

Chapter 5

In the Wake of ITQs in Iceland, 1991–2011: A Dynamic Approach to Marine Resource Management Policies

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Abstract In this chapter, the author studies and analyzes the Icelandic ITQ system as a work in *process* and *progress*. In Iceland, ITQ policies for commercial fisheries have, from the very beginning, been mixed up in an unstable play of demersal harvest rights allocations and reallocations by the State. The numerous reallocation policies that have successively reshaped rights distributions since 1991 are a very stimulating object for anyone interested in the study of marine resource management in theory *and* practice. The ethnographic study of such an unstable resource management system is very challenging: a methodology had to be elaborated which would suit the study of an object which involved a number of different parameters and kept evolving very quickly. Far from having being adapted from theory, Iceland's ITQ system must be understood as a 100% homemade system constantly adapted to social demand. The aim of this chapter will be not to establish whether ITQs in Iceland have been a success or not but rather to point out *how* public authorities and stakeholders interacted and coped with the ITQ system to reshape and re-define it in various contexts.

Keywords Area-based management • Coastal jigging system • Fish processing • Fishing communities • Individualization • Labor relations • Longline concession • Privatization • Professionalization • Quota leasing • Reallocation • Regional quota system • Resilience • Self-management • Unstable resource management system

In Iceland, the ITQ system, implemented in the Fisheries Management Act, celebrated its 20th birthday in 2010. ITQ not only changed a field of activity, it wholly changed the Icelandic society and the representations of how society functions, on local and national levels. This chapter reports findings from dynamic, multi-case and multi-scale Social Anthropology research conducted in 2005 and 2006 and later, after the financial collapse of 2008, which compared the evolution and

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situation of seven fishing harbors in the West fjords, Western and Eastern region. The chapter analyses *how* ITQ functioned in different local socio-economic systems. Villages were impacted by the ITQ system but, individually and/or collectively, they impacted the ITQ system – the ITQ effects have been corrected in order to protect coastal settlements and their populations. The study of processes has been the methodological cornerstone of research because of the volatility of ITQ. The chapter highlights the main features of an individualization process resulting from the introduction of ITQ and identifies and analyzes its consequences and meanings. Many new or original things emerged within the ITQ policy on a local level: new practices at sea and on land, new kinds of seasonality, new social and economic status and skills for ITQ owners, new strategic partners and local actors, original forms of inter-professional mobilization, new social-economic bounds and forms of dependence, new forms of local mobilization, and new representations of social and labor relations. Beyond the various consequences of the ITQ system from one village to another, the analysis affirms that the socio-economic organization of fishing villages has been re-configured by both State policies and by local strategies. Attention is focused on four aspects of change: the professionalization of fishers and the construction of the self-managing stakeholder; the fate of land-based fishing communities and common property institution in the face of bio-economic reorganization; fish-processing, quota leasing and labor relations in biologically-based privatization schemes; and area-based management of diverse coastal and marine resources within and outside the quota system.

5.1 Introduction: The Metamorphoses of Fishing Activities and Policies

In Iceland, ITQ policies for demersal or groundfish commercial fisheries have, from the very beginning, been mixed up in a complicated and unstable play of demersal harvest rights allocations and reallocations by the State. For that reason, Iceland is a wonderful ‘laboratory’ for the study of the effects of ITQ, and, above all, for the study, at a local and national level, of a highly flexible society. Furthermore, far from having being adapted from theory, Iceland’s ITQ system must be understood as a 100% homemade system: it has been constantly adapted to stakeholder needs and even to social demand. According to Helgi Grétarsson (2010), more than forty amendments were made to the Act before the legislation was re-enacted as Act No. 116/2006. The numerous reallocation policies that have successively reshaped rights distributions since 1991 are a very stimulating object for anyone interested in the study of marine resource management in theory *and* practice.

The study of such an unstable resource management system is very challenging and a methodology had to be elaborated which would suit the study of an object which involved a number of different parameters and kept evolving very quickly. It seemed essential to describe “how” the situation was “before” and “after” the implementation of ITQs, to identify the different types of changes which happened in

various fields, and eventually to take into account the internal policies which were carried out within the ITQ system. As the lawyer Helgi Grétarsson wrote:

In fact since 1984 the Icelandic system has evolved more by trial-and-error than by design, and a substantial portion of the demersal quota shares have been reallocated. These reallocations should influence how the system is judged and evaluated. (Grétarsson 2010: 299)

Studying ITQ in theory is one thing, and studying ITQ effects at a macro level from different social science perspectives is quite another. Studying step by step *how* ITQ evolved at local and national scales through a comparative approach is yet another. The scientific literature on ITQ from the social sciences is voluminous, but I am convinced that a very bound-to-earth ethnographic study of ITQ effects has been lacking. Last but not least, while in social anthropology, Einar Eythorsson's synthetic article published in the anthology *The Commons in the New Millennium* (Eythorsson 2003) called for an articulation between the different levels and proposed a methodology to enable this, no such articulation has been achieved in Iceland. The time has come in 2015, especially after the financial crisis of 2008, to take a fresh look at the problem. Even basic propositions, such as the challenging one "the Icelandic fishery management system has by no means been a 100% ITQ system since 1984" (Grétarsson 2010: 299) needs attention: this is a highly relevant proposition but one that has not yet been clearly and objectively thought through as a relevant topic from an anthropological point of view.

