

Trade-offs between environmental protection and economic development in China's fisheries policy: A political analysis on the adoption and implementation of the Fisheries Law 2000

Gianluca Ferraro and Marleen Brans

Abstract

The Rio Declaration of 1992 called for states to integrate environmental protection in their process of development in order to achieve the ultimate goal of sustainable development (Principle 4). The paper investigates to what extent the People's Republic of China (PRC) has integrated environmental protection into her fisheries policy. The environment/development nexus is analysed in relation to the adoption and implementation of the Fisheries Law of 2000. Official documents and, more importantly, interviews conducted in several organizations at multiple levels of governance disclose a complex reality beyond the formal commitment to sustainable fisheries. Diverging interests, goals and strategies can be traced beyond formal policy documents in Beijing, Guangdong and between the Centre and the Province. Inter-organizational divergences at the central and local levels, as well as between them, hinder the pursuit of environmental protection in the development of China's fisheries sector. The paper highlights the political complexity of pursuing more responsible fisheries in the multi-actor and multi-level political-administrative system of the PRC. Here, as well as in many other developing countries, economic development constitutes the policy priority. Environmental protection often remains not only an ambitious objective but also an unperceived need.

Keywords: Sustainable development; fisheries policy; China.

1. Introduction

The United Nations Conference on Environment and Development (UNCED), which took place at Rio de Janeiro in 1992, proclaimed 27 principles for the ultimate goal of global sustainable development that would preserve the integrity of the entire planet. Twenty years later, the United Nations Conference on Sustainable Development will be held in Rio de Janeiro in June 2012. The event calls for some evaluations on the progress made since the Earth Summit of 1992 in the area of institutions for sustainable development. Practical evidence worldwide suggests, indeed, that many obstacles and bottlenecks have impeded the complete implementation of its principles. Particularly, Principle 4 of the Rio Declaration states that

"In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it". (United Nations, 1992: Principle 4, Rio Declaration)

The integration of environment and development represents a complex topic which has often been addressed from a win-win perspective. In opposition to this common trend, McShane *et al.* (2011:966) argue that "Win-win scenarios, where both natural resources are conserved and human well-being is improved in specific places over time, have been difficult, if not almost impossible, to realize. Compromise, contestation and conflict are more often the norm". Indeed, compromise, contestation and conflict may occur at several levels of governance, in multiple arenas and at different times in the policymaking process around specific policy initiatives. In addition, lower level of development is recognized as a potential threat to the pursuit of natural resources conservation (see Principle 11 of the Rio Declaration). Therefore, in order to shed some light on the state of implementation of Principle 4 of the Rio

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Declaration, we investigate the environment/development nexus in a sectoral policy, i.e., fisheries, of a developing country, the People's Republic of China (PRC).

We focus on fisheries because of the societal relevance of this policy field. The depletion of fisheries resources and their marine environment due to overfishing has been commonly recognized as a global problem which impacts on both the North and South of the planet (Chuenpadgee *et al.*, 2005). Awareness about the possible extinction of fish species has increased over the years, particularly after the UNCED in 1992 (Christensen *et al.*, 2007). Since Agenda 21 (Chapter 17), international organizations have promoted the sustainable use of fisheries' resources. The need of more responsible fisheries has been confirmed by FAO Code of Conduct on Responsible Fisheries (CCRF, 1995) and the Johannesburg Plan of Implementation (2002) adopted at the World Summit on Sustainable Development (WSSD) (Freestone *et al.*, 2006). Despite these international efforts, the pursuit of sustainable fisheries faces high resistance from fishing States. Of these States, those that belong to the developing world will pay most of the costs of overfishing and the consequent depletion of fish stock. These costs range from loss of income to unemployment, from the decrease of food security to a drawback in poverty reduction (Hanna, 2003). Among the fishing developing countries, the People's Republic of China constitutes a relevant case for the purpose of our research. The World Bank defines developing countries as those states with a annual gross national income (GNI) per capita lower than US\$ 11,905 (in 2008), which includes both low- and middle-income countries. With her middle income, China still falls within the group of developing countries, although the PRC "has developed huge budget surpluses stemming from a favourable balance of trade" (Gamer, 2008:7). While the PRC still constitutes a developing country, it is among the major coastal fishing states. The country is, indeed, the largest fish producer and main exporter in the world (FAO, 2010).

More precisely, the environment/development nexus in China's fisheries policy will be analysed in relation to the country's Fisheries Law. In China, a complete legal framework for fisheries management has been in place only since the 1980s. After the Cultural Revolution (1966–1976), China recreated her entire national legal system and passed the 1986 Fisheries Law of the People's Republic of China (Fisheries Law, 1986) (Saich, 2004; Xue, 2005; Zou, 2005). Later, in the 1990s, the depletion of fisheries' resources as a result of over-fishing started to be perceived as a serious socio-economic problem by the country's political elite. One of the first official acknowledgments of the problem (contained in China Agenda 21, Art. 14.65) was nonetheless accompanied by considerations about the political difficulties of achieving responsible fisheries in the country. This would be achieved only through a long and complex process because of the multiple stakes involved in the field. A new

Fisheries Law was adopted in 2000, which was further amended in 2004 for few aspects related to aquaculture. With a focus on marine capture fisheries, we analyse the revision that took place in 2000. We ask *to what extent China's fisheries reform integrates environmental protection into the development process of the country.*

The Fisheries Law 2000 works as a case; we have no ambition of covering all aspects of China's fisheries management. Our paper highlights the complex set of actors, interests and objectives populating fisheries policymaking in China. Our research purpose is to disclose the major stakes along the environment/development nexus in the multi-actor and multi-layered Chinese politico-administrative system. We want to analyse the political economy of fisheries' reform along the entire policy process, which includes policy formation, policy implementation and policy termination. While policy formation coincides with the adoption of the Fisheries Law 2000, the analysis of policy implementation calls for the selection of a specific aspect contained in the law. We focus on the fishing licensing system. The analysis of the implementation of fishing licences in China calls for a closer look at the sub-national actors who are directly involved in the execution and enforcement of the licensing system. Guangdong Province has been selected as a specification of the Chinese case for the study of the sub-national aspects of fisheries policy implementation. This choice is due to the relevance of the Guangdong Province which represents China's largest provincial economy (Chen, 2002; Saich, 2004). In the case of licences, policy termination (understood as the phasing out of a specific governmental programme) consists of buy-back programmes aimed at decommissioning vessels. We acknowledge that the selection of single aspects (i.e., licensing system and buy-back programmes) related to a specific policy output (i.e., the Fisheries Law 2000) in one Chinese province (i.e., Guangdong) poses problems of generalization of our results. We will deal with the scope of generalization in the conclusion of our work.

