

IUCN World Conservation Congress, Barcelona, Spain, October 8th 2008

Overcoming hurdles to sustainable industrial fisheries production

Grimur Valdimarsson
Director
Fish Products and Industry Division
Food and Agriculture Organization of the
United Nations (FAO)
Rome



Ladies and Gentlemen,

It gives me great pleasure to be here today and I am sure that, as usual, when a few people interested in fisheries get together, there is plenty to talk about. And that is the idea here today.

Before I go into thrashing out some of the stage material on the international fisheries scene, let me make clear that I will try to be provocative today, as requested by Carl Gustav. So, I had better state right away that the views presented in this talk today may not necessarily represent those of the Food and Agriculture Organization of the United Nations.

First, two words in the title of this presentation:

Sustainable. This word now represents the magical health certificate, since Rio in 1992. But we should be reminded that fisheries can be sustainable even if they are overfished and produce only a fraction of the fish they could if well managed, and they can be fully sustainable biologically with very poor economic results or pouring in tax payers' money as subsidies.

The other word is **industry.** This is commonly taken to signify « big industry », « big profits », « big boats », etc. To me, small-scale vessels are also part of an industry because practically all capture fisheries constitute an economic activity that responds to normal economic incentives. That is why practically all fisheries are, to my way of thinking, « commercial » one way or the other.

Outline

- Fisheries successes
- Fisheries failures
- Are fisheries unmanageable?
- Fishing rights and “self-governance”
- Growing awareness
- Overcoming the hurdles



An outline of my talk is as follows:

Fisheries successes

Fisheries failures

Are fisheries unmanageable?

Fishing rights and “self-governance”

Growing awareness

Overcoming the hurdles

Fisheries successes...



I am not sure whether it is a good idea to start on a positive note before talking about the failures, but I will take the risk. We can say that fisheries has become a victim of its own success. For decades catches just increased and the industry expanded. More and more species became available. With better fish finders, better fishing gears, and better vessels, this seemed to be an endless source of excellent food.

Fisheries successes

- Fish in great demand – positive health image
- Most traded food internationally
- Over 230 species from aquaculture



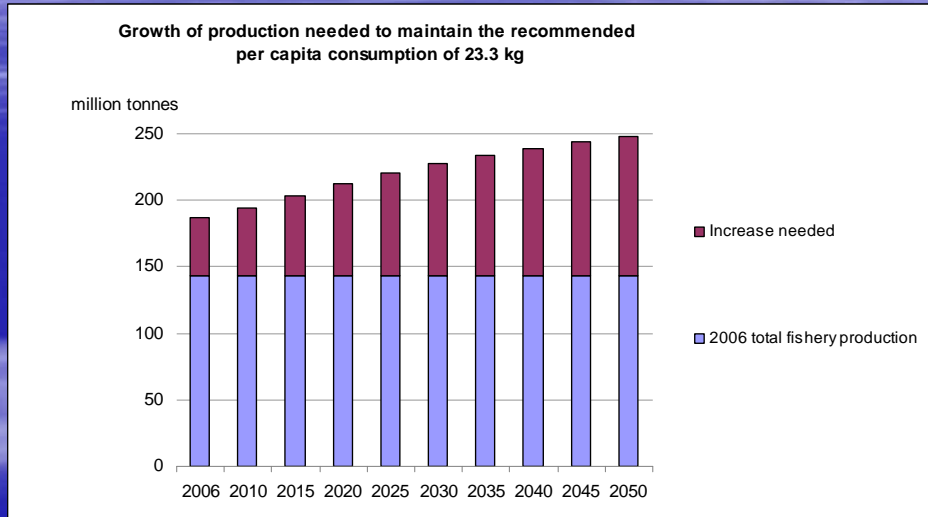
And even if capture fisheries has become stagnant, globally consumption has been on the rise due to aquaculture. At present, consumption is at a record high of 17.4 kg/capita. From a nutritional point of view fish is a very important food item. Fish constitutes 20% of intake of animal proteins for 1.5 billion people.

International trade is a major success, with some 37% of all fish now traded across national borders – developing countries providing over 50% of this quantity – which is a remarkable achievement in light of the strict hygienic requirements of the major importers.

