

**INSIGHTS INTO THE POLITICAL (DIS)ECONOMY OF LAKE NASSER FISHERY
DEVELOPMENT***

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ABSTRACT

About 8000 fishers are operating today in the Lake Nasser's fishery (Egypt) and the annual official landing varies between 12,000 and 15,000 tons. Despite this relatively modest importance, the Egyptian authority decided to embark in a reform of the Lake Nasser fishery in the early 2000s. The objective of the present article is to analyze the evolution of this reform. For this, we use a political economy perspective. Our analysis shows that, while some major institutional changes have undeniably resulted from the reform, those have little to do with a 'liberalisation' as conventionally understood in neo-classical literature. Instead, the new *status quo* that resulted from the reorganization of the fishery turns out to be one where the central government and its parastatal agencies have managed to maintain their existing advantages. This failure to reform the system led the fishers and fish traders to develop a massive parallel smuggling 'industry' (black market) which trades a substantial amount of fish through unofficial channels.

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INTRODUCTION

Agriculture in Egypt has always played a central role in the economy of the country. At the end of the 1990s, despite a continuous decline since the 1970s, the sector was still estimated to employ about one third of the national labour force and to contribute about 20% of Egypt's GDP [1]. In comparison, fisheries and in particular the fishery of Lake Nasser is a very recent and relatively small economic activity. About 8000 fishers operate artisanal boats from the shores of the lake and the annual official landings, essentially supplying the domestic market, varies between 12,000 and 15,000 tons a year (LNDA unpublished data). Despite this relatively modest importance, and the difficulties faced by the government in implementing liberalisation and land reforms in the rest of the agricultural sector, the Egyptian authority decided to embark on a complete reform of the Lake Nasser fishery in the early 2000s.

The objective of the present article is to analyze the evolution of this reform, using a political economy perspective. In particular, we will look retrospectively at the justification of the reform, describe the different institutional and economic changes that have (or have not) resulted from its realization, identify how the distribution of power between the different actors has altered the course of its implementation, and finally assess the outcomes (who have been the 'losers' and 'winners'?) of the reform. Our research will show that the reform, which may at first sight be (mis)taken for another attempt of the Egyptian government to pursue the liberalization of the agricultural sector, has in fact very little to do with this agenda. Instead, the analysis suggests that the reform of the Lake Nasser fishery has been the result of a

combination of three converging ‘drivers’. First, the urgent need to respond to a ‘perceived’ environmental crisis where the resource was seen as being over-exploited; second, a despairing attempt to regain control over the management of the fishery, and third, the need to support the Egyptian national food subsidy programme that was at that time dismantled by the government under the pressure of the International Financial Institutions.

CREATION OF THE LAKE NASSER FISHERY

The Lake Nasser fishery started in 1961, with the construction in Aswan of the “High Dam”. The main objectives of the High Dam ‘pharaonic’ project were to regularize the flow of the Nile river, to store water, to provide resource for permanent irrigation and to produce electricity. Behind its structure, the High Dam created a gigantic man-made lake (the Lake Nasser) that spread across Upper Egypt and Sudan along 490 km, with an average width of 15 km. The long and narrow shape of the lake is composed of a main body, following the former riverbed, surrounded by 100 major creeks (*khors*) and numerous minor ones. This dendritic shape creates a shoreline stretching for as much as 7,800 km [2]. In fact, Lake Nasser presents more characteristics of an extremely slow flowing river than of a real lake. It is characterised by a high primary productivity due to the millions of tonnes of the Nile’s slits that slowly sediment in the southern part of the lake [3]. Rich in sediment and thus in food, the Lake supports an abundant fish population. Tilapia (*Oreochromis niloticus*) is the most common species and represents about 80% of the catches. In addition to tilapia, Nile perch (*Lates niloticus*), Tiger fish (*Hydrocynus forskalii*) and *Alestes spp.* are also important for the fishery [4]. While tilapia and Nile perch are landed fresh, Tiger fish and *Alestes* are usually processed by fishers before being sold as salted fish.

