

**RESOLVING THE DISPUTE BETWEEN CHINA AND THE
PHILIPPINES IN THE SOUTH CHINA SEA
MUTUAL GAINS AND VALUING ENVIRONMENTAL GOODS**

Master of Arts in Law and Diplomacy Capstone Project

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Resolving the Dispute between China and the Philippines in the South China Sea

Mutual Gains and Valuing Environmental Goods

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Executive Summary

The Philippines and China have reached a stalemate in their dispute over territory in the South China Sea (SCS). While both countries continue to attempt incremental gains, neither can achieve the full economic benefits available from the territory unless an agreement is reached to share the resources at stake, or one country gains full control of the territory.

China has disputes with several countries over territory in the SCS, but this paper focuses on the area of the SCS the Philippines considers part of its Exclusive Economic Zone (EEZ), which the Philippines calls the West Philippine Sea. This territory includes the Spratlys and Paracel Islands. China and the Philippines are the significant parties in the conflict, but Association of South East Asian Nations (ASEAN) countries and the United States are also connected because of the regional implications of the conflict and the United States interests in Southeast Asia. Economic factors are central to the dispute as the Philippines and China compete for oil and gas, and fisheries resources. The importance of trade in the area and the pressures of population intensify the dispute. Philippine nationalism and Chinese expansion in Southeast Asia contribute to tensions as well. Both China and the Philippines are signatories to the UN Convention on the Law of the Sea (UNCLOS), which defines the international law concerning the dispute with regards to sovereignty and dispute resolution mechanisms. Given this context there are three scenarios moving forward.

The first scenario is to maintain China and the Philippines' current positions, implying that the countries will not reach a solution regarding the territory, or management of resources. In this scenario there are no mutual gains. Both sides would look to strengthen their alternatives to negotiation. China would continue to build artificial islands, fish in the disputed area, and appeal to other countries in the region to isolate the Philippines. In January 2013 the Philippines initiated an international arbitration process over the disputed territory with the concept that a verdict in their favor would strengthen their position. However, China has refused to participate in the arbitration process and there seems to be little hope for a resolution to the conflict in the current state of affairs.

A second alternative is for China and the Philippines to agree to conventional joint management of the resources in the West Philippine Sea. Based on a mutual gains approach the countries could jointly manage oil, gas and fisheries resources without resolving the territorial dispute. By focusing on interests instead of positions, there is a zone of possible agreement (ZOPA) in which China and the Philippines could reach a compromise satisfactory to both sides. The ASEAN-China Code of Conduct on the SCS may be a vehicle to reach an agreement. While the second alternative is preferable to the current state of affairs, it does not put enough emphasis on valuing environmental goods and services.

A third scenario would be holistic joint management of the resources in the disputed area. China and the Philippines would cooperate in managing the resources while factoring in externalities such as the long-term impacts of oil and gas exploration and fishing, and consider the possibility of leaving oil and gas in the ground. When deciding their policies on oil and gas resources China and the Philippines need to consider their commitments to reduce emissions, valuing the future, and the externalities of fossil fuel development. For marine resources both countries would have to limit levels of catch to maintain stocks and consider protected areas to preserve the high levels of biodiversity in the West Philippine Sea.

Chinese and Filipino policy has been based on the race to fossil fuels and fish paradigm. A mutual gains approach will allow each side to approach the dispute with a better understanding of their interests and the benefits of cooperation. There is an opportunity to redefine the national dialogue in the Philippines and China over fossil fuels and economic growth. The oil and gas resources in the West Philippine Sea have to be valued in a holistic manner, accounting for the environmental and health damages they will cause when burned, in addition to their economic value. There is a similar opportunity in managing fisheries. Fisheries management in the West Philippine Sea has to account for the impact on ecosystems and how to maintain and restore fish stocks in the long run. The success of these initiatives will be determined by the decisions of governments and

businesses to accurately value ecological goods and services. As the world moves towards international action on climate change and more sustainable fisheries practices the West Philippine Sea is a microcosm of the opportunities and barriers to valuing environmental goods.

I. Background and Context

1. The Nature of the Dispute

In the last two years the SCS has become a focal point for tensions in South East Asia with global implications. The territorial quarrel involves the Philippines, China, Taiwan and Vietnam, with Malaysia and Brunei making some partial claims. The conflict came to a head in April 2012 when an encounter between a Philippine navy vessel and Chinese fishermen led to a two-month stand off. Since then China has barricaded the Bajo de Masinloc to prevent Filipino fishermen from accessing the area (Dancel 2014) . Tensions spiked again in May 2013 after a Taiwanese fisherman was shot and killed by the Philippine Coastguard in the disputed territory. China is dredging massive amounts of sands to create artificial islands on several of the disputed reefs (Chicago Tribune 2015) . Questions regarding this territory and the rights to its natural resources have been raised for several decades, and give rise to issues of sovereignty, historical precedent and international law.

The area includes the Kalayaan Island Group (part of the Spratly Islands) and the Scarborough Shoal. Oil, natural gas and seabed materials in the area are largely untapped and to an extent still an unknown quantity. However, current use estimates are that the area could hold up to 5.4 billion barrels of oil and 55.1 trillion cubic feet of natural gas (Himmelman 2013) , enough to satisfy Philippine fuel demand for the next two decades. In addition, the area includes some of the richest fisheries in the world, which are essential for the livelihood of Philippine coastal communities and the national economy. Fisheries resources are similarly important for China as it extends its blue water fishing fleet to meet the demands of its enormous population. Raising the stakes even higher is

the trade importance of the territory with half of the world's merchant fleet tonnage and one third of the world's crude oil passing through annually (Himmelman 2013) .

The Kalayaan Island Group and Scarborough Shoal have officially been part of Philippine territory since 1978. In the 1960s the Philippine government took an interest in the area and President Marcos eventually issued a presidential decree declaring the Philippines claim. (Baviera and Batongbacal 2013) From the Chinese perspective historical evidence goes back to Xia and Hang dynasty records and a 1947 map made by the Kuomintang. These claims inspired China's "9-dash line map" in the SCS, which includes the Paracel and Spratly islands as part of Chinese territory and reaches up to the coastlines of all the other countries in the area. China submitted the 9-dash line map to the UN in 2009 and the Chinese claim has been officially protested by the Philippines, Vietnam, Malaysia, Brunei and Indonesia. (Himmelman 2013)

International law regarding the dispute is almost universally recognized to come under the heading of the United Nations Convention on the Law of the Sea (UNCLOS). All the countries making territorial claims in the SCS including the Philippines and China have ratified UNCLOS, which entered into force in 1994. The Philippines and several countries in ASEAN see the Chinese 9-dash line map as a violation of the rules set out in UNCLOS.