The analysis will include two main levels of policymaking, i.e., the national (or central) and sub-national (or local) ones. Therefore, our analysis develops along a vertical dimension linking the national and sub-national levels, and along two horizontal dimensions linking actors at both spatial levels (central and local) (Exworthy and Powell, 2004; Hill and Hupe, 2009).

2. Data collection

For assessing the integration of environmental protection in China's fisheries policy, we collected our data through a prolonged document analysis and several phases of interviewing. Initial useful information on China came from books on her political system and articles on her environmental policy. Later, we analysed the content of

governmental acts related to fisheries management: national laws, regulations and measures, as well as provincial legislative documents. Further data on the Chinese case were collected through interviews conducted in China. At the early stage of our project (June 2007–August 2008), we interviewed civil servants from the provincial and local fisheries administration in Guangdong Province. Later (October 2009), we interviewed policy officers in Beijing, at the Fisheries Management Bureau of the Ministry of Agriculture and the State Oceanic Administration.

In order to verify the reliability of the data provided during interviews with Chinese State actors, these data were compared with three other sets of interviews we conducted in Asia. First, during a period of study at the University of Hong Kong (October 2009), interviews with academics helped us to contextualize those data in the framework of the Chinese political system. Second, a Chinese interviewee from an international NGO we met in Beijing (October 2009) clarified the data presented by policy officers and civil servants, and elaborated on them from a non-governmental perspective. Third, one interview at FAO Regional Office for Asia and the Pacific (Bangkok, May 2008) helped us to put the data collected through interviews in China into perspective within the Asian region. A total amount of 25 interviews were conducted at several levels of governance and in multiple geographical locations: regional organizations (Bangkok); China's central government (Beijing); provincial and sub-provincial administration (Guangdong Province).

3. Fisheries policy in China: major trends

Since 1978–1979, China has gone through major reform process which has embraced both the economy and the polity of the country (Beyer, 2006; Fu *et al.*, 2008; Wu and Wang, 2007). Economic reforms in the direction of a market economy started from special zones in the coastal provinces, and have later spread to the whole national territory, thus bringing the People's Republic of China (PRC) into a “social market economy” (Interview with a top officer, Ministry of Agriculture, Beijing, October 2009, Interview File BJ.AX.09). This hybrid economic system, i.e., “a market economy with socialist characteristics” (Fu *et al.*, 2008:893), has turned China into one of the world's fastest growing economy (Gamer, 2008). Economic development has, indeed, been promoted since the late 1970s as the primary policy objective of the country, cutting across all policy fields (Xue, 2005). This emphasis on development and growth has also characterized fisheries policy.

By the mid-1980s, while the PRC was promoting economic development and growth in all sectors, the fisheries production of the country was not sufficient to feed China's population. Together with the overarching priority of economic growth, this problem of food supply pushed

the Government to adopt a policy of strong exploitation of fisheries resources, which inspired the first version of the Fisheries Law (1986) (Interview File BJ.AX.09: Ministry of Agriculture, Beijing, October 2009). Particularly since the early 1990s, China has invested a high amount of energy and resources in the creation of a “Blue Economy” (Xue, 2005; Zou, 2005). This marine-related economy (hence, “blue”) has had fisheries as its pivotal industry and benefited from the country's favourable natural conditions for fishing. With a land territory of about 9.6 million km², China is one of the largest countries in the world (after Russia and Canada). Its long coastline (more than 18,000 km) along four main seas (Bohai Sea, Yellow Sea, East China Sea, and South China Sea) defines a large fishing ground (818,000 square nm) which corresponds to one quarter of the world's total fishing grounds (Xue, 2005; Fu *et al.*, 2008; Qiu *et al.*, 2009). The exploitation of these potentials not only solved the problem of scarce food supply from fisheries (see above) but also determined a rapid development of the fisheries sector. Since the first text of the Fisheries Law (1986), fishing activities expanded and became much more relevant for the rural economy and the richness of the whole country (Interview File BJ.AX.09: Ministry of Agriculture, Beijing, October 2009).

Thanks to her favourable natural conditions, under a policy of full exploitation aimed at the national economic growth, China has become the largest fish producer in the world since the 1990s (Xue, 2005). In 2008, the country produced 47.5 million tonnes (14.8 million tonnes from capture fisheries and 32.7 million tonnes from aquaculture), which corresponds to one third of the world production (FAO, 2010). It is worth recalling, though, that exact production statistics for China remain somewhat dubious. The country has for long time provided incorrect data to the Food and Agriculture Organization of the United Nations (FAO), as was pointed out by Watson and Pauly (2001). China had systematically over-reported her fish catches to FAO, which has, ultimately, covered up the actual worldwide drop in catches (Watson and Pauly, 2001).