The recorded yields of the fishery have varied considerably since the creation of the lake. In the first two years following the filling up of the lake, the production reached 1000 tonnes. Those were caught by a few hundred fishers operating from about 200 small boats [5]. Five years later, when the lake was still only half-full, 3,200 fishers were already catching 4,670 tonnes a year [6]. From then, the development of the fishery accelerated. The number of fishers tripled in a decade to reach about 8,000, and the landings reached a peak of 34,206 t in 1981. Following this, the landings then stagnated around 20,000 t for some years with very important variations that reflected changing water levels, but also social, economical and political factors. Official landings eventually reached an alarmingly low level at 8,281 t in 2000. Since then, annual landings remain low, far below the potential of the Lake, estimated to be between 50,000 and 80,000 tonnes (LNDA unpublished data).

STATE-CONTROLLED MANAGEMENT OF LAKE NASSER’S FISHERY: 1966-2001

The central authority

As soon as 1963, while the first stage of construction of the High Dam was about to be completed, the Governorate of Aswan established the Regional Planning Authority to cope with the changes created by the High Dam. In addition, in 1968, the Egyptian government invited the United Nation Development Programme (UNDP) and the Food and Agriculture Organization (FAO) to establish the Lake Nasser Development Centre in order to assess the development potential of the new water-body and its surroundings. At the end of its mandate, in 1975, the Centre submitted a report with findings and recommendations about how to develop Lake Nasser regarding agriculture, fisheries, public health, settlement planning, tourism and transportation [7].

In order to pursue and implement the work started by the UN, the Lake Nasser Development Authority (LNDA) was established 1975. It was made responsible for the overall development and utilization of the natural resources in the Lake Nasser region. This institution has played and is still currently playing a

crucial role in the development of the fishery. Over the years, NLDA has seen its prerogatives gradually extended up to the point to becoming the only governmental agency in charge of the fishery since 2001.

The cooperatives

Since the first years of existence of the Lake Nasser fishery, one cooperative (called “Mother Cooperative”) has been active. Mother Cooperative did not, strictly speaking, emerge from the will of individual fishers in order to facilitate their activities, increase their bargaining power or improve access to fishing inputs or services. In fact, far from comprising a homogenous and coherent social group, the majority of the individuals involved in the fishing activity are seasonal, unsettled, workers coming from different parts of the country to exploit the fishery with which they have no real historical (long-term) connection. Mother cooperative had therefore no vocation to neither federate, nor represent, these seasonal workers. Instead, its first duty was to link the fishing camps scattered around the lake with the harbour of Aswan. For this, it used to operate half a dozen large carrier boats that visited the fishing camps on a regular basis, providing fishers with food and other inputs and collecting their fish in return [8].

In the early 1970s, the growing potential of the fishery rapidly attracted an increasing number of fishers from all part of Egypt. Along with the development of the fishery and its economic potential, interest for this new income opportunity steadily increased also amongst the local populations. In particular, the Nubians and people from Aswan Governorate suddenly developed an interest in fishing and wished to create their own cooperatives. In 1979, the Nubian Cooperative Society for Fishing (hereafter referred to as the “Nubian cooperative”) was established. Soon after, two other cooperatives were also created: Aswan’s Sons and el Takamol.

In order to reduce the potential conflicts that the entry of these new actors may have created, a license system was introduced in the fishery. Originally, the ownership of fishing boat gave right to claim for a license, and boat/license owners were thus making the majority of the cooperative members. The number of licenses in each cooperative was used to calculate the portion of shoreline that each cooperative was to control. It is interesting to note that the division was based on the length of the shoreline, not on the surface of the lake -as the productivity of the lake is recognised to be more directly related to the shoreline length than to the area or volume of water. Initially licenses could be sold and/or exchanged. Some boat owners thus managed to acquire as many as 100 licenses. Recently new restrictions on renewal of licenses were introduced and the regulations have changed in an attempt to clamp down on the smuggling activity (see below). In particular, an upper limit of 3000 licenses has been fixed and those licenses cannot be sold or exchanged any longer.

The fishers

Fishers operate from temporary fishing camps established along the 7800 km of the lake’s shorelines. With no electricity, no running water and no access to public services, the living conditions in those remote camps are rough. Only male fishers live there, usually staying in rudimentary cane-made shelters for up to 7 months. Those fishers operate whether for a company or under the banner of a cooperative. The ones working for companies are labourers who receive money from their work, usually proportionally to their catch. Fishers working with a cooperative can either own their own license or use the license of another owner. Two contract systems allow this second type of arrangement: leasing and sharecropping. Under the leasing system, fishers pay a certain amount of money to the license owner and then manage their activity and their catch on their own. Sharecropping is more common. Under this system, fishers and license owners will share the profit of the catch, with usually half of which going to the owners. Owning licences can thus become very profitable. Nevertheless, small-scale activity is still widespread on the lake and approximately 50% of the license owners are actual fishers [8]. This

proportion greatly varies amongst cooperatives, though, with a large majority of license owners actually fishing being part of Mother cooperative, by far the biggest cooperative with about half of all the licenses.