In January 2013 the Philippine government informed the Chinese Embassy in Manila that it had applied for arbitration on the issue of the West Philippine Sea in accordance with UNCLOS. The Chinese government responded on February 19, 2013 that it rejected and returned the Philippines' Notification and Statement of Claim. The arbitration is currently ongoing without Chinese participation.

This dispute has ramifications beyond the territory in question as China and the U.S. are jockeying to secure their strategic and economic influence in the region. The Obama administration has declared its intentions to make a strategic pivot toward Asia-Pacific and is a close ally of the Philippines. Neither the United States (U.S.) nor China is

interested in violent conflict in the region, but the intersection of economic interests and the regional struggle for geo-political influence make the West Philippine Sea a flashpoint in international diplomacy.

2. Significant Parties To The Conflict

The main parties to the conflict are the Chinese and Philippine governments. Within these parties there are a few key players. President Benigno “P-Noy” Aquino III, son of the national hero with the same name, leads the Philippines. P-Noy was swept to power following the death of his mother, a former Philippine president, in 2010. P-Noy has held a relatively hard line in dealings with China, refusing to be bullied by the major power in the region. Other Philippine actors involved in the dispute include the Department of Foreign Affairs (DFA) and the Armed Forces of the Philippines (AFP), specifically the Philippine navy and coast guard.

Since China is a one party state it is sometimes thought of as a monolith where government agencies are aligned with the broader national strategy. However, a closer look reveals that conflicting mandates and lack of coordination on the SCS have led to increasing tensions between different agencies and departments. Only the foreign ministry has a coordinating mandate, but it lacks the authority and resources to manage the other parties. The bureaucracy surrounding the SCS involves eleven central government agencies, which includes five law enforcement agencies and private actors. Some key players are the Chinese coast guard, and influential local governments such as Hainan province, which administers the SCS area (International Crisis Group 2012). In 2012 Hainan introduced new rules requiring foreign fishing vessels to seek approval to operate in the area of the SCS included in China’s nine-dash line claim (Kwok 2014). There is a clear principal-agent problem as law enforcement and paramilitary vessels are playing a role in disputed areas without a clear legal framework. Central government agencies and local governments are competing for larger budgets and focused on domestic concerns, but the implications of their activities are increasingly international (International Crisis Group 2012).

Additional parties with a stake in the conflict are claimants to territory in the SCS, and the Association of South East Asian Nations (ASEAN) as a whole. The U.S. has important interests in the region related to trade and the Obama administration's pivot to Asia-Pacific. In addition, the US recently recommitted itself to an Enhanced Defense Cooperation Agreement with the Philippines in April 2014. Japan and South Korea also have a stake in this dispute due to their defense cooperation with the Philippines, and Japan's own dispute with China in the Senkaku islands.

3. Principal Factors Contributing to the Dispute

Economic Factors

Economic incentives are at the core of this dispute and the Philippines and China remain in a mindset of a race to fossil fuels and fish. Both are desperate to have the rights to the oil and natural gas located in the West Philippine Sea. The issue of climate change and reducing carbon emission from fossil fuels takes the back seat to the pressures of economic growth. Furthermore, both states are eager to control the rich fisheries resources contained in the disputed area for the benefit of their economies and the livelihoods of their people. The rich biodiversity of this area and linkages between ecosystems are largely overlooked as the Philippines and China seek to achieve maximum yields from the marine resources in the area. On top of that there are valuable minerals to be harvested and the potential for biotechnology discoveries due to the high biodiversity in the area. Possibilities for tourism in the area add to the economic stakes. Population serves as a backdrop to all of these economic factors as China pursues more natural resources and food for its 1.3 billion citizens and the Philippines seeks to do the same for its rapidly growing population. China and the Philippines are also contending to control an area of tremendous economic importance on an international scale because of the high traffic of merchant shipping and crude oil that pass through the West Philippine Sea annually.

Oil and Natural Gas

Both the Philippines and China see oil and natural gas as essential for each of their countries' economic development. China is already an industrial powerhouse boasting the world's second largest economy (and the most CO2 emissions), while in 2009 the

Philippines graduated to the rank of ‘lower Middle-Income Country’ (UNDP 2015) and has growing ambitions for its industry and energy sectors. The Philippines gets a significant amount of its electricity from geothermal (15%), hydropower (14%) and other renewable energy sources, but natural gas and coal account for the remainder. Oil made up 40% of the Philippines total primary energy consumption in 2011 (USEIA 2014b) . Both countries see the untapped oil and gas in the West Philippine Sea as opportunities to fuel economic growth at home, or profit by selling the rights to the resources to private organizations. The resources in the West Philippine Sea are made even more attractive by past Philippine experience of the potential benefits of offshore energy. The Malampaya Deepwater Gas to Power Project has contributed 1 billion USD to the national budget and resulted in significant foreign exchange savings from foregone energy importation. (Baviera and Batongbacal 2013)

Ecological Impact

Although there are estimates for the dollar value of the oil and gas in the West Philippine Sea, these estimates do not account for the externalities associated with extracting and using these fossil fuels. There are likely to be significant repercussions for the ecosystems in the West Philippine Sea (and linked ecosystems) when China or the Philippines exploit the resources in this area. In addition, burning the fossil fuels will have further impacts on human health and add to global carbon emissions. The most recent reports of the Intergovernmental Panel on Climate Change (2013, 2014) found that a majority of fossil fuel reserves will have to be left in the ground in order to limit global temperature rise to 2°C. Calculating the total environmental and economic impacts of exploiting and burning these resources could change China and the Philippines’ analyses of the costs and benefits of pursuing these resources. Both the Philippines and China have agreed to limit their carbon emissions. China has agreed a date for peak CO₂ emissions around 2030 and the Philippines has recently shifted their policy from demanding that industrial countries cut emissions, to pledging voluntary cuts of its own (Davenport 2014) .

Fisheries

While oil and gas often make the headlines, the fisheries resources in the West Philippine Sea have the most direct impact on the Philippine coastal populations who rely on the sea for their daily food and livelihoods. The West Philippine Sea has some of the richest

marine resources in the world and includes important breeding grounds and shelter areas for fish. Fisheries are an essential part of the Philippine economy and critical for food security. Fish make up 22.4% of the total protein intake of the average Filipino (Baviera and Batongbacal 2013), and an even greater proportion in the diet of the coastal populations around the West Philippine Sea.

Estimates about the economic value of the fisheries in the Kalayaan Island Group vary. One estimate in 1998 valued the annual fish catch in the Kalayaan Island Group between 47-105 million USD. Another study in 2004 estimated the value of the fish catch as 11% of the total value of national fish production. The potential annual yield of the Kalayaan Island Group is estimated at 5 million tons, which would make up 20% of the country's annual fish catch (Baviera and Batongbacal 2013) .

The Scarborough Shoal is also very important to the economies of neighboring Philippine provinces. As the only large reef structure west of Luzon, fishermen use the reef as their main offshore fishing area (Baviera and Batongbacal 2013) . The annual potential yield of fisheries resources in the Scarborough Shoal area is estimated at 5000 metric tons.