Aquaculture has been one of the fastest growing food sectors in the world, with total production increasing at a rate of almost 9% per year – excellent results by any measure.

Yet, the world wants far more fish. If we take the recommendations by the U.S. Heart Association and the UK Food Safety Authority, i.e. at least two meals of fish a week of 140 grams each, then we would have to provide a bit more fish than we are capturing and harvesting today.

If humanity follows the recommendations of two 140 g meals of fish a week...



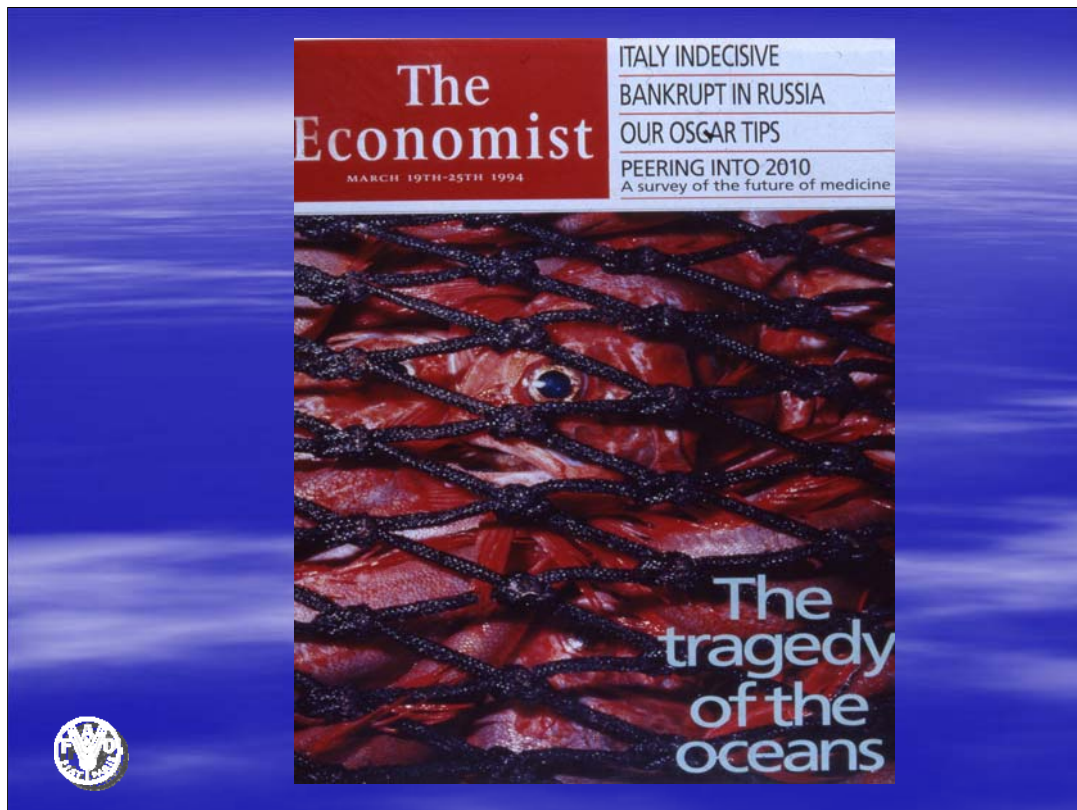
If we follow these recommendations of two meals of 140 g of fish per week then this is the scenario: The per capita consumption would have to be 23.3 kg per capita instead of the 16.7 in 2006. That means 42.2 million tonnes more fish would have been needed in 2006 and 84 million tonnes more in 2050. And these figures are based on the minimum recommendation. I think it is clear that it will be very hard to satisfy all this demand.

Fisheries failures



And now, the failures:

With weak restraining mechanisms in management and technological developments in finding and capturing fish – the result has been inevitable: widespread overfishing.

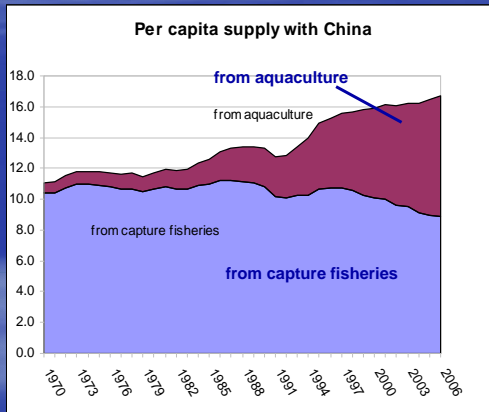


This is actually an old slide that I used 14 years ago to make the point of the troubles the capture fisheries sector needs to get out of! It is unfortunately becoming a classic.

