

## **Property rights on the oceans : a prerequisite to humanity survival<sup>1</sup>**

Max Falque

Managing director ICREI

### **Introduction**

It is ironic that marine resources which are now acknowledged as the future of mankind economic wealth are still to large extent under an open access regime.

Imagine that mainland should be managed the same way, that is without:

- clearly defined and defended property rights on land
- cadastre mapping the boundaries of each piece of land
- registration of titles by governments

But conversely access to land resources managed by politicians and bureaucrats according to everchanging laws and regulations according to special interests.

As a matter of fact the emergence of agriculture some 10 000 years ago implied the the progressive invention of property rights which in turn open the path to food and animal production..

This was the beginning of civilisation which means taming conflicts over access to resources, economic and demographic growth and ultimately rule of law and individual liberty.

Unfortunately this kind of evolution did not happen for the oceans which cover more than 70% of the planet and for good reason since “you cannot fence the ocean”.

This open access regime worked more or less for centuries though national and international regulations dealt with overexploitation and conflicts especially on the near shore and that numbers of traditional common property regimes managed the resources.

However since around the mid XXth century one can observe:

- over exploitation of the fish stock by industrial fishing
- location of a great number of infrastructure and competing activities on the near shore

---

<sup>1</sup> Contribution to the Université d'Eté de la Nouvelle Economie

- a concentration of the population on the coastal zone and corresponding pollution of the sea.

As with all resources, scarcity compels to imagine new institution to avoid “the tragedy of the commons” as described by Garrett Hardin “Ruin is the destination toward which all men rush pursuing his own interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all”.(1968).

Of course regulation is the traditional response to deal with this situation but it is time to imagine efficient management by property rights to cope with the growing economic and environmental pressures on the oceans.

This is now possible thanks to new digital technologies which allow identifying both species and space:

- Individual Transferable Quotas (ITQ) for fish which is a prerequisite to a market
- Marine cadastre which is a prerequisite for quasi property rights

### **I- Individual Transferable Quotas (ITQ)**

On July 14<sup>th</sup> 2011 the International Herald Tribune headline on page 14 wrote “ *EU overhaul would privatize bloc’s fisheries*” and the same day Le Monde “*Brussels proposes a radical reform of fisheries*”

The idea is simple and some 30 years old. Up to now each EU country is allowed by the EU a quota for each species which in turn is allowed to all registered fishermen.. As a matter of fact the total available catch (TAC) at the European level is set up every year for the fishing season by marine biology scientists but politicians allow extra quota (so called “Christmas Fish”) to tame the too often violent fishermen community.

So we are exactly in Hardin’s “Tragedy of the Commons”<sup>2</sup> situation where a publicly held resource is overexploited because all users have an incentive to maximise its use in the short term and eventually the total destruction of the resource.

The rational response of fishermen is to use bigger boats to catch the maximum fish during an ever shorter fishing season.

The perverse effect of such a regime are numerous:

- danger of accident for overworked fishermen,
- over capacity of fishing vessels built with subsidies

---

<sup>2</sup> « The oceans of the world continue to suffer from the survival of the philosophy of the commons. Maritimes nations still respond automatically to the shibboleth of the freedom of the seas. Professing to believe in the inexhaustible resources of the oceans, they bring species after species of fish and whales close to extinction”

- destruction of non authorized species
- difficult official control of catch and corruption
- competition and confrontation at national and international level

This situation prevails worldwide according to the 2009 World Bank's booklet *'The sunken billions: the economic justification for fisheries reform'* the harvest sector to the global economy is substantially smaller than it could be. Over the three decades the cumulative loss of potential benefits is the order of two trillions.

So the idea is to allow each fisherman an individual transferable quota of fish to catch, i.e. a full property right allowing him to fish when and how he wants and possibly selling his ITQ to an other fisherman.

If the concept is clear its implementation is quite tricky. The effective removal of age long open access condition from marine capture fisheries and the institution of secure marine tenures and property rights systems is a difficult task both technical and political reasons.. Moreover this reform would involve the reduction of subsidies that create excess fishing effort and capacity..

Introducing a new governance is a very difficult task since special interests of fishermen association combine with ideology. This is the case in France who demonizes any kind of patrimony of collective good (*res nullius*) belonging to all.

However several countries such as Iceland, overcame this problem. But political will had to fight deeply felt emotions, traditions, practices and political opposition?

The long battle fought for the emergence of property rights is now to be fought for the oceans. But the alternative to reform, business as usual, is a continued decline in global fish wealth : *"Failure to act implies increased risks of fish stock collapse, increasing political pressure for subsidies and a sector that rather than being a net contributor to global wealth is an increasing drain on society"* ( World Bank 2009).