This chapter summarizes some key facts and methodological approaches that should be taken into account in an evaluation of ITQ policy effects in a long-term perspective. It is based upon research conducted as part of the scientific program "DRISCLA-Nord" (Dynamics, Resources, Innovations and Strategies of Coastal Communities in the North-Atlantic Area) and supported by the French Polar Institute Paul-Emile Victor. The research was conducted in two phases of field research in Iceland using an ethnographic methodology. During 2005 and 2006, I lived in Iceland and conducted fieldwork for the PhD in social anthropology which I completed in 2011. Entitled "Of Quotas and Men: The Economic and Social Consequences of the Icelandic Policy on the Management of Marine Resources/An Ethnology of Coastal Communities", my PhD set out to acquire a comprehensive understanding of the Icelandic fisheries by establishing detailed studies of seven Icelandic fishing harbors. It thus involved study of an occupational group scattered over a wide geographical area and through a long period of time. The aim was to capture, on the one hand, the diversity and fullness of meaning which fishing, as both an industry and a way of life, embodies, while on the other hand charting how it was, is and will be transformed, from both material as well as ideal perspectives. This anthropological research developed along three main axes: fishermen and fishing practices; the socio-economic organization of coastal communities; and national policies in marine resource management. I returned to Iceland in 2010 to carry out postdoctoral research which addressed the consequences of the financial collapse on fishing practices, especially on small-scale fisheries, coastal communities and harvest rights reallocation policies. It is important to mention precisely when the research was conducted, since these periods allow different contexts – local,

regional, national and international ones – to be taken into account even though throughout the research the fisheries, coastal communities and harvest rights allocation policies have been apprehended as whole systems through time and space. Together, this fieldwork-based research highlights the need to understand original practices resulting from interactions between different partners and demonstrates the value-added contribution of ethnography for the study of any marine resource management system involving local and global perspectives.

The chapter proceeds by first outlining the changing status of the fisheries within Icelandic politics and society from the end of World War II through to the financial collapse of 2008. At first the focal point of national economic aspirations, during this long period, fisheries became overshadowed by other industries and prospects so that the fisheries and fish processing were subject to policies of expansion followed by policies of withdrawal. The methodology for the research in Iceland is then summarized before the policies developed by the government are explained and the reactive and adaptive efforts of fishers and processors are discussed.

5.2 From Expansion to Withdrawal

The dramatic development of fishing and fish processing activities in Iceland has first of all to be evaluated and understood in the international context of intensive development due to technical progress in fishing and fish processing and to the beginning of a strong commercial competition over access to marine resources on an international scale. As the economist Paul Adam observed on a global scale, fisheries became an industry of major interest on a superior level for many countries whether traditionally specialized in fishing activities or not (Adam 1987). Icelandic policies during more than a half century are representative of these periods of expansion and withdrawal in fisheries.

After the Second World War, Iceland became a very prosperous and newly independent country. The Icelandic economy flourished when Iceland became a “specialized-fish-exporting country” (Magnusson 1985). The development of the fishing industry served the quest for sovereignty on which the people and the public authorities embarked together. The exploitation, processing and later preservation of fish and fish products became an affair of State, a superior goal and a matter of common interest for the whole nation.

The fast development of the Icelandic fishing industry was directly linked to the gradual expansion of its maritime territory up to the 200 nautical-mile limit of its Exclusive Economic Zone (EEZ) (1975–1976). EEZ matters in Iceland became a national priority because nations were now responsible for the management of the marine resources within these new and wide limits. Between 1945 and the beginning of the 1980s, the national fleet capacity increased by 380% and the catch’s real value by 590%. Thirty-five fish species were exploited: cod, which represented 45% of the total export value; then haddock (*Melanogrammus aeglefinus*), golden redfish (*Sebastes Marinus*), Atlantic wolffish (*Anarhichas lupus*) and saithe (*Pollachius*

virens). Lumpfish, which is caught between March and June, is landed by small-scale fishermen. Over the period to the beginning of the 1980s, the halieutic production was both intensified and diversified: this led to a threat, for pelagic and demersal population stocks.

Fishing activities had a determining impact on the territorial, economic and social organization of the country. In addition, the territorial development of the country depended on the development of fishing activities. The coastal communities, whether they were already or only recently specialized in fisheries, were therefore equipped to become the lynchpin of a nation entirely involved in and revolving around fishing and fish-processing activities.

Over that period of great expansion, the appropriation and exploitation of marine resources became an economic, social and symbolic process. This phenomenon became concomitant with the building up of an economic patrimony. This point is a particularly weighty one when the aim is to understand political decisions over harvesting rights and, more generally, over employment in fisheries. In the Icelandic Fisheries Management Laws – *Fiskveiðistjórnun Íslands* – and later in the Constitution, the status of marine resources can be seen as a legacy of the Icelandic social and economic history: marine resources, which are inalienable, are the property of the Nation and their management must ensure that they are protected and must guarantee the economic balance of coastal communities.

During the 1980s and 1990s, in a global context of implementation of new marine resources management governance, a new chapter in the history of national policies began. Time had come to manage marine resources from a clearly long-term perspective since reports of marine biologists of the national agency *Hafrannsóknarstofnun* warned that some fish stocks were greatly endangered. In the 1990s, experts supported the idea to develop other industries in the country, especially in the fields of geothermal energy and electricity. Fisheries and fishing activities no longer dominated the social and economic life of the country. Instead, they were set in the background and competed with other industries, especially the transformation of bauxite into aluminum, which could generate substantial revenues.

Step by step, successive governments transformed the access to marine resources, thereby indirectly re-shaping the entire Icelandic society. First, by an officially short-term, 1-year policy of enclosure, non-tradable quotas were implemented (1984). These were subsequently made permanent. Then, in 1991, with the creation of the Fisheries Management Act (FMA), the well-known ITQ system was implemented. Public authorities then, by reforming access to marine resources, challenged their legal and symbolic status. New policies consequently challenged the protection of coastal villages and of the general common interest: they put an end to an era of *expansion* and launched an era of *withdrawal*. By reforming the rights of use of marine resources, they went against a national consensus and broke a social contract formally established in the Fisheries Management Laws *Fiskveiðistjórnun Íslands*.