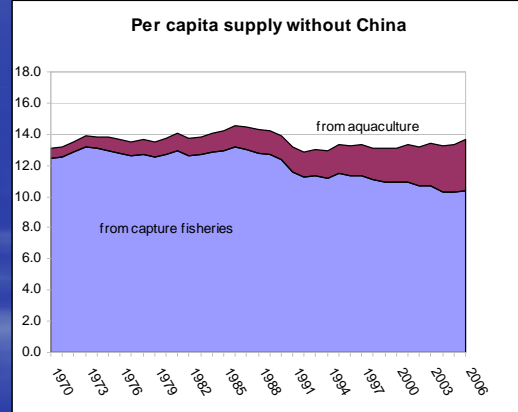


Contribution to food

Per caput supply with China



Per caput supply without China



The capture fisheries failure is evident from these slides which show that the per capita supply of fish from capture fisheries is going down in the world. The increasing per capita figures that we are flagging come from one source: the phenomenal aquaculture sector in China.

“Deploring the fact...”

sparsely regulated.. inadequate flag State control..
heavy fishing effort.. overfished..

inadequate enforcement..

illegal, unregulated fishing... etc.

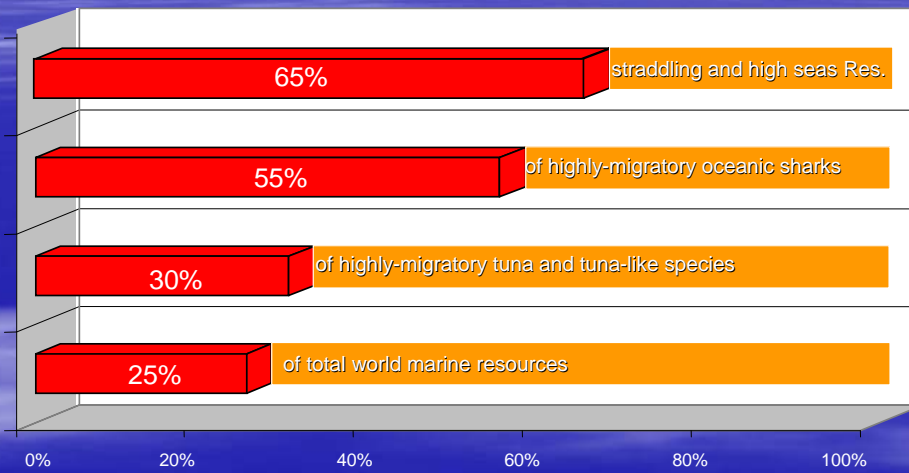
UN General Assembly:
Resolution A/621/177,2007



This slide shows what the UN General Assembly has to say about the capture fisheries sector:

One of the preamble paragraphs reads: “*Deploring* the fact that fish stocks... in many parts of the world are overfished or subject to sparsely regulated and heavy fishing effort as a result of inter alia, illegal, unreported and unregulated fishing, inadequate flag State control and enforcementetc. etc.”

Overexploited or depleted marine resources



SOFIA, 2006

FAO FTP 495, 2006

FAO publications give the following sad account of overfishing – or in more correct terms: overexploited and depleted marine resources.

Needless to say, this situation is not acceptable and underlines the need for more effective fisheries management, which actually is materializing in many places in the world, but admittedly too slowly.

And all this begs the question:

Are capture fisheries unmanageable?



As a result of this “deplorable” state of fisheries, the idea is emerging that capture fisheries cannot be managed. That we have been trying hard for decades but have apparently failed.

There is now strong and increasing evidence that the answer to this question is a firm no. Capture fisheries can be managed – if we select the right tools. FAO has been gathering case studies from around the world that show this ever more clearly. There is a fundamental flaw in how fisheries management has been approached, i.e. with top-down command and control methods that have proven unsuccessful in practically all sectors of the economy where they have been tried. This is management in the form of open access, semi-open access, and competitive fishing with very limited or weak fishing rights.