However, according to the data available, in the early 2000s, agriculture accounted for 35% of the national GDP and fisheries represented the 10% of the total contribution of agriculture to the national GDP (Xue, 2005). Fisheries contribute even more significantly to the GDP of coastal provinces, as well as their employment rate. Particularly after the industrialization of the 1990s caused a considerable loss of farmlands, agricultural workers have engaged in fishing, which is usually more profitable than agriculture. Hence, China currently counts six million households depending on fisheries, which has made China the country with the largest fishing population in the world (Xue, 2005; Qiu *et al.*, 2009). According to FAO (2010), in 2008, 13.3 million people were employed as fishers and fish farmers in China. Finally, fisheries play an important role in food supply in a country with 1.3 billion inhabitants, which represents about one fifth of the world's population (Gamer,

2008). Fish products constitute an important source of protein and fish consumption has increased enormously in the last twenty years, from 4.6 kg per capita in the early 1980s to 36.1 kg in 2003 (Xue, 2005).

In general, China's rapid economic growth has caused major environmental problems in the country, such as a severe depletion of natural resources and high levels of pollution (Gamer, 2008). These problems, in turn, seriously impact on Chinese society: "Deforestation, removal of ground cover and wetlands, water and air pollution, and giant engineering projects pose serious threats to China's food and water supplies, health, and standard of living" (Gamer, 2008:8). In the fisheries domain, the development of a blue economy, which responded to the national emphasis on economic development and the priority of food supply, has determined an over-exploitation of fish stocks (Xue, 2005; Zou, 2005). Such intense exploitation of the marine resources has generated new problems which became evident by the mid-1990s: the marine environment presented signs of severe deterioration; the resource outputs stopped increasing; and the quality of the fish production decreased (Interview File BJ.AX.09: Ministry of Agriculture, Beijing, October 2009). In 1994, the policy document "China's Agenda 21" clearly stated: "The worsening of marine ecological environment has resulted in a dramatic downturn with respect to the abundance of marine biological resources. The main problems that the marine fishery resources in China face are an excess of total catch and a decline in traditional fishery resources".

With fisheries contributing to national wealth, foreign exchange, employment and nutritional needs (even more significantly for coastal provinces), the problem of fish stock depletion and marine environmental deterioration implies negative consequences for the Chinese economy and society. Under the threat of these consequences, policy priorities in China seem to have shifted, at least on paper, towards the protection of fisheries resources and the entire marine environment. The shift in the priorities of China's political agenda towards environmental protection appears in policy documents (e.g., China Agenda 21) and is evident in the country's quinquennial planning. Since the Tenth Five-Year Plan (covering the period 2001-2005) economic growth is pursued as a strategic objective together with the conservation and protection of China's natural resources.¹ However, we want to move beyond formal documents and assess to what extent environment and development have actually been integrated. Integration may indeed be more apparent than real, more formal than factual. It may even result from a compromise among diverging objectives which, in the end, leaves wide spaces of manoeuvre and discretion. Ultimately, rhetorical integration may legitimize trade-offs at the expense of the environment. In order to

disclose these aspects beyond formal declarations, the policy process around the revision of China's Fisheries Law is traced and analysed in the following sections.

4. The adoption of the Fisheries Law 2000: policy formation

In 2000, a new Fisheries Law (FL) (National People's Congress, 2000) was issued by the National People's Congress of the PRC "for the purpose of enhancing the protection, proliferation, exploitation and rational utilization of fishery resources, [...] and boosting fisheries production, so as to meet the requirements of socialist construction and the needs of people" (FL, 2000: Art. 1). The law aims, then, at enhancing both protection and exploitation, and rational utilization is ultimately envisaged to boost production for the needs of the country. However, the integration of environmental concerns into development strategies is rather a compromise among the multiple interests that surrounded the revision of the law than the result of a serious commitment to sustainable development.

A top official interviewed in Beijing at the Ministry of Agriculture (October 2009, Interview File BJ.AX.09), who was involved in the revision of the Fisheries Law, affirmed that the revision had been characterized by conflicts between two central agencies, i.e., the Fisheries Management Bureau (FMB) and the State Oceanic Administration (SOA). These two agencies are usually steered by diverging objectives. While the FMB acts as 'the servants of the fishers', the SOA considers itself as 'the owners of the sea'. While the former worries about fishers' activity and income, the latter pursues the protection of the sea by restricting the access to marine resources. Similar diverging objectives also characterized the relations between Beijing and the provinces. Indeed, the Chinese political system is characterized by the permanent need to conciliate central policies with provincial concerns for economic development. These sub-national concerns, which influenced the reform process already during the adoption of the law (policy formation), are even more evident during its execution (policy implementation), when Chinese provinces play a major role (see below).

The Fisheries Law 2000 does not seem to pursue sustainable development as its priority. It rather confirms a set of different and inconsistent objectives, which were already present in the previous version (i.e., FL 1986), in order to appease political and bureaucratic conflicts during policy formation. Usually, the clear definition of policy objectives decreases the discretion of the administrators involved in policy implementation (Barrett, 2006; Winter, 2006). However, this clarity may also hinder the achievement of consensus during policy formation. Therefore, policymakers often favour compromise through the adoption of ambiguous policy

¹ From the Chinese Government's Official Web Portal. Available at http://www.gov.cn/english/2006-04/05/content_245624.htm. (Last accessed 22 April 2010).

objectives, which facilitates the achievement of consensus among stakeholders (Grindle, 1980; Lazin, 1999).

Only minor changes in the direction of a more responsible fisheries management were introduced by the new law. According to the Fisheries Law of 2000, fishing licences need to be obtained for any fishing operation, either of Chinese or foreign vessels (Zou, 2005). The issuing or the renewal of fishing licences is now subject to stricter requirements (Xue, 2005; Cheng *et al.*, 2006). First, a new article of the Fisheries Law (2000: Art. 24) establishes that fishers willing to have their licence issued or renewed must present a number of specific documents: inspection proofs, register certificates, specifications of their fishing vessel, etc. Second, since licences must specify “types of operation, location, time limits and quantity of fishing gear” for each unit and individual involved in fishing activities (FL, 2000: Art. 25), the new law also contains stricter requirements about the number and types of gears and vessels.