State owned companies and fixed price

During the first years of the Lake Nasser fishery development, when Mother Cooperative was still the only cooperative collecting the fish from the fisher camps, a single state-owned company organised the marketing of the fish in Aswan. This company, the Egyptian Company for Fish Marketing (hereafter called Taswik), depended on the Ministry of Supply. At that time, the fishery, as well as the fisherfolk, were of little concern for the central government whose main interest was to provide the country with cheap protein [5]. The price of fish from Lake Nasser was therefore fixed at a very low level and the whole commercialisation process was under state control. The cooperatives collected the fish from fishers and delivered it to Taswik. The money they received from Taswik was later redistributed to the fishers and boat owners.

In order to improve the marketing process, another company, Misr Aswan Fishery and Fish Processing Company (hereafter called Misr-Aswan), was established in 1979. This company did not depend on the Ministry of Supply as Taswik did. It had its shares held by a variety of different actors including the National Bank of Egypt, the A-Chark Insurance Company (affiliated to the Ministry of Investment), the New Urban Communities Authority (part of the Ministry of Housing, Utility and Urban Communities). It was thus clearly a second state-owned company but with wider functions and mandate than Taswik. Misr Aswan did not only bring fish to the national market but also had its own fishing activities and carried out some processing activities. Despite this wider range of activities, Misr Aswan did not have the large marketing infrastructure of Taswik and the government decided to institutionalize this difference in legally attributing 75% of the landings to Taswik and 25% to Misr Aswan.

Declining catches

As mentioned earlier, 1981 has marked a turning point in the evolution of the fishery. Not only the planning reorganisation that took place that year institutionalised a 5-fishing zone arrangement that was then to characterize the fishery for the next 20 years, but it is also the year where the landings reached its peak level at 34,206 t, never equalled since then. Over the following two decades, the yield diminished from 650 kg/boat/day to a mere 35 kg/boat/day. These diminishing quantities as well as decreasing sizes of captured fish were interpreted by many scientists as the sign of serious overexploitation of the resource [9, 10]. Two main factors could have played a crucial role in this decreasing trend.

First, the natural factors, and in particular the varying water level of the lake directly depending on rain precipitation of the basin. Africa went through a particularly dry period over the 1970-1980 and the water level of Lake Nasser (like some other Sahelian Lake, e.g., Lake Chad) showed an overall decreasing trend over that period. This potentially affected the productivity of the *khors* whose total surface were drastically reduced. Second, the fishing effort. Even if the increase in number of fishers stopped from the beginning of the 1980s, the gradual organisation of the fishery made the resource prone to increasing fishing pressure. Indeed, during the first years of the exploitation of the fishery, only few large carrier boats were linking fishing boats with the harbour of Aswan. Due to the long distance between the fishing ground and the harbour, carrier boats were only collecting fish once a week. Unable to store their catch for more than two or three days without electricity (and therefore ice), fishers were only fishing during the days immediately preceding the arrival of the carrier boat. Latter on the development of new harbours (Abu Simbel and later Garf Husein) and the multiplications of carrier boats (190 nowadays) allowed fishers to have their catch brought to the market more regularly. This increased frequency of carrier boat collection led to an overall greater number of days of fishing, which probably increased pressure on fish population and might have contributed to overfishing [11].

Conservation measures

Faced with decreasing landings, the management agencies introduced new measures to increase both the production and the productivity of the fishery. It was then proposed to control that each licensed boat was effectively operating and its catch was being recorded and not smuggled away. Production targets were set for each cooperative and a minimum threshold was fixed for each boat. The targets were set by estimating the expected production of the whole fishery, and then divided between the four cooperatives and Misr-Aswan according to the number of boats each operated.

In addition to the license control, a closed period was also introduced in an attempt to release the pressure over the resource. Initially the closed season was supposed to last for 2 to 3 months, but right after the measure had been adopted, loud complaints from the cooperatives led the administration to reduce the closed season to one month only. The argument was that preventing fisherfolk to fish would have severe socio-economic consequences. Following additional protest the closed season was brought down to a mere two weeks, making it virtually totally ineffective. It has only recently been re-established to one month again. Finally, LNDA also introduced legal size limitation for the catch. For each fisher's landing load, a maximum of 10% of undersized fish (e.g. 500 g for tilapia) was tolerated. If the proportion of undersized fish was higher than the 10% limit, the whole fisher's catch was confiscated.