It means racing for the fish. If I don't catch it someone else may. The result is huge overinvestment and too many vessels. A new FAO/World Bank report concludes that some 50 billion US\$ are lost every year through such inefficiencies. Think about it: 50 billion US\$.

What is even more serious is that, at a time when we would really need much more information collected from every fishing trip, the race for the fish provides very strong incentives for the vessel crews NOT to give any information on what they are doing - or as little as they can get away with.

The fisheries fundamental problem:

Lack of clear legally defined fishing rights



The lack of clear, legally defined fishing rights has been called the fundamental problem preventing management from becoming effective.

Thalassorama

The Death Rattle of Open Access and the Advent of Property Rights Regimes in Fisheries

FRANCIS T. CHRISTY
IMARIBA

Introduction

In considering fisheries regulation in the next decade, I make a concluding point that may become a major theme. This is that individual permanent catch quotas of a regulator-determined TAC are only a stage in the development of management from licensing to private rights (Scott 1989).



A now retired FAO colleague, Francis Christy, wrote an article 14 years ago optimistically entitled, “The death rattle of open access and the advent of property rights regimes in fisheries.” He postulated that the case for property rights was so evident that fishing rights would become the key issue in the coming years and wipe out open access fisheries. How wrong he was.


Writing the article one year after the FAO Code of Conduct was approved, he pointed out that, as good as the Code was, it failed to recognize that fishing is primarily an economic activity and thus responds to economic incentives – like any other business.

“Despite their salty independence, even fishermen respond to market incentives.”

The Economist. September 20th -26th 2008



In a recent article in “The Economist” this thinking was put as follows: “Despite their salty independence, even fishermen respond to market incentives.” Lets look at this article, that actually is based on a paper in the journal “Science”.



Science and technology The Economist September 20th 2008 83

Also in this section


- 84 The purpose of sleep
- 84 Children's health
- 85 Blogging for science

Fishing and conservation
A rising tide

ermen as a long-term right. Fishermen therefore have an interest in good management and conservation because both increase the value of their fishery and of their share in it. And because shares can be

The Economist,
September 20-26 08

Science 19th September 08



Can Catch Shares Prevent Fisheries Collapse?

Christopher Costello,^{1*} Steven D. Gaines,² John Lyncham^{1†}

Recent reports suggest that most of the world's commercial fisheries could collapse within decades. Although poor fisheries governance is often implicated, evaluation of solutions remains rare. Bioeconomic theory and case studies suggest that rights-based catch shares can provide individual incentives for sustainable harvest that is less prone to collapse. To test whether catch-share fishery reforms achieve these hypothetical benefits, we have compiled a global database of fisheries institutions and catch statistics in 11,135 fisheries from 1950 to 2003. Implementation of catch shares halts, and even reverses, the global trend toward widespread collapse. Institutional change has the potential for greatly altering the future of global fisheries.

Although the potentially harmful consequences of mismanaged fisheries were forecast over 50 years ago (1, 2), evidence of global declines has only been seen quite recently. Reports show increasing human impacts (3) and global collapses in large predatory fishes (4) and other trophic levels (5) in all large marine ecosystems (IMEs) (6). It is now widely believed that these collapses are primarily the result of the mismanagement of fisheries.

One explanation for the collapse of fish stocks lies in economics: Perhaps it is economically optimal to capture fish stocks now and invest the large windfall revenues in alternative assets, rather than capturing a much smaller harvest on a regular basis. Although this remains a theoretical possibility for extremely slow-growing species

¹Yuen School of Environmental Science and Management, 4420 Boes Hall, University of California, Santa Barbara, CA 93106, USA. ²Marine Science Institute, University of California, Santa Barbara, CA 93106, USA. ³Department of Economics, University of California, Santa Barbara, CA 93106, USA.