5. The PAFL 2002 and the Guangdong Regulations 2003: policy implementation

The Fisheries Law of 1986 had broad implementing measures issued in 1987 by the State Council. With regard to the FL 2000, the legal office of the State Council decided not to have a broad implementation act, but rather specific implementing measures for given aspects (Interview File BJ.AX.09: Ministry of Agriculture, Beijing, October 2009). For licensing, the Ministry of Agriculture (2002) issued, the Provisions on the Administration of Fishery Licensing (PAFL) in accordance with the FL 2000. The Provisions on the Administration of Fishery Licensing (PAFL) specifies the system of fishing licences at the national level, and, thus, function as the delegated legislation (or implementation acts) of the FL 2000 (Page, 2001).

In line with the Fisheries Law (2000), the Provisions on the Administration of Fishery Licensing (PAFL) aim to “protect and reasonably utilize the fishery resources, control the fishery intensity, maintain the fishery production order and safeguard the legitimate rights of the fishery producers” (PAFL, Art. 1). The attempted conciliation between production concerns and fisheries conservation present in the primary law is then confirmed in these delegated acts. However, this conciliation ultimately opens up spaces of manoeuvre for provincial adaptation. It allows, indeed, the eventual distortion of Beijing’s policy objectives, rather than integrating the environment into national and sub-national fisheries development strategies.

On the basis of the FL 2000, the National People’s Congress of the Guangdong Province also adopted provincial regulations in 2003 (Regulation of the Guangdong Province on the Administration of Fishery). The system described in such regulations is extremely complex. For instance, authorities at various geographical levels issue licences to vessels with different power and

gears. In general terms, while the central administration (MOA) deals with large-scale fisheries and high-sea fisheries, provincial and local fisheries administrations deal with small-scale fisheries (Interviews at the fisheries administration: Beijing, October 2009, Interview File BJ.AX.09; Guangdong, May 2008, Interview file GD.GV.08).

The acts adopted by the MOA and the Province (respectively the PAFL 2002 and the Guangdong Regulations 2003), enable both the central Ministry (through its Fisheries Management Bureau) and the provincial administration (i.e., the Guangdong Oceanic and Fisheries Administration-GDOFA in the Guangdong Province) to manage licences at the national and provincial level. The role of the province in the Chinese licensing system is then extremely strong: the provincial fisheries administration issues licences and carries out annual controls on vessels’ compliance with the licence specifications (Zou, 2005). More precisely, under the provincial branch of the FMB, enforcement of fisheries management regulations is carried out by the Fishery Patrol (Interview with an officer of the State Oceanic Administration, Guangdong, May 2008, Interview File GD.AV.08). The strong role of the provincial fisheries administration in the Chinese licensing system has relevant consequences in the enforcement of the regulatory system put in place.

6. Enforcement of the licensing system: policy implementation

A high number of violations to the current licensing system still occur in China (Zou, 2005; Cheng *et al.*, 2006). These violations seem to take place not only because of the inadequate sanctioning system, which still relies on very low sanctions, but also because enforcement is jeopardized by a common administrative tolerance. In the framework of implementation studies, Lipsky (1980) has recognized the impact of street-level bureaucrats’ discretionary decisions on the process of implementation. They are the front line staff in delivery agencies: teachers, policemen, nurses, doctors, tax inspectors, social workers, etc. Street-level bureaucrats are, in our study, the fisheries inspectors of the Fishery Patrol responding to the provincial fisheries administration. These public service workers at the delivery end of the policy cycle have to cope with workload among multiple demands; hence, they ration services (e.g., monitoring and sanctioning), select clients (e.g., who should be sanctioned), and, ultimately, modify policy objectives (Lipsky, 1980).

In China, the high degree of tolerance for evasion shown by the local fisheries inspectors is not only motivated by workload and discretionary decisions. According to several authors (e.g., Lieberthal, 2004; Saich, 2004; Burns, 2007), the Chinese policy process is characterized by the

Table 1. Powered fishing fleets in China

Year	2000	2001	2002	2003	2004	2005
Number	487,297	479,810	478,406	514,739	509,717	513,913
Tonnage (GT)	6,849,326	6,986,159	6,933,949	7,225,660	7,115,195	7,139,746
Power (kW)	14,257,891	14,570,750	14,880,685	15,735,824	15,506,720	15,861,838

Source: FAO, 2006:27.

intervention of strong interests and pervasive corruption. More precisely, policy implementation seems to be captured by informal patron-client type relationships that take place especially at the level of local governments, for example, between local entrepreneurs and local officials. This point has been confirmed for fisheries, a civil servant from a sub-national authority (Guangdong, October 2007, Interview File GD.PX.07), has stated that evasion occurs frequently along informal relationships between fishers, local enforcement officials and higher authorities. The problem of administrative tolerance becomes more acute when local enterprises are run by local officials or the same provincial government (Saich, 2004).

As already explained the Fisheries Law (1986/2000) and the Provisions on the Administration of Fishery Licensing (PAFL 2002) attribute fisheries competences to the Ministry of Agriculture (MOA) and management responsibilities to the Fisheries Management Bureau (FMB). They also recognize the provincial fisheries administration, i.e., the Guangdong Oceanic and Fishery Administration (GDOFA) in our study, as the primary authority for the implementation of the licensing system. However, the government of the Guangdong Province does not only possess strong competences in the implementation (and enforcement) of the licensing system; it also owns one of the major companies fishing in the South China Sea (Field research conducted in Guangzhou, Spring 2008). It follows that the Province is placed at the centre of conflicting interests: the Province has high discretionary power on managing fishing licences, owns an important fishing company, and — in addition — is responsible for its own budget in a situation of fiscal decentralization that has characterized China for the last few decades. The discretionary power of the Province also plays an important role in the country's attempts to reduce capacity, as we show here.