Ecological Impact

The coral rich Kalayaan Island Group has an estimated reef area of 1000 square kilometers. This area is very important from an ecological perspective because of its rich biodiversity, fish shelters and breeding grounds, and links to the ecosystems of the Sulu Sea and others of the archipelago. Filipino scientists believe that the Kalayaan Island Group exchanges and replenishes living marine resources with the other ecosystems of the archipelago, and the biodiversity of the Kalayaan Island Group is responsible for the richness of the marine waters west of Palawan. (Baviera and Batongbacal 2013)

As mentioned previously the Scarborough Shoal is the only large reef structure west of Luzon. Its status as a rich feeding and breeding ground for fish and marine species, makes it vital for the Philippines to maintain control of this area to protect linked ecosystems. (Baviera and Batongbacal 2013)

Given the context of depleted global fisheries, managing the marine resources in the West Philippine Sea takes on greater urgency and importance. The Philippines, China and other countries fishing in the West Philippine Sea will have to consult with scientists and experts to determine sustainable yield and the wide-ranging impacts of fisheries on ecosystems if they plan to maintain the fish stocks. (Baviera and Batongbacal 2013)

Trade

The West Philippine Sea is a vital international sea-lane of communication. Critical commodities like oil and other goods from the Middle East and the Indian Ocean regularly pass through the area. Half of the world's merchant fleet tonnage and one third of the world's crude oil passes through annually (Himmelman 2013) . This makes control of the area extremely valuable to the Philippines and China.

Population

With a population of 1.3 billion the Chinese government is under pressure to meet the growing economic and energy needs of almost a fifth of the world's total population. In addition, the Chinese population is increasingly demanding higher standards of living, which adds to the need to find additional natural resources for food, jobs, electricity and transportation. On the other side the Philippine population is rapidly growing with a fertility rate of 3.1 births per woman and a population growth rate of 1.7%, significantly higher than several regional neighbors¹ (World Bank 2013) . The Philippine government is under pressure to feed and find livelihoods for its citizens, and fisheries and the energy sector provide important sources of employment.

Minerals and Other Natural Resources

The Kalayaan Island Group is rich in valuable minerals including phosphates, guano deposits, and manganese nodules, which the Philippines and China would like to harvest from the seabed (Baviera and Batongbacal 2013) . In addition, the tremendous biodiversity in the Kalayaan Island Group indicates that there is potential for valuable biotechnology and pharmaceutical discoveries from the plant and marine life in the territory. On top of that the Scarborough Shoal is believed to have massive sulfides and cobalt rich crusts, which can be exploited. (Baviera and Batongbacal 2013)

¹ Indonesia 1.2%, Thailand 0.3%

Tourism

The rich biodiversity of the Kalayaan Island Group area means there is significant potential for tourism, although this remains largely underdeveloped. Two of the islands are already sanctuaries, Likas Island for sea turtles and Lawak Island for birds. The rich marine life, which features giant clams, sea turtles and rare land crabs, could attract local and foreign tourists (Baviera and Batongbacal 2013). Countries with claims in areas of the SCS outside the West Philippine Sea have already invested in tourist resorts to start to reap the economic benefits from natural attractions. The possibility of revenues from tourism may encourage the Philippines and China to think more seriously about the ecological impacts of extractive activities in the West Philippine Sea.

Social and Political Factors

An intersection of social and geo-political factors shapes the dispute. The Philippines is eager to defend its sovereignty and pride against what it perceives as Chinese bullying in the region. On its own the Philippines has little leverage against Chinese economic and military might, but its alliance with the United States and the U.S. own interests in South East Asia serve as a counterbalance to Chinese influence in the region. China bases its claims in the West Philippine Sea on historic evidence that predates the Philippines' declaration, and seeks to continue to expand its territory and influence in the region.

Philippine Nationalism

As a country that has been occupied multiple times throughout its history, Filipinos respond strongly to actions seen as threatening their sovereignty. The Kalayaan Island Group is a critical area for the strategic defense of the Philippines and Filipinos have identified China's attempts to claim the SCS and West Philippine Sea as a serious threat. Although the Philippines does not have the economic clout or the military capacity to challenge China in the West Philippine Sea, they are leveraging their close ties with the United States to counter pressure from China.

Chinese Expansion in South East Asia

China's 9 dash-line claim, including the West Philippine Sea, is based on historical and jurisprudential evidence. China has presented Xia and Han dynasty records as well as a 1947 map made by the Kuomintang, which included the Spratlys and Scarborough Shoal as part of Chinese territory. Based on this precedent they appear to be ignoring the rules

of UNCLOS that indicate that the West Philippine Sea is part of Philippine territory. As a one party state, there is continuous pressure to appease the Chinese population, primarily by increasing living standards. The enormous population translates into a continuous search for natural resources in all forms including the fossil fuels and fisheries resources in the West Philippine Sea.

The United States in South East Asia

The United States is under pressure to maintain its influence in Asia-Pacific and limit the expansion of Chinese influence. The Obama administration has declared its strategic pivot toward Asia-Pacific, and this dovetails with the United State's historic close ties with the Philippines, formalized in a mutual defense pact. The U.S. is strongly against open conflict in the region, but wants to maintain a balance of power with China in Southeast Asia.

4. The International Law Concerning the Dispute

The dispute in the West Philippine Sea is a disagreement between the Philippines and China over the sovereign rights to an area, which includes land and ocean features, and the natural resources contained therein.

The most relevant international agreement to address this dispute is UNCLOS, which came into force in 1994. China and the Philippines have both ratified the convention, but China submitted a reservation to UNCLOS part XV in August 2006 regarding the application of the third party dispute settlement procedures.

Exclusive Economic Zones

Part V of UNCLOS defines the issue of exclusive economic zones (EEZ), which is critical in this dispute. *Article 57* states that: *the exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.* On this basis the West Philippine Sea is part of the Philippines EEZ. The convention goes on in article 56 to describe a state's *“(a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and*

exploration of the zone, such as the production of energy from the water, currents and winds;”

In accordance with UNCLOS definition of a nation’s rights within its EEZ, the Philippines have the sovereign rights to manage the natural resources in the West Philippine Sea. Article 76, which defines rights of a state over the continental shelf confirm this conclusion. Since the West Philippine Sea is part of the Philippines EEZ China’s activities in this area, including fishing and resource gathering, contradict the rules laid out in UNCLOS.