*To whom correspondence should be addressed. E-mail: costello@em.ucsb.edu

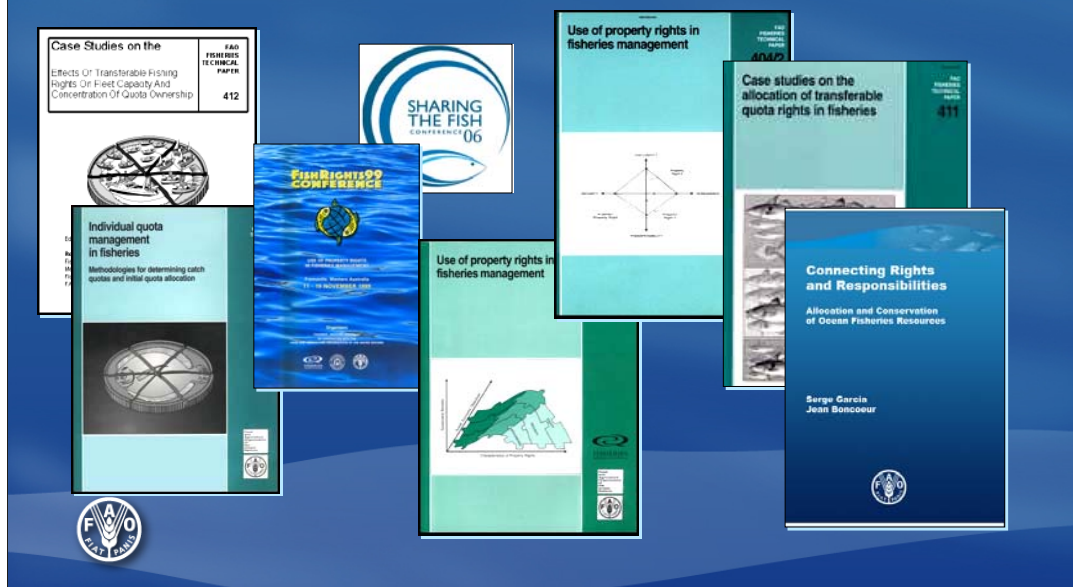
†Present address: Department of Economics, University of Hawaii at Manoa, 2424 Maile Way, Honolulu, HI 96822, USA.

678 19 SEPTEMBER 2008 VOL 321 SCIENCE www.sciencemag.org

The authors of the “Science” article, Costello et al., analysed 11,135 fisheries around the world from the years 1950 to 2005. Out of these, 121 were managed using catch shares – defined variations on individual transferable quotas (ITQs). The results, in short: rights-based fisheries performed much better from a management point of view and were much less likely to collapse than conventionally managed fisheries. The authors state though that ITQ systems are not to be taken as “carte blanche endorsement” for good management. FAO says that no one size fits all and that rights systems in fisheries have to be tailor made for each situation, and even each fishery.

Addressing the real problem

- Assigning legally secure fishing rights to the people in the fisheries sector



FAO has been working on the rights-based approach and on the mechanisms of rights-based fisheries management since the 1970s. The case is pretty clear: effective fisheries management calls for clear fishing rights. The current form of responsibilities without rights doesn't work. Rights and responsibilities go hand in hand. However, the process of assigning fishing rights is tedious and politically sensitive.

Brand new case studies by FAO



The newest FAO publication on rights-based fisheries is called “Case studies in fisheries self-governance”. It is the 4th such publication by FAO and is an account of 32 case studies of management with close involvement of the sector itself – involvement which has been given the term “self-governance” or “co-management”, but all based on one form of a rights-based system or the other.

FTP 504: WHAT INDUSTRY DOES...

The case studies documented here describe situations where the industry: determines seasons; manages closed areas and m... **Determines seasons...**
catch monitoring programmes; fixes daily and seasonal catch limits; rotates fleets; manages research; imposes penalties for violation of rules; implements individual quotas... **Manages research...**
rationalizes fleets; manages product quality, and manages competing demands for the resource between commercial and non-commercial users – an astonishing range of activities reflecting laudable se... **Imposes penalties...**



Industry involvement is described as.....

Growing awareness...