During the 1990s, the construction of dams and aluminum plants preoccupied the interests of economists, politicians and public opinion, though some projects were criticized for their environmental impact. The strength of the Icelandic kroner

due to foreign investments threatened fish-product exports: land-projects had to advance, a new era had begun. Fish remained the main source of economic prosperity and the basis for investments in other industries or fields of activity but, at the same time, fisheries matters, though hardly debated, were overshadowed by new, ambitious visions for the future of Iceland. In public discourses, fishing and fisheries became “insignificant”, “old fashioned” or “archaic”: if some experts said it before the financial crash, thousands of Icelanders still “lived on fishing”.

After the financial collapse in October 2008, fisheries not only continued but became a symbol of stability in a context where financial products were demonized. In 2008, 3.1% of the working population were employed in fishing and a further 2.9% in fish-processing, so, together 6% of the working population, that is to say 4200 individuals (Hagstofa Islands 2008), were still employed in fishing and fish-processing activities. This did not include indirect jobs related to the fishing industry, but here the common ratio is one job at sea for three jobs on land. Amid the dark days of financial crisis many advertisements used images related to fishing activities as symbols of trust, know-how and stability through times, revealing and waking up their cultural dimension. Even the ex-First Minister, Geir Haarde, in his memorable speech about the crash made an allusion to marine resources as a surety to endure dark days to come. Fisheries came again in the foreground and became more than ever the backbone of the Icelandic economy and a guarantee of trust but its image in the public opinion had definitively changed.

5.3 A Framework for Studying ITQ and Marine Resource Management Dynamics

First of all, it is imperative to underline that if ITQ are at stake and if the attention is focused on them, marine resource management policies have to be apprehended in a broader perspective and in their *totality* since they are directly or indirectly related to ITQ measures. It was necessary to elaborate a methodology suited to the empirical study of an object which involved a number of different parameters and kept evolving. If the aim was to “represent complexity” (Barth 1978), it was necessary to “delimit a ‘convenient area’ as an object of study without isolating it from all those events and circumstances outside the area which are major determinants of life within it” (Barth 1978: introduction).

A synchronic study and comparative approach are needed. My fieldwork, which included an ethnographic survey, lasted for more than 1 year. Since “the typical fishing village doesn’t exist” (Skaptadottir 1995: 165), I compared the situations of seven fishing harbours. I stayed in Bolungarvík and Patreksfjörður, in the Westfjords, in Rif and Grundarfjörður, in the Western region, and in Reydarfjörður, Neskaupsstaður and Eskifjörður, in the eastern region (2005–2006). After the financial crash, I stayed for a long time in Grindavík, a prosperous fishing village very strategically situated regarding the fish export market (2010). Within each harbor, I

compared the situations of stakeholders in small-scale fisheries with those involved in the industrial sector to underline the unity and diversity of social and technical systems responding to national policies on the management of marine resources. Men and social relationships matter: it was essential to identify leaders. Places matter. In today's circumstances, due to financial reasons related to the export market for fish and fish-products, one place, in terms of its function and its localization in the country, is not equivalent to another. When places are far from strategic exportation localities in the south western region of Reykjavik/Keflavik, sale operations can be more complicated during wintertime, more expensive for producers and buyers and, in effect, worthless. These last two aspects matter a lot. The financial organization of entrepreneurs when combined with technical specialities in fisheries can be so different that communities' profiles will, in turn, be different. The business of pelagic fishes is more related to vertically-integrated firms since demersal fishing and/or processing activities allow for more diversity: they are observed on a wider range of entrepreneurial formulas from small-scale fisheries to a vertically integrated, industrial sector.

The gathering of empirical data was necessary to bring to light original individual and collective practices, that is social, technical and economic processes. To complete this research successfully, I started my fieldwork with the observation and analysis of the individual and collective forms of mobilizations and strategies of coastal communities facing national marine resource policies. I focused my attention on how vessel owners used their fishing rights, that is to say, I identified their different tactics in relation to harvest rights leasing or purchase. This immediately warns us to identify "new" actors playing a key role and deeply involved in ITQ management at a local scale. This study led me to analyze what was at stake from an individual and collective interest when *ITQs* were exploited and transferred: social and economic matters were obviously embedded and, precisely, their *desembedding*, to use Polanyi's concepts (Polanyi 1944) were perceived as a threat for some and as liberation for others.

The aim was to shed light on the diversity in time and space and in practices and discourses of the responses of vessel owners and local populations to national policies and then to analyze and interpret this diversity. Due emphasis was given to the variations in fish-processing practices within fishing practices, which vary from one region to the next. I also tried to make sense of the evolution of legal practices in the regulation of the industry following the implementation of the ITQs, especially concerning the endless policies of reallocation of harvesting or fishing rights. The process of *individualisation* we observed was the result of the commoditization of harvest rights and of the liberalization on fish prices due to the creation of fresh fish markets in the end of the 1980s and early 1990s. I met numerous people who followed a wide range of occupations, including people who were related to the fisheries sectors, people from institutions, as well as scientists, politicians and village inhabitants who worked directly or indirectly for fisheries.

Intensive and extensive surveys were a key approach to study ITQs effects at different levels – local, regional, national and international. I conducted an intensive fieldwork in a village of the Icelandic Westfjords. As I stayed in the same village

during almost 1 year, I could study the fluctuations of activity within the so-called “quota year” (*kvótaárið*) and the seasonal variations in the relationships between members of the fisheries sector – boat owners, fish-processing company directors, fresh-fish market directors and employees – and local public authorities. This allowed identification of “critical periods”, for instance summer, a period of harvest rights scarcity. During that period, fishing and fish-processing activities are at their lowest level. Small-scale fishermen and fish-processors are engaged in a hard battle with local public authorities in order to get the “regional quota” or *byggðarkvóti* originally created in the early 1990s to support employment in coastal villages that had lost important harvesting rights. Situated at the end of the quota year, summer is a season of harsh quota scarcity. The tensions opposing small-scale fishermen and fish-processors on the one hand, with local public authorities who reallocate these special quotas on the other hand, are related to the fact that boat-owners in small-scale fisheries estimate that public authorities pressure them to sell their fish at the lowest price to fish-processors if they want to get these quotas. Local public authorities decide which boat-owners are eligible according to their good business attitude: who sells fish *at home* for *our* fish-processing workers? Who sells fish *out* unprocessed on the market for local prejudices? This conflict is cyclical.