## **II- The marine cadastre**

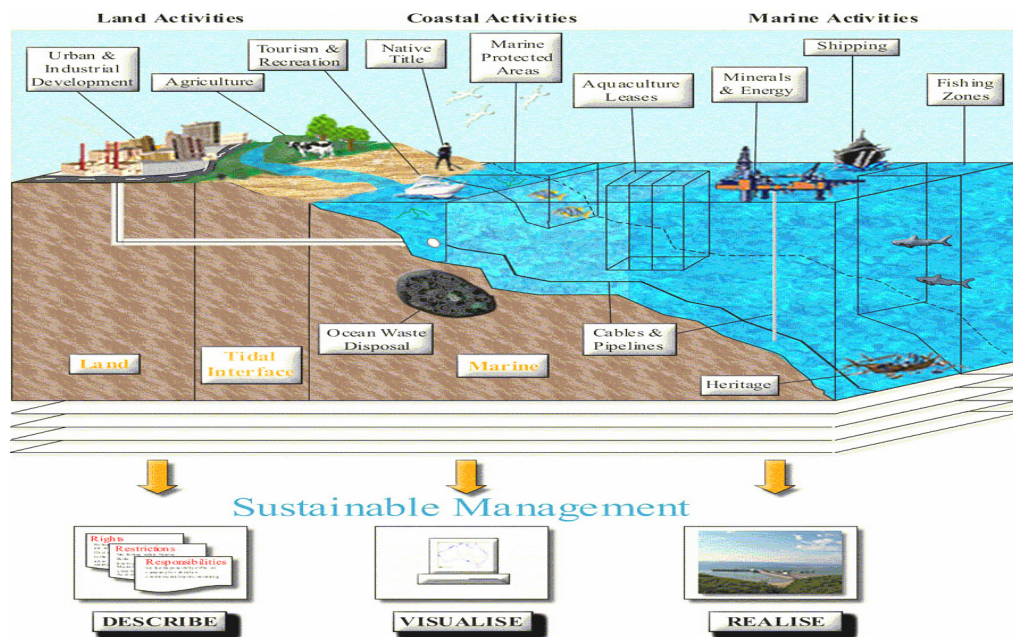
If it is not possible to fence the ocean ....however "Good fences make good neighbors"

The concept is new and began to be discussed at the turn of this century especially in Australia , New Zealand,, Indonesia , Canada and the US.

In France you could not find any reference until I coauthored with Pierre Boissery a short article in octobre 2009 (Annales de la voierie)<sup>3</sup>.

The idea is very simple: in the near shore submerged area growing number of infrastructures and activities are competing for a limited 3 dimensional zone such as pipelines, undersea cables,,ship routes, military protection zones and fields, dock structures, alternative energy facilities (wind, wave, tide,solar....), archeological research areas, aquaculture, oil and gas, usinesses, fishing, artificial reefs, and even fresh water from underground rivers etc.

For the time being there is no clear and updated record of these activities and conflicts arise between competing users.



- Now what is a marine cadastre for ?

It is defined as a document for users and stakeholders to describe, visualise and realise spatial informations in the marine environment.

- What is a marine cadastre ?

- describe the location and spatial extent of rights, reservation and responsibilities,
- visualize through a three dimensional updated and accurate digital spatial data system

<sup>3</sup> In addition Diane Dumashie (FIG) made presentation at the 8<sup>th</sup> ICREI International Conference in June 2010. Proceedings to be published next fall by Bruylant

- set up maritime boundaries.

Eventually a marine cadastre will provide a simple, reliable and authoritative mean for delineation, management and administration of legally defined offshore boundaries at any scale.

One can imagine that implementing a marine cadastre is a very difficult task and up to now a limited number of case studies have been successfully conducted in few countries.

What to do do ?

The first step is to introduce the very concept and assess its cost and benefit for a given nation. For instance in France, which is a clean slate, ICREI and Agence de l'Eau are setting up a one day seminar in 2012 with some 20 officials and land surveyors to test the idea<sup>4</sup> Since we acknowledge the fact that setting a marine cadastre in France (by the way just second to the US for ocean control of EEZ) is costly and difficult, it is wise to check what is the experience of other countries and institutions such as Fédération Internationale des Géomètres-FIG.

### **Conclusion**

Property rights are the basis for economic development and resource conservation. Of course history tells us that they are also the corner stone for liberty.

Extending them to oceans is one of the major task of this century though not an easy one.

Beside scientific and technological input it needs also legal and economic imagination which is the motto of ICREI.

---

<sup>4</sup> This seminar will take place in Aix or Marseille with limited money from Agence de l'Eau and with two French speaking keynote speakers belonging to the Association of Canada Land Surveyors and Federal Government which have now a large experience.