7. Capacity reduction: policy termination

Although the Chinese Fisheries Law 2000 does not explicitly address the issue of capacity reduction, China is promoting capacity control through a vessel reduction programme (Xue, 2005). In 2002, the Ministry of Agriculture adopted a five-year Buy-Back Programme (BBP for simplicity) to discard 30,000 vessels from the

Chinese commercial fleet (FAO, 2010). In this framework, the Chinese Government offered subsidies to fishermen leaving their profession and training for redundant fishers (Cheng *et al.*, 2006; FAO, 2010). The reduction plan (targeting both small and large fishing vessels) is based on voluntary participation; hence, its results strictly depend on the system of incentives put in place. In the absence of appealing incentives and, most of all, alternative livelihoods, fishers have not been very keen to give up their only source of employment (Interviews: Ministry of Agriculture, Beijing, October 2009, Interview File BJ.AX.09; provincial fisheries administration, Guangdong, June 2008, Interview Files GD.HVI.08 and GD.FVI.08; local fisheries administration, Guangdong, May 2008, Interview File GD.GV.08). For this system of incentives, Beijing largely depends on the commitment of the Province.

The programme specifies obligatory reduction targets for each coastal province and heavily relies on provincial governments for carrying out its implementation and for the allocation of financial resources.² In a context characterized by a high level of provincial discretion, each province (competent for defining and financing the implementation of the BBP) carries out its own plan at its own pace according to its own priorities (Interviews with a civil servant, Fisheries Administration, Guangdong, October 2007, Interview File GD.PX.07). According to the framework set by Beijing for the period 2002–2007, the Guangdong Province should reduce fishing vessels from 49,659 units (2002) to 42,960 (2007) (MOA, 2003). The Guangdong Government has, thus, framed a provincial vessel reduction plan and allocated 600 million Yuan (US\$ 95 million) to reduce the fishing fleet and provide new jobs for redundant fishermen. (Under this plan, another 107.5 million Yuan (US\$ 17 million) should be provided by coastal municipal governments.) The limited funds made available for the plan result in an inadequate system of incentives³ (Interview with a civil servant, Guangdong, June 2008, Interview File GD.HVI.08).

Although outcome assessment is particularly difficult in China due to the high level of illegal fishing and lack of accurate data, the information available (see Table 1)

² The central annual budget for the plan is 270 million Yuan (US\$ 43 million) for the whole country (Guangdong Provincial Government, 2004).

³ For example, only 50,000 Yuan (US\$ 8,000) are offered to scrap a 40 kW motor fishing vessel; the amount equals the income of one year (Guangdong Provincial Government, 2004).

Table 2. Marine catch in the Guangdong Province

Year	2000	2001	2002	2003	2004	2005	2006
Output (million metric tons)	1.91	1.88	1.85	1.82	1.78	1.72	1.69

Source: GSY, 2008.

shows that fishing intensity and excess capacity still need reduction in China (Cheng *et al.*, 2006:3).

Most fishers have refused to leave their profession and resisted the curtailing of fishing licences. Their number has decreased from 9,213,340 (in 2000) to 8,389,161 (in 2005) and to 8,288,287 (in 2008) (FAO, 2010). A similar reluctance has been shown in the Guangdong Province. Values of marine catch for the Guangdong Province (see Table 2) follow the general trend of Chinese catch, which seems to be diminishing since 2000 (Xue, 2005). However, Christensen *et al.* (2007:71) suggest that the decrease in catch which is taking place since the 1990s at a global scale represents a clear symptom of a general stock depletion.

8. Discussion of results

We discuss, here, the reform process presented in the previous section. Trade-offs between environment and development emerge at several moments during policy formation, implementation and termination. These trade-offs are discussed along three levels of analysis: those taking place at the Centre; those characterizing the interaction between the Centre and the Province; and those that have been detected in the Province.

8.1. Trade-offs at the Centre: SOA vs. FMB

The Fisheries Law issued in 2000 (FL 2000) embodies the objectives of the major actors involved in its revision. What seems to be an integration of environmental concerns into a rationale of fisheries exploitation for higher production and economic growth is in fact a compromise. In order to reach consensus on the revision of the law, the views of the “friends of the fish” (the SOA) and “friends of the fishers” (the FMB) had to be conciliated. This attempt to conciliate environment and development also characterized the issuing of the delegated legislation (or implementation acts) of 2002 (i.e., Provisions on the Administration of Fishery Licensing, PAFL).

The departmental structure of state administration at the central level often causes cross-departmental conflicts when specific policy initiatives require the involvement of multiple departments or agencies (Exworthy and Powell, 2004). An important line of bureaucratic fragmentation in the Chinese politico-administrative system goes, indeed, with the vertical specialization among functions. Several

policy areas in China are characterized by the sharing of competences among multiple departments/agencies pursuing very different objectives. Inter-organizational differences in values and interests can lead to different levels of commitment to a policy (Barrett, 2006; Winter, 2006) and problematic organizational interactions. This seems to characterize marine affairs in China. At the central level, competencies for marine resources are allocated along two main bureaucratic branches: one strictly dealing with fisheries management and the utilization of fisheries resources, the other in charge of marine environmental protection. Within these two branches, three major bureaucratic actors can be highlighted at the Centre: the Ministry of Agriculture and its Fisheries Management Bureau; the Ministry for Environmental Protection (former State Environmental Protection Agency); and the State Oceanic Administration under the Ministry of Land and Resources. In particular, two agencies had a major role during the revision of China’s Fisheries Law: the Fisheries Management Bureau (FMB) and the State Oceanic Administration (see Figure 1).