We tried to study and analyze limited periods of time exhaustively in order to follow *processes* – activities, employment, evolution of the fleet, ITQs transfers – in different places by comparing a wide range of data. We studied the fishing years 2004–2005 and 2005–2006 bearing in mind the method of an archaeologist who systematically analyzes each stratigraphic layer according to the method of horizontal analysis in order to link different components – social, technical, economic, juridical and political ones. We went back to the same places in 2010, after the financial collapse.

Since marine resource management policies are unstable and are linked to numerous parameters, it is necessary on the one hand to use a systemic approach to study them because they form a whole whose biological, economic, legal, political and social aspects are intermingled, and, on the other hand, to examine them from a diachronic and dynamic point of view because the measures changed several times between 1984 and 2011. The successive governments permanently interacted with stakeholders and constantly readjusted/adapted the system on purpose to become more and more implicated. Boat owners had to regularly modify their strategies and expect new tactics and the government had to concurrently respond or anticipate the strategies of boat owners and implement new measures in order to correct or check new tendencies they had not foreseen.

Policies had both expected and unexpected effects. It was essential to compare policy theories or spirit – expected effects – to practices – that is, responses to policies – in order to understand the evolution of measures and their various goals – ecological, economic, and social. *Laisser-faire* didn't function for ITQ since public authorities had constantly reallocated harvest rights to protect employment and to gain credibility from public opinion. It was essential to link current phenomenon to the national history of Iceland during the twentieth century in order to get a comprehensive insight into State policies.

5.4 Marine Resource Management as a Work in Progress: “Top-Down” Policies

With its more than 20-year-old ITQ system, Iceland appears to be a very stimulating case study, but studying its evolutions presents a formidable challenge since knowledge of each step in national policy is required for an understanding of the issues which determine national public marine resource policies. In retrospect, when I finished this research and analyzed further State decisions, I established a typology of the jurisdictions – “innovation”, “neutralization” and, over the last years in particular, “reparation”. From 1984 to 2004, State policies have mostly been of “innovation” and “neutralization”: public authorities initiated an enclosure policy by setting non-tradable quotas, then, they implemented ITQs and at almost the same time tried to prevent phenomenon such as the concentration of ITQ into the hands of fewer vertically-integrated enterprises and, later, quota leasing, which was disastrous for producers and scorned as immoral by critical opinion as one of the darkest sides of ITQ. If the government did not at first anticipate stakeholder strategies (1984–2004), then, after 2004, it engaged in ambitious, long-term, “reparation” measures in order to strengthen employment in regions where local harvesting rights had been sold out. Policy entered into a new era: public authorities somehow took the power again to reintroduce social politics into policies, against neoliberal theoretical principles.

In 1984, the Minister of Fisheries innovated and established a system of fishing for non-tradable quota for boats over 6 tons engaged in the catch of the most valuable demersal species, such as cod, haddock, saithe, redfish, Greenland halibut and Atlantic wolfish. After numerous warnings from marine biologists, this new system of management corresponded to the coming on stage of “experts” (biologists, later economists). It aimed at preserving demersal stocks, reducing a fishing fleet that was too numerous and restructuring fisheries that were indebted. At that time, shares or amounts of the national Total Allowable Catch (TAC) were allocated to individual operators of vessels on the legal basis of their calculated “catch history” or *veiðireynsla*, which amounted to their average annual catch during the 3 years preceding 1984. Before each September the 1st, at the beginning of a new “fishing year”, the Minister of Fisheries officially declared the TAC for each demersal species. At the beginning of September then, a vessel owner received the individual ITQ share he had to live on and to manage efficiently over the following 12 months. These measures were not entirely without precedent. The Icelandic authorities tried to manage the cod fisheries with a system based on day limitations in the period 1977–1983 but this fisheries management system failed and fish stocks remained in a very poor state. Catch quotas had been used before for pelagic stocks, mainly in the capelin and herring fisheries.

On the 1st of January 1991, the Fisheries Management Act took effect. To accelerate a rationalization process for better efficiency in fisheries, quotas became individual, divisible and transferable for boats over 6 tons. Fishermen used to say that

“the ball” or *kvótaballið* began, meaning that harvest rights started to be bought and sold out in an endless business.

The legal concept of a quota share was established for the first time. In essence quota share means a long-term percentage of the TAC, while the catch quota means the exact figure in tons that a vessel is entitled to catch for a particular fishing year or a season. (Grétarsson 2010)

Fishermen became stakeholders. New laws and rules were implemented in order to make quota transfers and movements easier from one boat to another. In theory, this innovative model was supposed to encourage competitive stakeholders and eliminate less efficient ones who were offered some financial support as a compensation and counterpart for the sale of their ITQ. The losers in the system would naturally help the latter to operate, but things did not work out as planned. Above all, the practical problems that arose on economic, social, legal and territorial levels, meant that ITQs had to be constantly re-designed: if the reality had to adapt to ITQ, ITQ had also to be adapted or effect-limited. That is what makes sense for our purpose. Territorial consequences of the ITQ system quickly appeared and the merging of ITQs became a problem: competitive companies bought out the ITQs of weaker companies and ITQ sales caused the ruin of some coastal communities overnight. Then the size of the small-boat fleet (boats under 6 tons) registered out of the ITQ system increased dramatically because operating a small boat was the only way to enter the system and live on fishing. In the scheme of ITQs, the allocation of harvest rights violated principles of equality and freedom of occupation, and both of these principles are protected by the Icelandic Constitution. ITQs started to be sold again and again and their price increased rapidly, making the market in harvest rights accessible to fewer and fewer stakeholders. Public authorities had to combine *flexibility* for quota transfers with requirements to prevent the development of new relations of exploitation that would question the legitimacy and morality of ITQs.