Explaining the magnitude of smuggling

While the price of fish in Egypt was already free in the 1980s, the government continued to maintain a fixed price for Lake Nasser landings. This exception was officially justified by the recent history of the lake: whereas other lakes and coastlines in Egypt had been supporting long-established fishing communities, Lake Nasser was not hosting any permanent fishing population but only newly established seasonal fishers. This particular situation, it was argued, was a good reason for the central authority to control the fishery, with no other (social) consideration than maximising the supply of cheap fish to the rest of the country.

Albeit having increased over time (passing for instance from EGP 0.64 to EGP 1.05 per kg between 1988 and 1990), the fixed price was still far below the free national market at that time. This situation gave both fishers and traders a very good incentive to engage in a parallel black market whereby an increasing quantity of fish was diverted from the official channels. Secretly landed in isolated creeks at night, these fish were loaded on trucks and sold directly on the urban markets of Cairo and other main towns of the country. Smuggling fish traders could offer a better price (than the fixed price) to the fishers and still make profit as the difference between the lake harbours price and the national Souk el Abour market was substantial.

In addition to higher price, smuggling also allowed fishers to evade some of the constraining government regulations. For instance, the government levied taxes on the official market to finance the development of the fishery, the management of the harbours and the social security system for the workers. These taxes may not be prohibitive but still contributed to make smuggling more profitable than official business. More importantly, smuggling offers the possibility to circumvent the stringent resource conservation regulations put in place by the government. When the proportion of the undersize catch was greater than the minimum 10% limit, the black market offered the fishers the opportunity to trade their catch without the risk of losing the whole load.

In addition to fixed price and government regulations, another major reason that made smuggling a widely practiced activity was the bad management and efficiency of the state owned companies. Albeit enjoying a complete monopoly for years in the marketing sector with low buying price, higher selling

price and reasonable transportation, processing and marketing costs, their bad management led the state-owned companies to constantly face financial difficulties. Their numerous and inefficient administration absorbed an important part of their income and, because of managerial inefficiencies, important quantities of the fish were being wasted. By 2000, the two companies together had accumulated a debt of EGP 2.5 millions towards the cooperatives from which they were buying fish. This failure of payment in turn had repercussion on the cooperatives that could no longer implement some of their activities and duties. They gradually abandoned most of their functions and eventually even stopped having the monopoly on transporting fish to the harbour as they could no longer operate all their carrier boats.

Finally, while smuggling to avoid low price or state regulations was mainly motivated by the expectation of higher profits, some situation of failure of payment also encouraged fishers to accept to smuggle even at very low price, as cooperatives were known to have a tendency to fail to pay for the fish they handled. In these cases, fishers had no choice but to turn to the black market to try to get a minimum remuneration for their catch.

Besides this endured or chosen smuggling, the problem of failure of payment destroyed the fishery further, from a relational and social point of view. It led fishers to deeply mistrust the public companies and the cooperatives they belonged to. Mistrust also emerged as the state-owned companies tended to demonstrate bad business practices. It has been reported that those companies tended not to pay for the fish being delivered to them, arguing on its quality and relying on corrupted officials sided with them. These practices are however no longer possible as the new organisation of the harbour prevents these companies, particularly Taswik, to directly deal with the fishers operating in their respective sector. The mistrust toward cooperative and state companies can, on a morality perspective, be seen as an additional justification for smuggling: unfairly treated fishers would feel no moral obligation to deal on an honest basis with a trading partner who had on several occasions in the past mistreated them.

Another major factor that has contributed to the magnitude of the smuggling is that the Lake Nasser fishery -like a large number of artisanal fisheries in the developing world- has been attracting an increasing number of poor people from all over the country. In Egypt where Nasser's land reform has been progressively dismantled by several series of counter-reforms, it is estimated that about 75% of the small tenants have been forced to leave the agricultural sector in the last 10 years [12]. In those conditions, the Lake Nasser fishery plays a substantial role as 'labour buffer' for many poor or landless *fellahins* who rely on the fishery as a safety net activity. As a result, many illegal unlicensed fishers (who cannot land their catch through the official system) are now operating in the fishery. Those are estimated to be about 3000.