What I like to call the recent fisheries successes is a growing awareness and acceptance by governments and the sector itself:

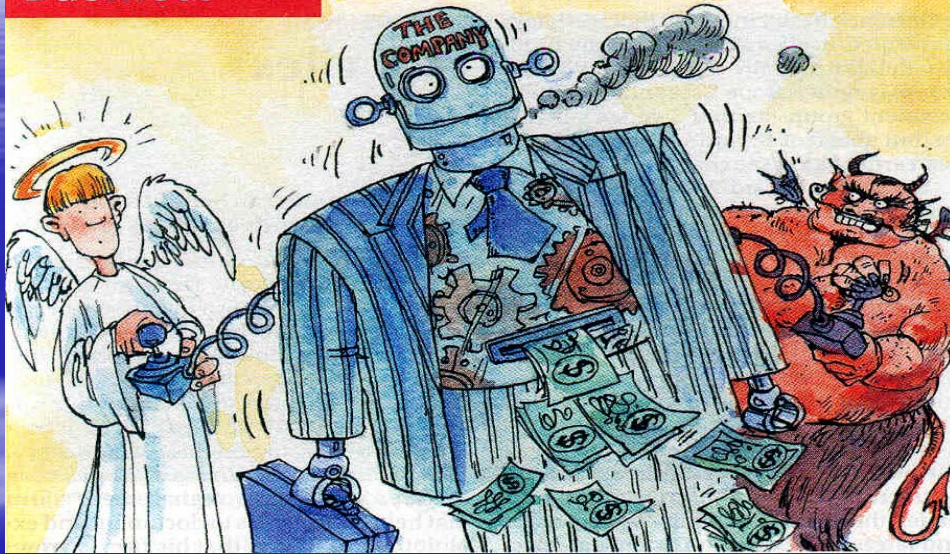
1. that the fishing effort has to be effectively restrained through rights-based systems;
2. that the “good old times” when the sector could fish wherever it wanted, whenever it wanted, however it wanted, will not come back;
3. that environmentalism is here to stay – and has to be accommodated;
4. that ecolabelling products is positively raising awareness.

There has been progress in the fight against IUU fishing, good results in reducing incidental catch of seabirds, the adoption of techniques to avoid marine mammals, bycatch issues being successfully addressed, avoidance of vulnerable marine ecosystems, etc. There are more and more examples where the industry is directly participating or is involved in closing areas, ecolabelling schemes, and other sustainability initiatives, the newest of which is being undertaken by tuna companies to conserve tuna stocks.

Actually, as I see it, these are examples of the increased social and environmental awareness as expressed through the Corporate Social Responsibility Movement (CSR), depicted vividly in the next slide.

Corporate Social Responsibility...

Business



Economist, September 8th 2007

The CSR debate cuts deep into the discussion of the role of the State versus that of the private sector. Many see it solely as a guise used by companies to gain market advantage and thus to increase profits. Others see that it represents a genuine new role for companies to be responsible corporate citizens. This is indeed a very healthy discussion.

So, “overcoming the hurdles...”



Well, there are no quick fixes, no patent solutions, even if we are learning that incentive systems in capture fisheries are still largely skewed.

I believe that in the last decade or so, we have come close to agreeing on what the promised land in fisheries and aquaculture looks like: responsible, eco-friendly, people-friendly and equitable, producing, healthy and convenient products at a reasonable cost. A sector at peace with society, sustainable and economically viable.

To me now it is much more a question of **HOW** to get there. I repeat that it is becoming clear that fishing rights constitute the main engine that can move the sector into that happy state. A management system is needed that reacts effectively to the decisions taken by the authorities or the industry much like we expect a car to speed up when we press down on the accelerator or slow down when we press down on the brake pedal. So, the engine and brakes are essential basics for all cars. To me the ecosystem approach and all the other adjustments are just a more sophisticated form of managing fisheries – more levers and buttons to push – to use the car analogy.

There have to be fishing rights, where states set the scene and have the overall responsibility, but the industry must be actively involved and be held accountable.

So, it is time for governments and the sector itself to take note of what we have learned over the last decades – and roll up their sleeves.

Should States be held accountable for the way they are managing their fisheries along the same lines as they are held accountable for safety of products in international trade?



I want to leave you with a question, which is:

Should States be held accountable for the way they are managing their fisheries along the same lines as they are held accountable for the safety of products in international trade?

“The thinking that gets us into trouble is not the thinking that gets us out of it”.

Albert Einstein



And finally, one of my favorites by Albert Einstein: “The thinking that gets us into trouble is not the thinking that gets us out of it”.

I hope we will have a lively and fruitful discussion here today.

Thank you

Further information: www.fao.org

Grimur.Valdimarsson@fao.org