From 1992 to 1993 onwards, the Icelandic government increasingly intervened to set some limits and control the effects of national policies. The consolidation of ITQs into the hands of fewer companies led to a kind of *métayage* practice where ITQ owners rent a capital they did not personally exploit anymore. This hardly debated aspect led to the denunciation of the so-called “quota kings” or *kvótakonngar*, a phenomenon that has been further analyzed by social anthropologists Gisli Pálsson and Agnar Helgason. (Helgason and Pálsson 1994, 1998; Helgason 1995). To limit and prevent this merging process, the Ministry defined a ceiling for ITQ shares of the national TAC and created what was called the “exploitation duties” in order to compel ITQ owners to exploit an amount of ITQs by themselves using the boat the ITQ was registered on. Then the government created a special quota fund called “regional quota system” or *byggðarkvóti* to help coastal communities suffering from diminishing quotas as a result of sales to other companies who moved the rights away from their village.

In 1995 and again in 2001, in order to limit the number of small boats that were out of the ITQ system, the Ministry attached ITQs to small boats, first on cod (1995), and later on haddock and Atlantic wolffish (2001). These “new” quotas had been

taken out of the national TAC to create a “new pot” for small boats. Public authorities intervene more and more.

The year 2004 can be considered as a turning point. After 2004 one enters the “reparation era” characterized by a stronger control from public authorities on stakeholders with more determination in territorial and social issues in national policies. From 2004 onwards, the Icelandic government strengthened and consolidated its efforts to secure employment in coastal communities. In 2004, it created a special system for hook fisheries within the ITQ system. It separated the “Big” classical from a new “Small” ITQ system called “Jig and Line system” or *krókaafllamarkskerfið* for boats less than 15 m long and under 30 gross tonnage in size. Thus the State reallocated an ITQ share from the national TAC and created a special quota fund for small boats. In 2012, 551 boats operated within the “Jig and Line system” (Þórðarson and Viðarson 2014: 7).

Public authorities boosted long-line fishing and created the “Longline Concession” or *linuivilnun* in order to strengthen employment in coastal communities and support boat owners using hand-baited lines. Under this concession longliners delivering daily landings and using land-based manual baiting are allowed to land an extra 20% surplus over their quota. This surplus was a new reallocation of harvest rights taken again from the national TAC.

All in all, these measures were taken officially at the national level, and were intended to serve the original goals of Icelandic marine resource management policies: protecting rural areas, providing employment and securing settlements all around the island. “The coastal fleet has a significant role in the Icelandic economy landing more than 17% of the total demersal catch, at the value of 170 million Euros in the fishing year 2012/2013 (Þórðarson and Viðarson 2014: report summary).

After 2008, the coalition government tried even more to “solve” the fisheries management problems related to the allocation of harvesting rights. As they had been seriously compromised, public authorities did this for social, economic and moral purposes and to recover the trust of the public. For stakeholders they aimed to demonstrate concretely that (1) fisheries could still be a matter of social justice and (2) that “the system” (ITQ system) wasn’t completely locked as it was often said to be by stakeholders or in newspapers.

With the creation of the “Coastal Jigging System” or *strandveidikerfi*, in 2009, the government took a chance to clean and promote the image of fisheries and business in fisheries. The aim of this new system was first of all to support coastal fisheries during the summer time – a period of hard ITQ scarcity and unemployment in coastal villages – and to help young fishermen to “enter the system” without being obliged to incur huge debts. Again, a new “pot” was created: the so-called “coastal jigging fisheries” allow fishing 8600 tons of demersal species by jigging (Directorate of Fisheries 2014). A part of the national TAC was devoted to this special fund and a maximal quota was established for each month between May and August for four different areas (A-B-C-D). When the catch amount was reached, fishing activities were stopped and only started again the following month, and that is why these fisheries have been called an “Olympic system” (Þórðarson and Viðarson 2014). After a very few days’ fishing the amount is reached. The way this system was

designed clearly showed a will from public authorities to develop a non-mercantile system within the ITQ system so as to counterbalance some of its worst effects. In 2012 a total of 569 boats were operated within the Coastal Jigging system (Þórðarson and Viðarson 2014: 7). This new post-crisis measure has helped the part-time, small fleet to take a deep breath and expand again.

5.5 From Local Strategies to National Policies: Bottom-Up Responses and Victories

The various policies outlined above had consequences in villages, and these are discussed before turning first, to what people did, either individually or collectively, to cope with the Fisheries Management Act, and then to how local reactions and economic practices impacted on national policies. Right from 1991, in many coastal communities, inhabitants working directly or even indirectly for fisheries started to feel unsafe since a lower amount of harvest rights or quotas meant scarcity both in the short term of a “quota year” and in the long term. Getting enough harvest rights to be able to work on a year-round basis challenged the future of local fisheries. A lower amount of harvest rights has numerous consequences. It means less work at sea and on land, fewer quantities of fish on which to base work in fish plants, and thus lower wages for employees and lower incomes for households and villages. Job losses or increasing part-time jobs sooner or later meant migration. In many places, especially in the North-western region, after the shock of the bankruptcies of companies and the sales of harvest rights, came the time of unemployment and emigration to the south-west of Iceland.

Lower amounts of harvest rights also meant less autonomy and independence for both vessel operators, who became increasingly dependent on national policies, and for town councils that were in financial recovery. In each case they were threatened by a situation of high debt which dramatically ended after the financial crash of 2008. At a certain point, the breakup of the local economic, professional and familial networks and bonds could become unavoidable. The sale of harvest rights considered as the result of collective efforts heavily impacted the local entrepreneurial diversity and was felt as morally unbearable for many inhabitants even those not employed in fisheries.