Dispute Resolution Mechanism

Article 287 of Part XV Section 2 lays out the compulsory procedures entailing binding decisions: *“When signing, ratifying or acceding to this Convention or at any time thereafter, a State shall be free to choose, by means of a written declaration, one or more of the following means for the settlement of disputes concerning the interpretation or application of this Convention: (a) the International Tribunal for the Law of the Sea established in accordance with Annex VI; (b) the International Court of Justice; (c) an arbitral tribunal constituted in accordance with Annex VII; (d) a special arbitral tribunal constituted in accordance with Annex VIII for one or more of the categories of disputes specified therein.* In accordance with these procedures the Philippines has submitted their grievance to an arbitral tribunal. However, China has refused to participate in these proceedings as they consider within their rights according to Article 298: *“1. When signing, ratifying or acceding to this Convention or at any time thereafter, a State may, without prejudice to the obligations arising under section 1, declare in writing that it does not accept any one or more of the procedures provided for in section 2.* China submitted their reservation to section 2 in 2006. International tribunals cannot compel states to submit to their jurisdiction and they do not have the power to enforce their judgments on an unwilling state (Baviera and Batongbacal 2013) . As a result China can virtually ignore the arbitration process initiated by the Philippines. China’s refusal to participate in the arbitration process could set a troubling precedent on an international level by indicating that the rules regarding EEZs can be ignored in certain circumstances.

Sustainable Management of Fisheries

Since neither the Philippines nor China have ratified the UN Fish Stocks Agreement², UNCLOS is the most relevant document in defining the countries' obligations regarding the conservation of living resources. Article 61 of UNCLOS states that, "2. *The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. As appropriate, the coastal State and competent international organizations, whether sub regional, regional or global, shall cooperate to this end.* 3. *Such measures shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether sub regional, regional or global.* According to this article States that have ratified UNCLOS are obligated to maintain and restore their marine resources based on the best scientific evidence available. The concept of maximum sustained yield is widely recognized as flawed, because it often sets targets based on high historic yields, which are not sustainable. However, the intent to promote sustainable management and conservation of marine resources is clear. If the Philippines intend to use UNCLOS as the basis for its territorial claims in the West Philippine Sea, it should meet the obligations of the international agreement regarding conservation and sustainable management of its marine resources.

II. Policy Prescription

The dispute between China and the Philippines in the SCS is delicately poised. If both countries maintain their current policies it is likely that the conflict will escalate. Cooperation would be mutually beneficial for both sides, but it is unclear what form the cooperation would take and how to reach an agreement. The following three options offer

² The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks

the most likely scenarios: 1) Maintain Current Policies, 2) Conventional Joint Management of Resources, and 3) Holistic Joint Management of Resources. Each of these scenarios is presented below, weighing the respective benefits and costs.

1. Maintain Current Policies

Given the current high state of tension between the two countries, China and the Philippines may not agree to negotiate and instead maintain their current positions. In this scenario it is doubtful that there will be mutual gains. This would push both countries to attempt to improve their best alternative to a negotiated agreement (BATNA). Without an agreement it is likely that tensions will continue to escalate and marine resources will continue to be overexploited.

China's Alternatives

China has been pushing for the Philippines to come to the table for bilateral negotiations. Without opening negotiations with the Philippines, China is stuck in a holding pattern in the West Philippine Sea. While official progress is halted, China is known to be fishing in the disputed area and building artificial islands. Artificial islands could help China to anchor its claim (Guinto 2014) . To create these islands China is using dredging vessels to dig up sediment from the sea and then dumping it on submerged coral reefs. It is estimated that five islands have been built this way and two more are under development (O'Callaghan 2015).

However, without resolving the dispute China cannot use all of their available resources in the West Philippine Sea due to international pressure as well as the threat of greater U.S. involvement in the region.

China has worked to increase goodwill in the region through a “charm offensive” in 2013, when it appealed to ASEAN members (excluding the Philippines) through commitments for improved trade and infrastructure (Nguyen 2014) . Strong relationships with neighboring countries in South East Asia will help China to work around the Philippines if they continue to refuse bilateral negotiations.

The Philippines' Alternatives

The Philippine government feels that it would be at a disadvantage if they were to enter bilateral negotiations with China, since China has significantly more economic and military clout. As an alternative the Philippines have initiated an international arbitration process to resolve the dispute according to the procedure laid out in UNCLOS. The process will take two to three years and if the arbitration result is in favor of the Philippines it will vindicate their position (Baviera and Batongbacal 2013) . However, since China has refused to participate, the results of the arbitration are unlikely to lead to a durable result. The arbitration will affect the legal status of China's nine-dash line claim. But if the arbitral tribunal decides the nine-dash line claim is not legitimate it is likely that China will argue that islands and rocks in the West Philippine Sea generate maritime zones and therefore the Kalayaan Island Group and Bajo de Masinloc are still part of Chinese territory (Batongbacal 2014) .

Sovereignty remains the most important principle governing relations between states, and no state can be subject to the sovereignty of another or subordinated to any international body without its consent (Baviera and Batongbacal 2013) . International tribunals cannot compel any state to submit to their jurisdiction and they do not have the authority to enforce their judgments on an unwilling state (Baviera and Batongbacal 2013) . While China may suffer some reputational damage if they ignore the judgment of the international tribunal, other countries that have done so in the past have quickly recovered. In 1986 the U.S. openly defied a clear order from the International Court of Justice (ICJ) to withdraw support for the Nicaraguan Contras and discontinue the mining of harbors. More recently in 2013 Russia refused to participate in a hearing before the International Tribunal for the Law of the Sea (ITLOS). China could claim that is following a precedent set by the U.S. and Russia. The Philippine lawsuit may succeed only in provoking China without changing its behavior. In addition, it may discourage China from considering voluntary international arbitration in future maritime disputes (Ku 2014).

To strengthen their position the Philippines is seeking to modernize their military, particularly their navy and coast guard. Although they will never be able to match China militarily, adding fighter jets and modern ships to their arsenal is likely to make China more cautious. Along the same lines strengthening defense cooperation with the U.S., Japan and South Korea will give the Philippines more leverage against China.

Management of Resources

Without an agreement China and the Philippines will find it very difficult to access and exploit oil and gas resources in the disputed area. At the moment there is virtually no exploration ongoing in the West Philippine Sea. In March 2015 Forum Energy, a UK incorporated oil and gas exploration and production company, was ordered by the Philippine Department of Energy to stop its exploration activities in the Reed Bank, because it is located in the disputed waters (Esmaque II 2015a).

While oil and gas exploration have been halted Chinese and Filipino fishermen continue to fish in the disputed area. If the status quo is maintained there will be no proper management system, which will allow rampant overfishing in the area to continue. The West Philippine Sea has one of the highest concentrations of biological diversity in the world and the balance of these ecosystems will certainly be under threat. In addition, China's continued dredging and dumping of sediment on submerged coral reefs is damaging local ecosystems (O'Callaghan 2015) .