The first Fisheries Law of 1986 attributed competences for fisheries management to the Ministry of Agriculture (MOA). Under this ministry, the Fisheries Management Bureau (FMB) (which responds to the MOA) is in charge of implementing fisheries laws and managing all aspects of fishing activities, which makes it China’s highest fisheries authority (Xue, 2005; Zou, 2005; Cheng *et al.*, 2006). Under the FMB, enforcement for fisheries management is carried out by the Fishery Patrol (Interview with an officer of the State Oceanic Administration, Guangdong, May 2008, Interview File GD.AV.08). While the Ministry for Environmental Protection (MEP) is in charge of the supervision on environmental protection at a macro level, the State Oceanic Administration (SOA), under the Ministry of Land and Resources (MOLR), constitutes China’s governmental agency for marine environmental protection in particular (Interview with an officer of the State Oceanic Administration, Beijing, October 2009, Interview File BJ.DX.09).

In conclusion, fisheries management and environmental protection still remain separate competences allocated to different central agencies with their own interests, goals and strategies. Consistency among the two objectives (i.e., fisheries development and marine environmental protection) is far from being achieved. More importantly, fisheries development priorities still prevail on

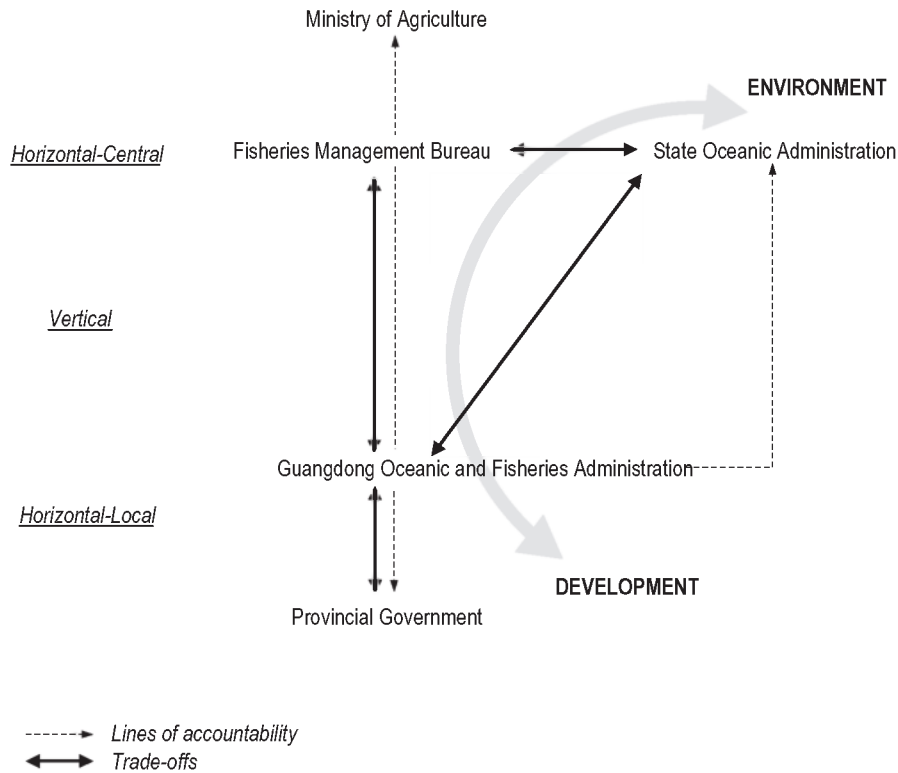


Figure 1. Trade-offs in China's fisheries policy.
Source: Authors' elaboration.

environmental concerns among the central policymakers (Interviews at the University of Hong Kong, October 2009, Interview Files HK.BX.09 and HK.EX.09).

8.2. Trade-offs between the Centre and the Province: SOA/FMB vs. GDOFA

The ambiguity of the policy objectives stated by the Fisheries Law 2000 allows the consensual acceptance not only among central agencies, but also of the Province. However, it also leaves a wide space of manoeuvre for provincial adaptation, which may ultimately distort Beijing's policy objectives. Public policies often tend to be diluted, distorted and evaded during their implementation and journey from the centre to sub-national authorities (Exworthy and Powell, 2004). In China, the Centre steers the state bureaucracy below the national level through a formal "vertical functional control". This vertical bureaucratic control develops from the ministry in charge of a specific field to all agencies and functions dealing with that field. All sub-national administrative units (e.g. provincial departments) are accountable to the competent national ministry in Beijing (Lieberthal and Oksenberg, 1988).

Nevertheless, the direct leadership of central ministries on subordinate territorial levels of administration has weakened through the years. At each territorial level, sub-national governments exercise more direct leadership than

national ministries; the latter have rather assumed a supervisory role (Lieberthal, 2004). Because of the equal bureaucratic rank between ministries and provincial governments, and the increased revenues, powers, and role of provinces, a functional department in a provincial government is responsible to both the provincial government and the competent central ministry. This double accountability results in an overlap of authority along two main dimensions: a vertical-functional line of authority (along a specific competence branch) and a horizontal-territorial one (within a given geographical jurisdiction) (Lieberthal and Oksenberg, 1988). Such overlap of authorities complicates the policy process, because the dominance of one over the other will determine how national policies are implemented (Saich, 2004).

The Fisheries Law (2000) charges both the MOA and the Province with issuing delegated legislation for the management of fisheries resources. The delegated legislation adopted by the MOA and the Province (respectively the PAFL of 2002 and the Guangdong Regulations of 2003) enable both the central ministry (through its Fisheries Management Bureau) and the provincial administration to manage fisheries resources, for example, through the issuing of fishing licences. Under the competence of the Ministry of Agriculture (MOA) and its Fisheries Management Bureau (FMB), Local Fisheries Management Bureaus (LFMBs) are located at the provincial level, for each one of the coastal provinces.

The Local Fisheries Management Bureau of the Guangdong Province is the Guangdong Oceanic and Fishery Administration (GDOFA). All LFMBs are involved (together with the central FMB) in the management and conservation of fisheries resources, controls on fishing operations, and enforcement of fisheries laws (through the Fishery Patrol) (Xue, 2005; Zou, 2005).