Finally, the form of ownership of the fishing rights and the nature of the labour arrangements also encouraged registered fishers to smuggle. We saw that the boat-owners had good incentives to hide some of their production to the cooperatives (due to the cooperative corruption and their frequent failure to pay their dues). The labourers operating under a sharecropping system have also good reasons to engage in smuggling. For those labourers, even a price much below the free market level often left them better off than the remuneration they obtain through the share cropping system.

In short, many actors are facing various, sometimes additive or complementary, reasons to support and participate to black market activity. Additionally, the fact that smuggling benefits actors on both side of the trade equation (fishers and fish traders) makes the whole cycle even less likely to break off.

Fighting smuggling

LNDA, in collaboration with the aquatic police, the federal police and the Governorate of Aswan, have been trying to fight against the smuggling sector. This turned out to be a very difficult task. The lake has

thousands of kilometres of inhabited shoreline and is surrounded by desert, making it almost totally impossible to control. In addition, smugglers are well organized and have good networks that allow them to be always ahead of the authorities. Even when those are caught, NLDA can just confiscate the smugglers' vehicles, boats or illegal gears for about a year. The case is usually submitted to local court, and the smugglers get their properties back within weeks [13].

The statistics are impressive. The police and NDLA arrested, in 2006 alone, as many as 357 trucks filled with smuggled fish, that is, more than one truck a day if we account for the fishery closed season. This statistic gives an idea of the intensity of the smuggling, and of the large economic and institutional forces that create it. In effect, fish smuggling does not involve only poor fishers but also a substantial number of better-off fish traders. It is a 'big business' and many actors in the sector would agree that it has become almost a formal activity.

LIBERALIZATION OF THE FISHERY: 2001-PRESENT

Privatization of the fishery as the 'solution'

After recorded landings fell to a catastrophic level of only 8,281 t in 2000, a commission representing the shareholders involved in the management of the fishery was called in 2001 to address the alarming situation of the Lake's fishery. The commission identified overfishing, rather than environmental change, as the main cause of the fishery poor performances [10]. This overfishing was reported to be closely related with smuggling and mismanagement of the resource. In turn, smuggling was diagnosed to result from price control. To overcome these two major defects, the commission recommended liberalizing the fishery. Through this liberalization, the whole lake resources were to be allocated to "investment companies" that would take over the entire productive chain, from fishing to marketing. Privatising the resource exploitation, it was thought, would make the players more responsible for their share of the resource and therefore provide them with incentives not to deplete their 'own capital'. In addition to this basic economic principle, the move towards the liberalisation of the fishery was meant to deregulate the price and improve the management of the sector. In turn, this would curb smuggling and reinstate some control over the fishery.

The commission's report also included other recommendations. In particular, in order to increase the productivity of the lake, the report called for increased public and private investment and encouraged the development of enclosures in the *khors*. The commission also suggested to strengthen control over the Lake and to toughen penalties. On the institutional point of view, it recommended to streamline the fishery management by unifying the activities of the two departments of the Ministry of Agriculture and Land Reclamation managing the fishery, with the result of transferring most of the duties to LNDA.

Liberalisation process

Twenty-one bids by different private investors were received but, while the selection process was still ongoing, the cooperatives warned against potentially severe socio-economic troubles if they were to disappear through this liberalization reform. Eventually, after a few months of a rather un-transparent process, the selection procedure was closed. The cooperatives managed to maintain most of their existing privileges. They ended up with as much as 60% of the lake allocated free to them. The investment companies were thus left with a mere 40% of the Lake's surface. Moreover, the private companies only received a very small fraction (6%) of the very productive *khors* areas. This new repartition, by attributing on average 85% of the shares of the investment companies to open waters, was meant to incite these private companies to deploy fishing activities in the so-far underexploited open waters. The cooperatives had always neglected these less productive areas and the two state-owned companies had made it clear that they would not be able to operate there. Another category of actor was therefore necessary if the

potential of the Lake was to be fully developed. The position of the central authority was based on the assumption that good fishing potentials exist in the open waters, but investment is needed before these areas can become profitable. Investment companies were therefore viewed as the only actors that could make the necessary efforts (and bear the risks...).