2. Conventional Joint Management of Natural Resources

Given the large potential for oil and gas development in the West Philippine Sea, China and the Philippines may be able to come to an agreement to jointly manage the resources in the disputed area. Joint management would be an improvement over the current stalemate that is preventing exploration and coordinated exploitation of the fisheries resources in the area. If both sides take a mutual gains approach they may be able to agree to jointly manage the resources even if the territorial dispute remains unresolved. To reach this result both sides would have to focus on their interests instead of their positions, which will allow them to develop a zone of possible agreement (ZOPA).

Mutual Gains Approach

A mutual gains approach can lead to an agreement to jointly manage the resources in the West Philippine Sea. With this strategy China and the Philippines can move the discussion beyond a zero sum game where both sides have been preoccupied with national sovereignty. A new paradigm would focus on win-win, and how the Philippines and China can both benefit from the natural resources available in the West Philippine Sea.

If China and the Philippines can reach an agreement there is a huge carrot to be won. The Philippines Malampaya Deepwater Gas to Power Project has contributed approximately 1 billion USD per year to the Philippine national budget and makes expanded offshore oil and gas production a very attractive proposition (Baviera and Batongbacal 2013) . China's energy needs are much greater, but a share of the oil and gas resources in the West Philippine Sea would be very valuable. Currently fishing in the West Philippine Sea is extremely disorganized because of the dispute. An agreement to manage fisheries resources would provide the Philippines and China with some structure and stability for managing fish stocks.

Focus on Interests Instead of Positions

In opening a dialogue both countries can focus on interests instead of positions. Both the Philippines and China are interested in benefitting from the resources in the West Philippine Sea. The language of national sovereignty makes compromise difficult, but we have already seen from the Joint Marine Seismic Undertaking (JMSU) in 2005 that cooperation is possible. That precedent can be a model for the Philippines and China to discuss cooperating in the management of oil and gas, mineral, and fisheries resources in the West Philippine Sea.

China's Interests

China's focus on national sovereignty has some parallels to the Philippines in that it is also tied to a history of imperialism. China has historically seen itself as the "middle kingdom", possessing a special role in world affairs. However, this position was undermined by the domination of imperial powers in China in the 1800's (Columbia University 2009). As China has continued its growth into a global economic power in the

21st century, it is seeking to make up for this unwanted history and claim a place as the dominant power in the region. This role is somewhat threatened by the United States and the Obama administration's recent pivot to focus on Asia Pacific. Several countries in the region, including the Philippines, have turned to the U.S. as a counter balance to China. Success in the dispute over the West Philippine Sea and other territories in the SCS is part of China's goal to define itself as a world power (Batongbacal 2014) .

The economic importance of the disputed area is central for China. Overall China has a domestic focus as they are dealing with a dissatisfied population that is demanding continuous economic growth. As in the case of the Philippines, fisheries are key for people's livelihoods and food. China has an enormous population and a growing middle class. The West Philippine Sea is part of China's larger pursuit of marine resources as many of China's existing fisheries resources have been exhausted (part of the larger global trend). China's fishing take is already four times the size of the nearest competitor and it continues to expand its long distance fishing fleet (Goldstein 2010).

China has one of the world's fastest growing economies, and much of its industrial growth is fueled by fossil fuels such as oil (18% of energy consumption in 2011) and gas (4%) (USEIA 2014a) . As the world's greatest CO2 emitter and with huge energy demands, pursuing the resources in the West Philippine Sea is part of the broader Chinese strategy of acquiring energy resources to fuel economic growth. But it also has to be noted that in November 2014 China made a commitment in cooperation with the U.S. for its CO2 emissions to peak in 2030, in addition to significant commitments to invest in renewables (Landler 2014). However, China's demand for oil and gas is likely to continue to increase in the next decade.

Lack of Coordination Among Chinese Central Government Agencies

Maritime enforcement entities in China are fragmented and this has prevented the Chinese coast guard from developing coherently. The bureaucracy surrounding the SCS involves more than ten different central government agencies (International Crisis Group 2012) . There is a principal-agent problem as local entities are often more powerful than the center in terms of resources, which has led to inconsistency. As a result interactions

with the Chinese coast guard in the West Philippine Sea are not necessarily representative of broader Chinese policy (Goldstein 2010). This is likely to complicate the process of reaching an agreement to jointly manage resources.

The Philippines' Interests

For the Philippines the issue of national sovereignty is strongly tied to their history of colonialism by Spain, Japan and the United States. Threats to the sovereignty of the Philippines are viewed as gross insults to national pride. Despite the mismatch in economic and military might, the Philippines refuses to be bullied by China.

With this underlying motivation, the Philippines is convinced that it has a strong case according to UNCLOS and that bringing China to arbitration (and winning) will be a vindication of the Philippines independence and right to the resources in its EEZ. The Philippines is also concerned about the important international sea-lanes in the West Philippine Sea, and control of this area is important to Philippine allies such as the U.S.

As touched on above the West Philippine Sea is critical for the Philippines economic interests. As the Philippines pushes on from its recently upgraded status as a lower middle-income country (World Bank 2014), the country is in pursuit of economic growth to reduce poverty and create jobs. The Philippines has a rapidly growing population and fisheries and oil and gas resources are important for livelihoods.

The Philippines depends primarily on oil and gas for its energy needs. Past experience with the Malampaya natural gas plant off the coast of the province of Batangas has illustrated that local gas resources can be a boon for the local economy (De Guzman 2013). The Malampaya plant provides 40-50% of Luzon's (the major island where Manila is located) power requirements (Rappler 2014). High estimates about the untapped potential of resources in the West Philippine Sea in the USD millions make it very appealing for the government. The government is swayed by the appeal of greater energy independence as optimistic estimates say that oil and gas resources in the West Philippine Sea could satisfy Philippine energy needs for the next 20 years (Himmelman 2013).

The other side of the coin is that the Philippines is one of the most vulnerable countries in the world to the impacts of climate change. The Philippines experienced one of the deadliest storms on record in 2013, typhoon Haiyan, and at the 2014 Lima Climate Change conference the Philippines was one of the first developing countries to declare its commitment to reduce its own CO2 emissions (Davenport 2014). In this context the Philippines may reevaluate its interest in oil and gas resources including those in the West Philippine Sea, if the country is really serious about moving away from fossil fuel energy and reducing emissions.

Communication And Relationship-Building

In order to have an open discussion about interests, the Philippines and China have to normalize their relations. Recent relations have been marked by heated language on both sides about violating national sovereignty, demanding changes in behavior, and assigning blame. A first step to normalize relations will be to tone down rhetoric and speak in terms of interests and areas for cooperation.