As for all other local fisheries management bureaus (LFMBs) (Zou, 2005), most of GDOFA's funds do not come from the central administration (to which GDOFA must respond), but from the provincial government. Through provincial funding, the Guangdong government has, thus, a high degree of influence on the activity of GDOFA (Interviews with a civil servant at GDOFA, Guangdong, June 2007, Interview File GD.OVI.07). This creates institutional overlap and tensions between natural resources conservation (officially promoted by the national administration) and development priorities (defended by the provincial governments). The presence of tensions between incoherent objectives in China has not only been reported in the literature (e.g., Xue, 2005), but also confirmed by interviewees at several levels, from international organizations (Bangkok, May 2008, Interview File BK.AV.08) and international NGOs (Beijing, October 2009, Interview File BJ.EX.09), down to the provincial administration (Guangdong, June 2007, Interview File GD.OVI.07).

Moreover, the Guangdong Oceanic and Fishery Administration (GDOFA) comprises a provincial office of the State Oceanic Administration (SOA), as it happens for many other LFMBs in China (Interview with an officer of the State Oceanic Administration, Beijing, October 2009, Interview File BJ.DX.09). Within GDOFA, then, friends of the fishers and friends of the fish co-exist; they respectively respond to both the Ministry of Agriculture (MOA) through its Fisheries Management Bureau (FMB) and the Ministry of Land and Resource (MLR) through the SOA (Interview with an officer of the SOA, Guangdong, May 2008, Interview File GD.AV.08) (see Figure 1). However, field research in Guangdong has revealed that it is GDOFA's focus on fisheries exploitation for economic growth (backed up by the political will of the provincial government) that tends to prevail in the Province.

In conclusion, in the peculiar political system of the PRC, characterized by a complex multi-layer structure where the province constitutes a powerful layer, policymakers in Beijing need to conciliate national policy priorities with provincial concerns. Sub-national governments in China are mainly concerned with economic growth — which represents their main policy priority — rather than environmental protection. Thus, in China's fisheries management, provincial discretion, rather than vertical control, prevails during policy implementation. Pulled in different directions, the GDOFA enjoys in the end a high degree of autonomy, which makes it a relevant veto point — an actor in the system able to block the policy process.

Particularly, the powerful pressure from the provincial government has important consequences in the local enforcement of the regulatory system put in place.

Similar considerations are valid also for the phase of policy termination, exemplified in our research by the BBP. The reduction of 30,000 units foreseen by the BBP 2002–2007 has implied a huge financial burden at both the central level (through the Ministry of Finance) and at the local government level, as the latter must participate (financially) in the reduction plan. Scarce provincial commitment to the plan easily compromises the whole national programme and the objectives set by Beijing (Interview at the Ministry of Agriculture, Beijing, October 2009, Interview File BJ.AX.09).

8.3. *Trade-offs in the Province: GDOFA vs. provincial government*

The provincial discretion that ambiguous objectives allow is particularly evident during the enforcement of Beijing's laws and rules at the local level by the Fishery Patrol (i.e., working level bureaucracy). Although the FL 2000 punishes violations with higher fines than in the past, sanctions are still negligible and over-fishing can pay more than the loss due to penalties (Ferraro *et al.*, 2009). The respect of Beijing's policies by target groups (i.e., fishers) is further jeopardized because even low sanctions are rarely applied. Enforcement is characterized by a high degree of tolerance for evasion shown by the local fisheries inspectors. Administrative tolerance can be deductively linked to the patron-client relationships studied in the Chinese State, particularly at the provincial and local level. In a country characterized by a high level of corruption among civil servants (Burns, 2007), personal relations are decisive. Fees and fines are more often negotiated than imposed authoritatively (Beyer, 2006) and regulations of any kind are set aside on receipt of bribes (Lieberthal, 2004). The increased control of local governments on resources under their jurisdiction, which has occurred with the decentralization process, has strengthened this practice of local clientelism (Saich, 2004). Particularly, Saich (2004) has emphasized the re-emergence of traditional power structures within Chinese villages in the form of lineages and clans, which has made the implementation of party rules more difficult. Clientelist ties are even more recurrent when local enterprises are run by local officials. Indeed, since the late 1990s, with the promotion of shareholding (coupled with the decentralization process), local officials have used their position of power to acquire majority shareholdings in enterprises and have started to run major local businesses (Wank, 2002). The conflict between official public interests and the informal pursuit of personal gain is evident.

The provincial emphasis on economic development that we discussed above does not only create a distortion of Beijing's policy objectives, but it also generates a

dangerous “conflict of interest” when sub-national governments sponsor or own industries (Beyer, 2006). As for all economic domains, state-owned fishing companies are still very present in China (Interview File BJ.AX.09: Ministry of Agriculture, Beijing, October 2009). In the Guangdong Province, the provincial administration is a pivotal actor in the enforcement of the licensing system, but the Guangdong government also owns one of the major companies fishing in the South China Sea. The Province is thus both the “ruler” (i.e., the main actor in fisheries policy implementation) and the “ruled” (through the ownership of an important local fishing company). This creates an evident conflict of interest which undermines any credible commitment to the responsible management of fishing activities (see Figure 1). Indeed, it pushes further the exploitation of fisheries resources, which still constitute an important source of public revenue for the Province in a situation of fiscal decentralization. Similar conflicts of interest in China have been traced by other studies in different economic fields (Saich, 2004; Beyer, 2006). These studies, then, prove that the predominance of development over environment is a common feature across several production sectors in China beyond the fisheries case we have analysed here. We come back to this point in the conclusions.