In the 1990s, a series of systemic changes took place in the villages that were hit the hardest by the loss of harvest rights (Mariat-Roy 2011). The most significant were the following. A re-composition process took place within the local groups of fishermen, with “new” and “older” stakeholders participating. It provoked a re-composition process in the local fishing fleet especially after the decline in the number of the bigger boats and the increase in the number of small boats under 15 tons. In this process, the “new” stakeholders came from the industrial sector and were used to work on bigger boats except in summer time when some of them operated or were employed on seasonal open vessels.

A professional and technical decline has been identified: fishermen became more mono-specified and used almost the same gear all the year round. The lack of job security among fishermen and workers increased. Being able to live from fishing all the year round cost much to vessel operators who became indebted when quota prices started to increase. Independent small vessel operators were hit the hardest compared to vessel-operators processing fish.

Debt was a chain for coastal communities: that is why small boat owners and their baiters declared that reduced wages was the price to pay to boost the local economy. In a context where companies were high in debt, fishing had to be profitable whatever the social consequences: the need to sell fish at the highest price was detrimental to the local cooperation between producers and fish processors workers in the fish plant and local authorities criticized. The sale on the fresh fish market of fresh fish that has not been processed “at home” (*heima*) aroused conflicts among boat owners, local authorities and fish-plant employees. Within intensive vertical integration, fewer entrepreneurs in the fisheries sector co-operated even on a seasonal basis. Processing fish on an independent basis could not be an independent business anymore. As a result, there was much less place for entrepreneurial diversity in the ITQ system.

Through a time-scale of one “quota year”, the ITQ system did not stabilize the fisheries sectors. On the contrary, its instability represented a threat for local communities. For vessel operators the threat was from getting heavily in-debt from purchasing more harvesting rights. For employers in the fishing sector and for local authorities the threat was from vessel owners, both weakened and ambitious ones, each of whom might prefer to sell harvesting rights, give up and emigrate. The threat of the harvest rights sale was a psychological burden for coastal village inhabitants.

Being a matter of community survival, ITQ matters are of high political interest. For instance, the end of the “quota year” was a period of harvest right scarcity which caused serious tensions among producers, fresh-fish market directors, town councils, workers and boat owners. People blamed boat owners because they did not sell their fish to the local fish-plant to support local employment – *heimavinna*. Each summer has now become the scene of cyclic conflicts opposing the same characters: harvest right scarcity arouses among village inhabitants the same question of legitimacy of vessel owner’s working methods. Vessel owners who sell fish to the local fish plant are the “good” and “fair” ones “fishing for others” and strengthening employment, while the others, selling out unprocessed fish on the market are perceived as threats “fishing for themselves” and “acting like if they were alone”.

At the same time, the dynamics of the ITQ system stirred individual and collective mobilization, phenomenon that are of particular interest for a social scientist paying attention to ethnographical materials. Policies toward marine resource management gave birth to original, local and unexpected resilience strategies (Mariat-Roy 2014) in ITQ management and fishing practices on a local scale. New forms of partnership and cooperation were developed in the context of the boosting of local fishing activities after the mid-1990s. Resilience strategies could be individual or collective but quickly became the latter. Since fishing activities and business were a

matter of local common interest many other economic and politic actors were involved in the local economy. The loss of individual autonomy for producers was therefore offset by the growing implications of new investors: the local bankers and the chartered accountants supported by town councilors. The local bank director who had worked for decades in the biggest local company best knew how to find interesting loans in foreign currency. The local chartered accountant who knew each boat owner's situation started a new business and lent or sold ITQs to his customers. These new forced or unforced alliances led resilience to be a co-construction process. From individual strategies, resilience quickly became collectively orchestrated.

Specific management skills were required to protect and strengthen the situation of boat companies. As vessel operators had become stakeholders who needed to sell, buy or rent ITQs, they had to acquire new skills. In an era of growing commoditization of harvest rights, they became closer than they had ever been to chartered accountants and bankers as they sought to optimize their business strategies and make the best choices to stabilize or even extend their exploitation pattern. "All together", "complementary", as they usually said, these actors gathered their skills and capacities "in the general interest". They decided to re-build the local community and to "play the game" in a new partnership where vessel-owners exploited harvest rights whose charter accountant and bank director helped to purchase, conserve, circulate and keep "home": "we buy harvest rights, they fish", as the bank director formulated it. They thus worked together to gain and, above all, keep marine resources under the form of harvest rights or fresh fish "at home" – *heima*. Things went on a superior scale when, at the end of the 1990s, the local bank director bought an important amount of quotas from the "Jig and Line system" in foreign currencies and retailed them to local vessel operators to extend fishing activities.

It was then essential to keep ITQs at home because their prices had dramatically risen. For example, the price of cod quota increased fifteen-fold between 1995 and 2008. Technically it was possible to buy them on the Quota Exchange Market (QEM) which was created at the end of the nineties to control leasing transactions. Apart from exchanges of species and transactions between vessels held by the same owner, all quota leasing transactions had to take place anonymously at the QEM. But if, once repurchased, they were sold out "again" it would then be impossible to reach them again on the Quota Exchange Market or *Kvótaping* (QEM) because they had become too expensive: they would be definitively lost. Keeping fishing quotas in the village *heima* or, at worst, in the nearby villages where the local banker had customers, was a priority. To do so, he designed an intercommunity "low cost" ITQ exchange market involving three towns and offering fishing rights at prices under the QEM prices.

On the national scale, in 2004, the creation of the "Jig and Line system" and of the "Longline Concession" were the result of a compromise between the National Association of Small Boat Owners (*Landssamband Smábátæigenda*) and public authorities, after a 20-year struggle for the sake of small boat owners and coastal communities, which are closely intertwined according to the leaders of *Landssamband Smábátæigenda*. For public, local authorities, public and private

actors – local bank directors, chartered accountants, fishing business families – it meant a return to basics: more than being the result of an endless business, *fishing is work*.