The Philippines has used diplomatic channels several times in attempts to diffuse tensions in the West Philippine Sea. In 1992 the ASEAN foreign affairs authorities signed the Manila Declaration on the SCS, a Philippine led initiative to establish principles that would help to avoid conflict. After China's occupation of the Mischief Reef in 1995, the Philippines concluded bilateral dialogues and agreements with China and Vietnam, which called for the peaceful settlement of disputes in accordance with recognized principles of international law, and expressed the need to cooperate for the protection and conservation of maritime resources. In addition, the Philippines played a central role in the negotiation of the 2002 ASEAN-China Declaration of Conduct on the SCS. The Declaration of Conduct is not legally binding, and provisions have not yet been fully implemented. Nevertheless, it commits parties to consultative and peaceful processes of dispute settlement, self-restraint and a halt to new occupations. In 2011 the Philippines moved for the conclusion of a legally binding code of conduct. These measures cannot resolve territorial disputes, but they should help to prevent armed conflict in the Kalayaan Island

Group. The Bajo de Masinloc is a newer issue and has not yet been the subject of major diplomatic talks since the 2012 standoff (Baviera and Batongbacal 2013).

The relationship between the Philippines and China has changed quite rapidly in recent years. There have been significant changes between the administrations of President Joseph Estrada (1998-2001), President Gloria Macapagal Arroyo (2001-2010) and President Benigno Aquino III (2010-present). Whereas Arroyo took an apologetic and cooperative approach with China, Aquino has taken a harder line. Looking at historical factors, the U.S. left the Philippines when the base sharing agreement ended in 1991. Afterwards, then President Estrada established the visiting forces agreement. However, this did not seem to aggravate China or create hostilities at the time. Arroyo's time in office was known as the time of the China "charm offensive" (Mendoza 2014). In recent years the Philippines and China seem to have hardened their positions, which indicate that it would be difficult to reach a compromise. There are indications that segments of the Chinese public and academia are not in favor of the government's hard line position. It is also important to note that progress in negotiations has also been affected by the recent change in the Chinese government administration, with the election of President Xi Jinping in 2013. There are ongoing back channel track 2 and 3 dialogues, but they have not been systematic (Mendoza 2014).

Past Cooperation

Past cooperation in the West Philippine Sea included a tripartite agreement between the state-owned oil companies of the Philippines, China and Vietnam to conduct joint seismic surveys for three years. The Joint Marine Seismic Undertaking (JMSU), was limited to seismic research and did not include joint development activities (Baviera and Batongbacal 2013). If the Philippines and China could establish a similar agreement and avoid the pitfalls of the original JMSU it may serve as a blueprint for joint management of natural resources. Although the original JMSU agreement stated that "signing of this Agreement shall not undermine the basic position held by the Government of each Party on the SCS", China agreed to this arrangement under the premise that it executes indisputable sovereignty over the SCS (Esmaguél II 2014b) . There was a strong backlash in response to the JMSU in the Philippines and other countries, partly due to

allegations of corruption and eventually the agreement lapsed without extension in 2008 (Baviera and Batongbacal 2013). Nevertheless, the JMSU illustrates that cooperation is possible. Initiating a similar agreement could reopen the dialogue to discuss joint development activities as well.

Zone of Possible Agreement

There are possibilities for mutual gains; therefore there is a Zone of Possible Agreement (ZOPA). However, the framing of national sovereignty has the Philippines and China stuck in the mindset of a zero sum game. As a question of national sovereignty the dispute becomes a winner-takes-all issue. If it were reframed as an issue of maximizing gains from the resources in the West Philippine Sea there could be a different result.

Both countries will benefit from joint management of fisheries resources. This will allow both sides to get a share of the catch, and there will also be gains from protecting marine resources. This will be important for tourism and long-term economic sustainability (Alino and Jacinto 2014). If both sides agree to jointly manage the oil and gas resources, they will be able to bring in international oil companies with the expertise to explore the resource potential of the area. There will be better information about what resources are available and the Philippines and China will benefit. The same applies for mineral resources. The challenge inherent in any of these joint management proposals is whether they will be politically feasible, and how to decide on splitting the resources.

A Tangible Target

The Philippines and China can use the ASEAN-China Code of Conduct (COC) in the SCS as a foundation for developing long-term solutions for the dispute. It is in the interest of China and the Philippines to establish a COC to prevent conflict and manage potential crises. During the ASEAN regional summit in Malaysia in April 2015 the secretary general of ASEAN, Le Luong Minh, said that it was very urgent conclude the COC, which must be a legally binding instrument (Reuters 2015) . Despite much attention there was little progress on a COC and the SCS disputes at the summit. Coming to an agreement on the COC would lay the foundation for more open discussions about each country's respective interests and the possibility of joint management of resources.

As a step towards agreeing on the COC the Philippines can offer to listen to China's arguments against a dispute settlement provision. In addition, the Philippines could make special efforts to include China in regional confidence building activities related to the ASEAN Economic Community.

Possible elements of the COC would be measures to ensure non-use of force by claimant states, hotlines among military commanders in the fields, and possibly a rules-based dispute settlement regime. There will likely be provisions to avoid fishermen and civilians being caught in conflict. A COC will help prevent conflict and aid crisis management, but it will not resolve the competing sovereignty claims (Baviera and Batongbacal 2013).

It is unclear whether a COC would be effective if it were contrary to current norms in the SCS. Ideally it would codify existing practice, but there are a number of challenges to establishing a COC. First, the Philippines wants a dispute settlement provision included in the COC, but not all ASEAN countries involved agree (Batongbacal 2014). The Philippines, Vietnam and Indonesia are on one side, Laos and Cambodia are siding with China, and Brunei is staying out of the debate. Secondly, for the COC to be effective ASEAN and the Philippines need China to agree to it. It is possible that the COC will be watered down to satisfy all sides and as a result will not be effective (Mendoza 2014). The original non-binding ASEAN-China Declaration of Conduct in the SCS has not been followed, so it is unclear whether a binding agreement would be different. Ideally a binding agreement would be the end result of a larger process of regional confidence building (Batongbacal 2014).

Bilateral Negotiations

The Philippines continues to hold on to UNCLOS, in order to make its case that the disputed area is part of Philippine territory. However, it is clear that China is reluctant to engage in multilateral agreements and prefers to work bilaterally. UNCLOS does not have provisions for joint management. The agreement foresees one country having control of a territory as part of its EEZ. Given this context it is difficult to see how UNCLOS could lead to a solution. As mentioned earlier the Philippine government is

wary of bilateral negotiations with China because of the difference in economic and military power. A possible solution may be a kind of coordinated bilateralism among the countries with disputes with China in the SCS. The recent ASEAN summit failed to make much headway with regard to the SCS as China continues to resist attempts to advance a new code of conduct (Parameswaran 2015) . What is clear is that the ASEAN members who have disputes: the Philippines, Malaysia and Vietnam (excluding Brunei), have similar views about moving forward with a legally binding code of conduct. If the countries coordinate among themselves, they may be able to come up with a system of bilateral agreements with China to move the process forward. If the ASEAN claimants can agree how far they are willing to compromise, they can each enter bilateral negotiations with China with set limits and move toward a resolution of the disputes.