In order to 'incite' those investment companies and provide them with enough fish to make marketing profitable, a compensation measure was also introduced. While the companies could only fish on a small fraction of the shorelines, they were entitled to get a part of the landings of the cooperatives. Thus, investment companies were 'offered' the right to process 58% of the cooperatives landing on their sector. The two state companies Taswik and Misr Aswan, on the other hand, kept the monopoly of their respective sectors and were entitled to process the whole production in those sectors.

Current actors and allocation of fishing rights

Out of the 21 bids proposed, a selection committee selected six companies after thoroughly examining their business plan, technical expertise and security plans. Not surprisingly, the two state-owned companies, Taswik and Misr Aswan, were both amongst the list of 6 'winners'. It was said that despite their relative low efficiency, these companies had to be chosen "as they were already active in the fishery".

Taswik and Misr Aswan, tend however to suffer from severe mis-management and since the exploitation has been opened to private companies, the hard competition has forced them to improve their practices and organisation. Misr Aswan, for example, reduced considerably its administration but has failed to keep its infrastructure operational. In fact, even under the new system, these two companies are perceived to do very little, except continuing to benefit for the monopoly over the processing of the fish caught in their sector.

The cooperatives have also tried to improve their management and practices. Through rationalisation, Mother Cooperative managed to reduce its administrative staff tenfold within a few years and other cooperatives have gone through the same process. Most fishers however still mistrust the cooperatives, in particular Mother Cooperative, and the election of the board are usually characterised by indifference even by the members. Their financing nowadays principally comes from a tax of 6 piaster (100 piasters = EGP 1) levied on each kilo of fish landed. There are growing complaints amongst fishers as the revenues generated through this tax is used, or at least perceived to be used, to cover mainly the board and the administrative costs with little redistribution or benefits to the fishers.

Price deregulation and neo-centralism

In 2001, following the recommendations of the commission, an initial attempt to liberalise the fish price at the harbours was made. Auctions were free and many traders were tensely competing to obtain their part of the landing. Unfortunately, the 'free forces' of the market did not drive the new system in the expected direction. As the competition became intense, the traders progressively started to use increasingly aggressive methods. Some days, the price of large tilapia went above EGP 30 per kg, far higher than the national price. This exacerbated and irrational competition led to unfair practices where for instance some buyers were pushing the price up to unaffordable levels before withdrawing from the auction, leaving the fish unsold. The whole system failed to move rapidly towards efficiency. After a few months, in order to bring the situation back into control, it was decided to discontinue the free market process: fish price would not be determined by auction at the harbour any longer, but would, instead, be determined fortnightly by a committee created especially for this purpose.

Price ceiling was not the only regulation (re)introduced by the central authority after the failure of the 2001 free-pricing experiment. Attracted by the market opportunities, many traders entered the sector in the course of the 1990s. However, in order to pay off transportation costs to the national fish market of Souk el Abour, more than 630 km away from Aswan, each trader needs a minimum of 2.5 t of fish per trip. Somehow, it was feared that the local market would not be able to internalize this costs and that, once again, the government should intervene. Thus, everyday, only one private trader (following a rotating system amongst the 6 traders officially associated to each harbour) is entitled to buy a share of the cooperative's landings, alongside with the investment companies and the state-owned companies. The other five fish traders have the choice: wait for their turn, or join the horde of smuggling traders who operate from non-official landing sites along the lake shores.

Today, fresh fish landings are low again -around 20% of the potential production. Overfishing, of course, may be one cause for this poor performance, as the resource is said to be under stress. But the re-emergence of smuggling cannot be ignored. It is currently estimated that official landings probably represent only half of the total catch. With a heavily controlled price and a limited entry through a fixed number of licenses, smuggling remains a major problem for the fishery. In addition, the mistrust and refusal to deal with the two state-owned companies remains acute amongst fishers and a good incentive for those operating in their sectors to use black-market channels instead of the company landing facilities.

DISCUSSION AND CONCLUDING REMARKS

The decision to liberalise Lake Nasser's fishery was made in 2001 following a 20-year decline in the official landings. Liberalisation was in fact perceived as the necessary response to an environmental crisis combined to an economic problem. From the environmental side, overfishing had been identified as the main threat to the resource and, as a response, the commission proposed to privatise the resource. The basic principle was to try to avoid the classical "tragedy of the commons" by privatizing the resource [14], thus giving incentives to the main stakeholders to responsibly and sustainably manage 'their' own resource. From the economic side, with massive amounts of fish diverted from the official commercialisation channels by the smugglers, liberalization was viewed as a way to incite soundly managed private companies to take over the whole business and transform the fishery into an economically efficient sector. Indeed, with quite powerful parastatal agencies enjoying an exclusive control over the resource, refusing to pay for it and poorly managing it, the government recognised that liberalisation was a possible solution to solve many of the economic inefficiencies of the system.