5.6 The Geographical Diversity of ITQ Effects: A Mosaic of Practices

This space-analysis related section is intended to emphasize the fact that there is neither technical nor economic determinism in fisheries matters. In Iceland, the consequences of the ITQ system and national policies vary from one place to another and I observed that the situation of coastal communities depended on socio-economic factors, on their geographical location and, historically, on the age of fishermen groups and local fisheries organizations.

The existing variety of small boat fishing practices in Iceland does not confirm the hypothesis of economic determinism often claimed by scholars, and certainly by Ragnar Arnason (1995), who think that the ITQ system will help to keep “only the best and get rid of the rest”: such assertions are meaningless in practice.

The example of the development of small-scale fishing in the Westfjords in a context of harvest right scarcity is a relevant one. In some places, small but powerful and efficient longliners are not fully automated and not equipped with baiting machines: this is a compromise small-vessel operators had to accept from local investors. It seems however a peculiar result in a context of policies that have always supported the idea of economic efficiency. This detail proves that stakeholder logic is neither 100% rational from an economic point of view nor optimal from a technical one but that it is social since in those places that have lost harvest rights, fishing activities preserve viability and means for living. That is also why the “Longline Concession” became a success: non-automated longline fishing is an expensive method but it contributes to the revitalization of coastal villages.

Longline fishing from non-automated boats temporarily helped to boost local activity and create employment. It became the fishing method of last resort and made it possible to rebuild social ties in coastal villages where unemployment created *anomie*. Stakeholders described in the previous section participated in the revival of the local economy and played a major role in the re-creation of ties of solidarity and cooperation. In such a local context, automated longline fisheries would be perceived as nonsense from a social point of view.

The western part of Iceland, which is specialized in the exploitation of demersal species and in the export of high-value fishing products including long-line fish, remains competitive. In contrast, the northwest suffered from quota loss and isolation from export centers. In a context where small vessel operators intend to intensify their fresh fish market production, the distance from export or fresh fish market centers makes the difference.

In the West, small-vessel operators are engaged in longline fishing and sell their fish at the highest price on the fresh-fish market. Their boats are fully automated and they do not subscribe to the Longline Concession. Since unemployment is not a major problem in this area, hiring baiters to create employment is not perceived as a necessity. On the contrary, baiting is perceived as old-fashioned and “disgusting”. Vessel operators in the West have an advantage over their colleagues from the Westfjords because they are closer to the Central fresh-fish market based in Reykjavik and to export sites. The price of fish from the West, carried to Reykjavik several times per day, is more competitive than the price of fish carried once a day, and sometimes less in wintertime, from the Westfjords, over long distances, and sometimes by lorry, then ferry and then lorry again.

In the eastern part of Iceland, the scheme is also different. Independent vessel operators are less involved in the “Jig and Line System”. Instead they are the very few (Pórðarson and Viðarson 2014), perhaps the last, independent coastal fishermen working in the classical ITQ system created in 1990 and called *aflamarkskerfið*. They are members of a vanishing professional group since fishing quotas belonging to the so-called “Big system” are more expensive and are mostly bought by operators from the industrial sector. Locally, the discrepancy between small-vessel operators and giant vertically-concentrated enterprises is so huge that interdependence between actors from the fisheries doesn’t exist anymore. Moreover, in the Eastern region, the labor market offers other professional opportunities.

As new commercial and sales matters play a decisive role for vessel-operators dependent from fresh fish sale, the localization of communities, as far as the market is concerned, is a critical point. As it has always been the case in fisheries production, it is important to be at the right moment at the right place but fish does not command anymore: it is rather the market and the proximity of sale and fish-processing sites that matters. That is why Southwest Iceland has become the most competitive and attractive region for fresh fish sale and small-scale fishing after the financial crisis of 2008. Assuredly, there are trends and there are communities where quotas are gathered on the one hand and deserted communities on the other hand. However, since ITQs are characterized by their volatility and since the system remains unstable, for environmental, economic and political reasons, things can change.

5.7 Conclusion: Will Politicians Hold the Line?

The aim of this chapter was not to establish whether ITQs in Iceland have been a success or not but rather to point out how public authorities and stakeholders – whether *direct*, expectant or latent to use concepts from Mikalsen and Jentoft to define fisheries stakeholders in Norway (Mikalsen and Jentoft 2001) – interacted and coped with the ITQ system to reshape and re-define it in conformity with the Icelandic Fisheries Management Laws (*Fiskveiðistjórnun Íslands*), especially after 2008. Social scientist Einar Eythorsson wrote in 2003: “In retrospect, it can be

argued that fisheries management has evolved from being an issue of great consensus and national unity during the 1970s to becoming the most divisive and conflict-laden issue in Icelandic politics and public debates in the 1990s” (Eythorsson 2003: 133). However, from 1991 to 2011, I conclude that public authorities went from disembeddedment to re-embeddedment, from so-called rationalization financial policies to more and more integrated management policies taking into account social and moral matters; from an untamed theoretical model of *laissez-faire* ideals to voluntary, intrusive and more “interventionist” policies. Public authorities adopted and adapted a market-based approach that has evolved to become a kind of State-based management: policy making had definitely changed. State interventions were intended to coastal communities and public opinion at large. That is the reason why, in answer to Eythorsson, this paper asserts that fisheries management after the financial crises of 2008 is even more *intended* than ever before to become again an “issue of consensus and national unity” (Eythorsson 2003: 133). This does not mean that fisheries management has this effect, but, in reference to its glorious historical past, that it is intended to have this effect by politicians who purpose a “reconciliation” *sátt* of the nation.

Many people, especially in bigger towns, considered that the ITQ system, by prioritizing financial matters and economic competitiveness to the detriment of social matters, led to moral impoverishment. Public authorities worked to repair ITQs prejudices and to break this image. On the national scale, the creation of the “Jig and Line System” in 2004 reaffirmed the political will to reassert a value of work that had been demolished by the omnipotence of financial transactions, which the people harshly condemned. By promoting economic, social, and intergenerational interdependence and cooperation in order to strengthen local economies and hold back people who wanted to leave, long-line fishing offered some job opportunities for a while and became, on a national scale, an emblem for local resilience.