3. Holistic Joint Management of Natural Resources

With most attention focused on the issues of national sovereignty and economic gains, many have overlooked the important environmental issues involved in the dispute. Given the urgent challenges of climate change, it is important to consider whether the oil and gas resources in the West Philippine Sea should be extracted at all. The uncertainty about the amount and availability of resources mean that there is likely to be a high opportunity cost. This money could instead be spent investing in cleaner energy sources. On the fisheries side, the West Philippine Sea is part of the coral triangle and has some of the highest concentrations of biodiversity in the world (Coral Triangle Initiative 2014) . However, the debate over marine resources tends to overlook the importance of sustainably managing these fisheries and preserving biodiversity and ecosystem links. A holistic approach to joint management means that different methods can be used to value the environmental risks and opportunities associated with the dispute.

Leaving Oil and Gas in the Ground

It is the nature of the Chinese and Philippine economies that they are desperate to claim the oil and gas resources in the area. Altering this incentive will require a significant shift in the energy use of the countries. China is already making strides toward renewable energy sources and decreasing fossil fuel dependence, but this will still take many years. The Philippines continues to be heavily dependent on oil, which made up almost half of

its energy consumption in 2011 (USEIA 2014b) . Altering these incentives will require policies on the part of the Chinese and Philippine governments to support growth in the renewable energy sector, and innovation from the private sector to meet local needs without greater use of fossil fuels. Progress in this area will also be shaped by international commitments and global innovations to reduce dependence on fossil fuels.

Commitments to Reduce Emissions

As developing countries China and the Philippines are seeking energy resources to fuel their economic growth. Much of this has growth been driven by fossil fuels, but the Philippines and China recently committed to limit and eventually lower their CO₂ emissions. Both countries are already experiencing the impacts of climate change, the Philippines in dramatic fashion in the form of devastating super storms like typhoon Haiyan in 2013. China made a commitment as part of the historic deal with the U.S. in November 2014 to have its CO₂ emissions peak in 2030 (Landler 2014) . During the 2014 Lima Climate Summit the Philippines became one of the first developing countries to commit to lowering its emissions (Davenport 2014) .

Externalities from Oil and Gas Development

China and the Philippines do not have a price on carbon emissions so externalities are not included in the price of oil and gas. Emissions are a tragedy of the commons problem. Although everyone ultimately suffers from the effects of climate change, individual countries have little incentive to limit their emissions. The challenge is how to convince countries like China and the Philippines to stop pursuing and extracting fossil fuels today.

One possibility is for the international community to compensate the Philippines and China for leaving the oil and gas resources in West Philippine Sea in the ground. A comparable example is Ecuador who in 2007 asked for \$3.6 billion in compensation from the world's developed countries in exchange for not extracting the oil beneath the Yasuni National Park. The oil is valued at \$7 billion so the compensation would have been about half the estimated value of the oil (Vidal and Carroll 2010). The Yasuni National Park, part of the amazon rainforest, is one of the most biodiverse hotspots in the world, and the high levels of biodiversity in the West Philippine Sea draw some parallels. The compensation experiment in Ecuador was ultimately not successful as in May 2014 the

government began issuing permits for drilling (Vaughan 2014) . However, as the impacts of climate change become more urgent the international community may take the issue of compensation more seriously.

The West Philippine Sea is home to some of the greatest marine biodiversity in the world and spawning grounds that link ecosystems within and beyond the SCS (Alino and Jacinto 2014). Extracting oil and gas is likely to be very disruptive for these ecosystems. There will be platforms, pipelines and ships transporting these fuels that will unavoidably affect the marine life. In valuing the oil and gas, the Philippines and China need to factor in the effects on marine resources in the near and long term. Fisheries are critically important for their economies and the respective governments need to weigh the costs and benefits that come with oil and gas production.

Discount Rates and Valuing the Future

Critical factors in valuing the oil and gas resources in the West Philippine Sea are opportunity cost and discount rates. Climate change is already an urgent issue in the Philippines and China, but the impacts are likely to be much more severe for future generations of Chinese and Filipinos facing drought, flooding and sea level rise. How do we decide how to discount those costs? Two widely known models are those of Nicholas Stern and William Nordhaus. Stern uses an extremely low discount rate that puts the onus on current generations to act now. Nordhaus' model has a higher discount rate, which implies that it will be easier for future generations to mitigate emissions and adapt to climate change. When they choose their respective discount rates the Philippines and China are deciding how they value the future.

The challenge of hyperbolic discounting follows the same lines. People are less willing to incur costs in the present if benefits are only in the distant future, and this willingness to incur costs is inconsistent over time. The Philippines and China have already made commitments to act on climate change and reduce emissions. The challenge is turning that decision into meaningful policy. If the Philippines and China are serious about reducing emissions, they have the opportunity to start today, by leaving the oil and gas in the West Philippine Sea in the ground. Such an agreement would be difficult to reach, but

it would be a global illustration of Chinese and Filipino leadership on environmental issues. Both sides also have the opportunity to lead by jointly managing the fisheries resources in the West Philippine Sea.

Sustainable Fisheries

Filipino fishermen depend on fisheries for their livelihood, and China's fishing fleet is constantly searching for new sources to feed the Chinese people and economy. The first step towards a solution is to ensure that the marine resources in the West Philippine Sea are being managed and conserved. Without sustainable management, neither China nor the Philippines will benefit from the fisheries in the long run, and other associated fisheries are likely to be depleted. Although China and the Philippines have ratified UNCLOS, they have not ratified the UN Fish Stocks Agreement³. Signing this convention would be a step forward by having both parties agree to a framework for the conservation and management of straddling fish stocks and highly migratory fish stocks. However, it is important to note that the UN Fish Stocks Agreement and most fisheries treaties are focused on "maximum sustained yield". This is problematic because it sets targets based on historic maximum levels of catch, which often turns out to be unsustainable. A better option may be "optimal sustained yield", which sets quotas 20 percent below the maximum to ensure more consistent yield. A possible solution may be an agreement between China, the Philippines, ASEAN member states and other countries fishing in the SCS to jointly manage and conserve the marine resources. This would not resolve the territorial dispute, but an agreement to jointly manage the marine resources may lower tensions and set the stage for a negotiation process regarding the territorial dispute.

Valuing Marine Resources in the West Philippine Sea

The Philippines is a country of islands and marine resources are essential for food and livelihoods. It is estimated that the potential yield from the Kalayaan Island Group provides 20 percent of the Philippines total catch (Baviera and Batongbacal 2013) . China has an enormous population to feed, and is constantly in search of new fishing grounds as

³ The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks

it finds that existing resources have been fully exploited or exhausted (Goldstein 2010) . In terms of environmental value the Kalayaan Island Group is a coral rich province with a reef area of 1,000 square kilometers that hosts breeding grounds for fish and other marine life. There is great potential for eco-tourism as the rich marine life features giant clams, sea turtles, and rare crab species (Baviera and Batongbacal 2013) .

