinational oil, and neoliberalism in Ecuador.* London: Duke University Press.

Schurman, R. A. (1996). Snails, Southern Hake and sustainability: Neoliberalism and natural resource exports in Chile. *World Development, 24*(11), 1695-1709.

Smith, L. T. (2004). *Decolonizing methodologies: Research and indigenous peoples.* Dunedin: University of Otago Press.

Smith, S. (2000). Qualitative methods. In R. J. Johnson, D. Gregory, G. Pratt, & M. Watts (Eds.), *The dictionary of human geography* (pp. 660-662). Oxford: Blackwell Publishing.

Strobosch, P. (1984). Tecnología y economías pesqueras artesanales en la Península de Santa Elena. In *Ecuador Debate No. 6: Campesinado y tecnología* (pp. 146-167). Quito, Ecuador.

Sundberg, J. (2003). Masculinist epistemologies and the politics of fieldwork in Latin Americanist geography. *Professional Geographer, 55*(2), 180-190.

Thorsen, D. E., & Lie, A. (2006). What is neoliberalism? University of Oslo, Department of Political Science, Manuscript. Retrieved June 2, 2010, from http://folk.uio.no/daget/What%20is%20Neo-Liberalism%20FINAL.pdf

Transparency International. (2000). TI corruption perceptions index 2000. Retrieved January 15, 2009, from http://www.transparency.org/

Treakle, K. (1998). Ecuador: Structural adjustment and indigenous and environmentalist resistance. In J. Fox & D. Brown (Eds.), *The struggle for accountability* (pp. 219-264). Cambridge: The MIT Press.

Trutanich, P. (2005). Eastern Tropical Pacific tuna fisheries. *INFOFISH International*, April, 68-72.

Tunaseiners.com. (2009, February 26). Ecuador – devices save species. Retrieved January 14, 2011, from http://tunaseiners.com/

Tunaseiners.com. (2009a, April 18). Tuna canneries polluting Manta. Retrieved January 14, 2011, from http://tunaseiners.com/

Tunaseiners.com. (2009b, April 18). Manta a dynamic and strategic city. Retrieved January 14, 2011, from http://tunaseiners.com/

Tunaseiners.com. (2009, April 26). Ecuadorian tuna fishing sector worries. Retrieved January 14, 2011, from http://tunaseiners.com/

UNEP. (2000). Cleaner production assessment in fish processing. Paris: UNEP Division of Technology, Industry and Economics.

U.S. Department of State. (2009). 2009 investment climate statement – Ecuador. Retrieved January 4, 2011, from http://www.state.gov/

U.S. House of Representatives Press Release. (2002). Andean trade agreement passes house with revisions on tuna. Retrieved June 12, 2011, from http://www.house.gov/list/press/as00_faleomavaega/atpapasseshouse.html

Weeks, J. (2000). Have workers in Latin America gained from liberalization and regional integration? *Journal of Developing Societies, 16*(1), 87-114.

Wolf, M. (2004). *Why globalization works.* New Haven: Yale University Press.

Wolford, W. (2005). Agrarian moral economies and neoliberalism in Brazil: competing worldviews and the state in the struggle for land. *Environment and Planning A, 37,* 241-261.

World News. (2011). Manta. Retrieved January 5, 2011, from http://wn.com/Manta

WTO. (2009). About the WTO – a statement by the director-general. Retrieved March 15, 2009, from http://www.wto.org/english/thewto_e/whatis_e/wto_dg_stat_e.htm

Wunder, S. (2001). Ecuador goes bananas: Incremental technological change and forest loss. In A. Angelsen & D. Kaimowitz (Eds.), *Agricultural technologies and tropical deforestation* (pp. 167-194). New York: CABI Publishing.

WWF International. (2007). Tuna in trouble: The challenges facing the world's tuna fisheries. Switzerland. Retrieved January 4, 2011, from http://assets.panda.org/

Zamosc, L. (1994). Agrarian protest and the Indian movement in the Ecuadorian highlands. *Latin American Research Review, 29*(3), 37-68.

Zamosc, L. (2004). The Ecuadorian Indian movement: From politics of influence to politics of power. In L. Zamosc & N. Postero (Eds.), *The struggle for indigenous rights in Latin America* (pp. 131-157). Brighton: Sussex Academic Press.