In 2008, the political aim was more than ever to restore dialogue with the public at large in a context of general distrust of politicians. After the financial collapse, on a national level, fishing activities and fisheries developed once again. Since 2008, sales revenues have stepped up while catch levels have decreased year after year. In comparison to 2004, the 2010 year resulted in half the catch volume but double the sales revenues. Catches decreased from 1.5 million tons in 2004 to 760,000 tons. Sales revenues went from ISK 63 billion up to ISK 117 billion in 2010. In the same time, for small-scale fisheries especially, the burden of debt in foreign currencies reached dramatic highs, thereby hurting the artisanal sector and weakening small communities dependent on that activity. In this context, profits from commons exploitation in such a critical period were not acceptable. Created in 2009, the “Coastal Jigging System” was part of the reaction of the public authorities who were eager once again to show that marine resources were an accessible common property in a context where social justice was at stake. It was designed in order to create social peace at a local and a national level. For the first time since 1991, reallocated harvest rights were not tradable.

At the same time, State interventionism and redistribution or reallocation policies threatened coastal fisheries. Coastal fisheries, which play an important role in

regional economies and contribute to the diversity of entrepreneurship in fisheries, depend more and more on political decisions. That is why, in the long term, the impossibility for new generations to inherit fishing skills could have a dramatic impact in some cases, leading to “technical regression and to the extinction of a profession” (Geistdoerfer 1982: 97).

In a context of serious social conflict, small-scale fisheries became a safety valve of the Icelandic society, on a local and a national scale. They were given a new role in the political arena: supporting it meant investing in low-impact fisheries and confirmed the will to design a system of fair redistribution of a common property whose exploitation benefited the whole nation. At that point of the redistribution of harvest rights and sales revenues, the reform of the national marine resource management policies that the coalition government intended to carry out was made up of two complementary parts: the Little Bill, a tax on marine resources to be paid by quota holders, which was passed by the Parliament in March 2012, and the Big Bill, the cornerstone of the ITQ reform, which planned a process of partial re-nationalization of fishing rights – an ultimo step in State intervention – which was later abandoned by the new government elected in 2013. What will happen next?

Acknowledgments This article is dedicated to Alette Geistdoerfer (1943–2015), pioneer in the field of maritime anthropology in France.

References

- Adam P (1987) Les nouvelles pêches maritimes mondiales. *Études Internationales* 18(1):7–19
- Arnason R (1995) The Icelandic fisheries. Evolution and management of a fishing industry. Fishing New Books, Oxford
- Barth F (1978) Scale and social organization. Universitetsforlaget, Oslo
- Eythorsson H (2003) Stakeholders, courts and communities: individual transferable quotas in Icelandic fisheries, 1991–2001. In: Dolsak N, Ostrom E (eds) *The commons in the new millennium: challenges and adaptation*. MIT Press, Cambridge, pp 129–169
- Fiskistofa – Directorate of Fisheries (2014) <http://www.fiskistofa.is/veidar/aflastada/strandveidi/strandveidiafli.jsp>
- Geistdoerfer A (1982) Fonctions spécifiques des techniques de pêche dans une production halieutique. In: *Actes de la table ronde Technologie Culturelle*. Éditions de la Maison des Sciences de l’Homme, Paris, pp 87–98
- Grétarsson H (2010) Allocation of demersal harvesting rights in Iceland. *Artic Rev Law Polit* 1(2):299–318
- Hagstofa Islands – Statistics Iceland (2008) <http://www.hagstofa.is/?PageID=2594&src=https://rannsokn.hagstofa.is/pxis/Dialog/varval.asp?ma=VIN01102%26ti=Fj%F6ldi+starfandi+eftir+atvinnugreinum%2C+kyni+og+landssv%E6%F0i+1991%2D2008+%26path=../Database/vinumarkadur/rannsoknir/%26lang=3%26units=Fj%F6ldi>
- Helgason A (1995) The Lords of the Sea and the Morality of Exchange. The Social Context of ITQ Management in the Icelandic Fisheries. Master thesis, University of Iceland, Reykjavik
- Helgason A, Palsson G (1994) The politics of production: enclosure, equity and efficiency. In: Durrenberger PE, Palsson G (eds) *Images of contemporary iceland: everyday lives and social context*. University of Iowa Press, Iowa City, pp 60–84

- Helgason A, Palsson G (1998) Cash for quotas: disputes over the legitimacy of an economic model of fishing in Iceland. In: Carrier J, Miller D (eds) *Virtualism: the new political economy*. Berg Publishers, Oxford, pp 117–134
- Magnusson SM (1985) *Iceland in transition: labour and socio-economic change before 1940*. Ekonomisk-historiskaföreningen, Lund
- Mariat-Roy E (2011) *Si les Quotas m'étaient contés. Les conséquences économiques et sociales des politiques islandaises de gestion des ressources marines*. Ethnologie de communautés littorales, PhD thesis, Ecole des Hautes Etudes en Sciences Sociales, Paris
- Mariat-Roy E (2014) When fishing means resilience: the evolution of small boat fishing practices in Iceland since 1990 and the new development of longline fishing. *Polar Record* 50:421–429
- Mikalsen KH, Jentoft S (2001) From user-groups to stakeholders? The public interest in fisheries management. *Mar Policy* 25:281–292
- Polanyi K (1944) *The great transformation*. Beacon Press, Boston
- Skaptadottir UD (1995) *Fishermen's wives and fish processors, continuity and change in women's position in Icelandic fishing villages 1870–1990*. The City University of New York, New York
- Þórðarson U, Viðarsson JR (2014) *Coastal fisheries in Iceland*. Icel Food Biotech R&D, Skýrsla Matís n°12–14