The Philippines is party to the Coral Triangle Initiative, a multilateral partnership established in 2007 to address the threats facing the coastal and marine resources in the biologically diverse and ecologically rich area. However, there has been little tangible action in recent years to sustainably manage fisheries in the region (Coral Triangle Initiative 2014) . The situation has been exacerbated by the territorial dispute, which has encouraged a winner-takes-all attitude on both sides.

China is keenly aware that overfishing has devastated its marine resources. The country had a fishing haul of seventeen million tons in 2007, four times as much as the nearest competitor. With approximately eight million fishermen, the country initiated a “zero growth” plan in 1999 to reduce the size of the fishing fleet while simultaneously pursuing more long distance fish stocks. The SCS accounts for China’s largest catch after the East China Sea, and is the only source that has seen increasing catches in recent years (Goldstein 2010) .

As in the case of oil and gas, there are externalities associated with fisheries that are difficult to value. Biodiversity and ecosystem function do not have a market price. These factors are critical for maintaining sustainable fish stocks in the West Philippine Sea, but difficult to understand because of their scientific nature and feedback loops.

As with many fisheries, the marine resources in the West Philippine Sea are a commons problem. Historically fisheries resources have been treated as if they are inexhaustible, and the territorial dispute has continued the “race-to-fish” mentality. Marine resources are not limited to one area due to the migratory patterns of regional fish stocks (Goldstein 2010) and this results in unclear property rights. The Philippines and China are

attempting to exclude one another from accessing the resources, but neither side is acting to ensure that fisheries are managed sustainably.

The resulting situation is an area subject to overfishing and without sustainable marine management. Key spawning grounds such as coral reefs are being destroyed by destructive fishing practices like dredging (Alino and Jacinto 2014) . The biodiversity of the area is at risk as linked ecosystems are being damaged. The long-term yield of the fisheries in the area is likely to drop unless there is a change in policy. How do we value these environmental goods? One possibility is to attempt to calculate an existence value for species, to account for the rich biodiversity in the West Philippine Sea. Another possibility is to estimate the tourism potential of the area as an alternative source of livelihoods.

Mutual Gains from Sustainable Management

While the current situation with fisheries in the West Philippine Sea looks bleak, there are opportunities to turn the territorial dispute and environmental predicament into mutual gains for both sides. With the current state of tensions neither the Philippines nor China are managing the fisheries resources and neither is getting the optimal sustained yield. If the two countries are able to come to an agreement to sustainably manage the marine resources both will be able to benefit in the long run.

Currently reserves that ban fishing only cover about one percent of the world's ocean. But there has been a recent increase in the size and number of marine reserves throughout the Pacific from the Hawaiian Islands to small island states. President Obama created the largest marine reserve in the world in 2014 by broadening the Pacific Remote Islands National Marine Monument (Eilperin 2014) . The same year Kiribati announced that commercial fishing would end in the vast marine reserves in its Pacific Ocean territory by the end of the year. Palau, the Cook Islands and the Bahamas have followed suit. The Palau National Marine Sanctuary represents 80 percent of the country's EEZ. Half the Cook Islands EEZ has been declared a marine park with pressure from locals to expand the park further. The Bahamas have committed to protecting 20 percent of its ocean territory by 2020 (Howard 2014) . Most recently in March 2015 the U.K. announced the

creation of the world's largest contiguous ocean reserve around the Pictairn Islands in the South Pacific (Howard 2015) . It is important to note that creating these reserves are not altruistic decisions. Global fish stocks have been devastated by the international fishing industry and restrictions on fishing activities allow stocks to recover. Once populations rebound they often spill over into areas that still allow fishing and the edges of marine reserves have proven to be some of the richest fisheries. (Howard 2014)

With this context in mind the Filipino and international scientific community have floated a proposal to establish a marine park in the disputed area. There are a number of land based international peace parks across the globe such as the Waterton-Glacier International Peace Park on the U.S. Canadian border, the Selous-Niassa Wildlife Corridor, which crosses from Tanzania into Mozambique, and in Southeast Asia, the Emerald Triangle project, jointly managed by Cambodia, Laos and Thailand. However, there are few examples of marine peace parks⁴ and China and the Philippines have the opportunity to lead in this direction. The extremely rich biodiversity in the West Philippine Sea suggests that it has potential to be a successful eco-tourism attraction. The Philippines has already identified certain islands in the area as protected areas: Likas Island for sea turtles and Lawak island as a bird sanctuary (Baviera and Batongbacal 2013) . By preserving this area the Philippines and China would set a new precedent for regional diplomacy, and demonstrate the mutual gains possible from preserving an environmental resource. As China seeks to demonstrate its leadership on a global stage, it has the opportunity to be innovative and strategic by establishing a shared marine reserve with the Philippines.

Both the Philippines and China recognize that it is important to properly manage the fisheries resources in the West Philippine Sea. As a result of economic pressures this has not been a priority in the past, but it does present an opportunity for cooperation. The Philippines and China could agree that certain areas, such as spawning grounds, should be off limits for fishing and carry out shared monitoring of oceanographic data and coral reefs. By including scientists, the discussion regarding the West Philippine Sea dispute

⁴One example is the Red Sea Marine Peace Park

will have a scientific and environmental context to go along with the usual themes of sovereignty and economic development (Alino and Jacinto 2014).

III. Concluding Thoughts

The dispute between the Philippines and China in the SCS has largely overlooked the value of the environmental goods at stake. As a biodiversity hotspot and coral rich region the West Philippine Sea is critical for ecosystems beyond the disputed territory and has great eco-tourism potential. However, the future of these ecosystems is threatened by unsustainable fisheries practices and the development of oil and gas. China and the Philippines have both committed to limit their carbon emissions, but it is unclear whether they are willing to act now to stop pursuing fossil resources such as those in the West Philippine Sea.

Chinese and Filipino policy has been based on the race to fossil fuels and fish paradigm. Now is an important opportunity to redefine the national dialogue in both countries over fossil fuels and economic growth. The oil and gas resources in the West Philippine Sea have to be valued in a holistic manner, accounting for the health and environmental damage they will cause when burned, in addition to the value they contribute to the economy. There is a similar opportunity in managing fisheries. More than a race to fish, fisheries management in the West Philippine Sea has to account for the impact on ecosystems and how to maintain and restore fish stocks in the long run. The success of these initiatives will be determined by the decisions of governments and businesses to properly value ecological goods and services.

Reaching a solution will not be easy. Nationalism and sovereignty form barriers to progress at every step. Chinese and Filipino positions make it seem like they cannot agree, but interests reveal the potential for mutual gains. As the world attempts to move toward international action on climate change and more sustainable fisheries practices the West Philippine Sea is a microcosm of the opportunities and barriers to valuing environmental goods.

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