9. Conclusions

The purpose of our research was to understand to what extent China’s fisheries policy reform integrates environmental protection into the development process of the country. Despite the country’s formal statements about the need for more environmental protection (e.g., China Agenda 21 and the Tenth Five-Year Plan), actual change in fisheries policies and practices seems minimal. The case we studied — i.e., the process of adoption of the new law (policy formation), its execution/enforcement in relation to the licensing system (policy implementation) and efforts of capacity reduction (policy termination) — has revealed the presence, in China, of diverging and, often, conflicting objectives at the central level, at the provincial level, and between them. Three considerations about the problems highlighted above are presented here, before broadening our conclusions from the case studied to the environment/development nexus in China and the developing world.

The case has shown three important aspects. First, the administrative fragmentation among ministerial agencies at the central level needs to be solved through a serious commitment to more cross-departmental coordination within the framework of marine affairs. Particularly, marine resources utilization cannot be detached from marine environmental protection. Second, marine environmental protection should be included in national and sub-national development plans, in order to tie all layers of government around a more sustainable use of marine resources. A

system of incentives could accompany the formulation of environmental targets for provincial and local administrations. Third, the conflict of interest between fisheries regulation and fisheries exploitation, which is particularly strong at the sub-national level, needs to be solved. Unlike the previous two organizational matters, this last problem is strictly linked to the nature of the political and socio-economic regime existing in the country; hence, it cannot be easily solved in the People’s Republic of China.

Notwithstanding the validity of these recommendations, our analysis suggests broader conclusions. In China, fisheries still remain an important component in nutrition and the only possible source of employment for many local communities. Fishers’ income remains a political priority, especially for coastal local and provincial governments. They cannot increase fishers’ income and at the same time focus on environmental protection (Interview File BJ.AX.09: Ministry of Agriculture, Beijing, October 2009). Chinese fishers usually live in a situation of high poverty, which represents a political concern and one of the major difficulties in adopting and, more importantly, enforcing stricter laws and rules. Not only the adoption of more responsible fisheries policies, but the simple application of high sanctions for violations to the existing laws could ignite severe social tensions. (Interview at a provincial State-owned fishing enterprise, Guangdong, June 2008, Interview File GD.DVI.08). The result is that the country as a whole is still promoting fishing activities beyond a sustainable level.

In China, economic development has been prioritized at the expense of the environment in many policy fields. Despite her unbalanced development, China still remains a developing country. The fact that some urban centres have constantly developed during the last decades (e.g., Shanghai) cannot obscure the factual poverty of the majority of the country’s population (Kenneth Keng, 2006; confirmed by interviews with academics: Interview Files HK.BX.09 and HK.EX.09, University of Hong Kong, October 2009). The lower level of material well-being constrains both the Government’s objectives and concrete interventions. If this argument may seem overstated for China, due to its multiple sources of GDP, it maintains all its validity when local economies (rather than the national economic system) are analysed. Field research in China at the national and sub-national levels has indeed shown that particularly provincial governments continue to pursue economic development at the expense of any other priority. Concerns for development increase while moving from Beijing to Guangdong, from the Centre to the Province. While officials in Beijing are somewhat more prepared and sensitive to international issues such as the preservation of the environment, local authorities need to cope with more stringent priorities such as poverty and unemployment; they are rarely concerned with international policy developments. At the local level, politics is dominated, on the one hand, by business interests — which influence sub-national policymaking through various channels, including

clientelism and corruption — and, on the other hand, by institutional priorities of development. Particularly, under the financial pressure imposed on localities by China's fiscal decentralization, localities tend to prefer development plans that maximize short-term revenues over longer-term needs. Under the pressure of economic and social urgencies, environmental risks are, ultimately, neglected (Saich, 2004; Wu and Wang, 2007). A strong commitment to economic development has been described by Chen (2002:19) for the Guangdong province in particular: "Any policy reform suggestions and measures, as long as they would benefit economic development, have been welcomed and adopted by the provincial government. On the contrary, any proposal that would hinder economic growth was rejected by the government".

Fishing activities represent the main source of food and employment for many people in the developing world, not only in China. In developing countries, the absence of alternative sources of nutrition and livelihoods makes more responsible fisheries an unachievable objective. Charles (2001) is straightforward on this point. The intense fishing effort in developing countries is often motivated by the lack of economic alternatives. Therefore, "[n]o amount of research or management of fish stocks is likely to produce a resilient system if humans are completely reliant on these resources for their livelihoods, and are unable to survive without over-exploiting them" (Charles, 2001:326). Caddy and Cochrane (2001:667) seem to agree on the point: "as long as the decision-makers perceive themselves to be constrained by a lack of alternative options to address short-term human requirements, there can be little hope for sustainable fisheries management". A sustainable use of fisheries resources can only be pursued if it is coupled with the development of alternative sources of employment and livelihood for those who still depend on fisheries resources. This implies governmental efforts which go beyond the fisheries sector and on which international aid and international organizations' capacity should focus.

In conclusion, our political analysis of the multiple political, administrative and social stakes involved in national and sub-national policymaking has shown recurrent trade-offs along the environment/development nexus. In line with McShane *et al.* (2011), our case study reveals that such trade-offs are made between different interests (economic benefits vs. biodiversity conservation), goals (e.g., development vs. environment), and strategies (short-term vs. long-term). We have also stressed the relevance of the interaction across scales of governance (international, national and local), since trade-offs occur both within and between scales.

Acknowledgments

The study has been carried out with the financial support of the European Commission (Sixth Framework Programme

2002-2006). It forms part of the EU funded project 'ECOST — Ecosystems, Societies, Consilience, Precautionary Principle: Development of an Assessment Method of the Societal Cost for Best Fishing Practices and Efficient Public Policies' (Contract No. 003711). The paper does not necessarily reflect the views of the European Commission. The study of the Chinese case owes much to Weiqing Guo and Feng Tu from the Sun Yat-sen University of Guangzhou (China) who helped us with the data collection in the Guangdong Province. We also would like to thank John P. Burns and his team for the insights presented to us during our visit at the University of Hong Kong. Any misinterpretation is our responsibility.

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