As our analysis reveals, however, the existing parastatal agencies –although economically inefficient - were politically powerful enough to oppose the radical reshaping of the fishery. As a result, the government had to modify or even to drop some parts of its original plan, and eventually invited only four private companies to participate in the new development plan.

Additional elements, however, should also be considered when one tries to explain the decision of the authorities to downplay the fishery reform. As far as the particular treatment enjoyed by the state-owned companies is concerned, there is little doubt that their close links with many different ministries and central authorities has been a major element in this process, confirming *a posteriori* some of the fishers' allegations. It is possible, therefore –as it is still the case in many other developing countries- that cronyism and nepotism might have been amongst the key-factors that 'shaped' the reform and led it to its current "neo-centralised" form.

Another explanation -which complements the cronyism hypothesis above, rather than replace it- is one that links the Lake Nasser 'liberalization' reform to the Egyptian national food subsidy programme that had been implemented in the country since World War II. To explore this hypothesis, let us first recall that the objective of the Lake Nasser fishery programme as it had been defined in the early phase of its

development planning was that of production of cheap animal protein. This objective appears in fact in direct line with the nation-wide food subsidy programme that was being pursued at that time in Egypt. Since WWII, a food rationing system had been put in place in order to provide certain necessities to consumers at relatively low prices. Initially focussing on edible oil, sugar, tea, and kerosene, the programme was extended in the 1950s and 1960s to include beans, lentils, frozen fish and meat, and chicken. By the end of the 1970s, almost 20 food commodities were being heavily subsidized [15]. During the 1980s and 1990s, internal budgetary and International Financial Institutions' pressures forced the central authority to considerably 'rationalize' the programme. Most of the food items that had been added in the 1960s and 1970s were gradually removed from the programme, and at present only four food items remain subsidized –one type of bread, wheat flour, edible oil and sugar [16].

In this context, the Lake Nasser fishery offered a great opportunity to the government to 'compensate' for the downsizing of the food subsidy programme, at least as far as animal protein is concerned. Several economically unorthodox decisions taken by the central authority only make sense when re-interpreted under this hypothesis. The introduction of the rotating trading system, for instance, whereby one trader only is allowed to purchase the landings every day is a good example. The monopsonic conditions created by this particular system ensures that the price at which the landed fish is purchased remains artificially low, thus compensating for the high transportation costs between Lake Nasser to the different national markets and reducing the risks that these costs are reported onto the consumers.

The reintroduction of the fixed-price system after the failure of the local market free pricing experience in 2001 is another example. Indeed, while the market had failed to organise itself rapidly, it could be argued that some institutional support or a better enforcement of the rules would have been sufficient to generate a free and efficient fish market system in the fishery. Instead, the central authorities decided to revert quickly to a fixed price system, which goes against the most basic economic principle. It seems difficult to explain such decision, unless, of course, the real objective of the operation was to keep the fish price artificially low.

All these market distortions eventually created enough space for a massive black market to develop. Today it is estimated that about half of the current production of the lake (probably 15,000 t) is smuggled every year. Sarcastically, while the authorities are actively fighting the smuggling, it might be argued that the black market does constitute an indirect food subsidy programme. Indeed, there is no doubt that the myriad of smugglers (licensed and not-licensed fishers, traders and other intermediates) that extract and trade thousands of tonnes of fish every year at a price below the national market's price and deliver those to the rest of the country's market places, do contribute, indirectly, to the supply of 'subsidized' animal protein. Of course many would retort that allowing existing (and possibly additional) private companies to properly invest and develop an economically efficient market chain would be a more appropriate manner to ensure this to happen, as theory claims that perfect markets eventually allocate resources in the most efficient manner.

Whether those private investment companies, supported by a true free-market policy environment, would indeed ensure a more efficient provision of cheapest fish than the current black market is difficult to determine. What is certain, however, is that the cheap supply of Lake Nasser fish is not currently 'subsidized' by the central government but by the primary stakeholders of the fishery. The fishers are indeed these who are bearing the social and economic costs of the distorted fish price mechanisms put in place by the authorities, for the greatest benefit of the rest of the society. As such, they are indisputably the main losers of this whole 'liberalization' reform.

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