



Governing Global Commons: Public-Private-Protection of Fish and Forests

Frans van Waarden

Utrecht University

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1. Three Regulatory Paradoxes

1.1. Paradox I. More Demands on States for Risk Reduction, yet less Capacity to Satisfy them, due to Globalization

A main task of the state is to protect its citizens against all imaginable kinds of risks and uncertainties. It is its very legitimation. Citizens have entered into an imaginary contract with the state, offering loyalty, obedience, and taxes in exchange for security and prosperity. That was already so in the early days of state formation, when state authority was accepted and duties performed in exchange for protection from dangerous nature, animals and humans: foreign armies and criminals. In democratic welfare states citizens have used democracy to demand protection from an ever longer list of risks: poverty, exploitation, unemployment, sickness, disability, old age, infectious diseases, unsafe water and food, polluted air, the weather, annoying beggars, chaotic traffic, even moral hazards such as temptations by immoral foods, drinks, pictures, or ideas.

The demands for protection are increasing due to a variety of social changes. First, advances in scientific knowledge. This made us aware of all kinds of risks we were not aware of before, such as the carcinogenic effects of certain chemicals or exposure to smoking. Second, the ICT revolution informs us instantaneously about all kinds of sudden risks, crises, frauds, scandals elsewhere that could also threaten our security: a SARS epidemic in China, political unrest in the Middle East. This seems to enhance a sense of insecurity. Science brought also knowledge how to avert or fight such risks, or how to calculate them, allowing for the provision of insurance against them (Bernstein 1996). This has nurtured a belief that risks are no longer fateful events, bad luck, acts of God, to which we better patiently resign, but that we can do something about them. Hence we expect our politicians to act, to ward off any imminent threats, and to use all available scientific knowledge and other resources and powers of the state to do so. A veritable 'race of rising expectations' is the result.

While expectations of and demands of citizens to the state for reduction of a wide variety of risk and uncertainty have grown, the state's capacity to satisfy these expectations is decreasing. With globalization, more and more sources of risk and uncertainty are beyond the direct control of the nation-state. Many emanate from outside its territorial jurisdiction. Thus states are getting squeezed between these contradictory tendencies: more demands, yet less capacity to satisfy them. Globalization affects also the subjective and moral risks. Production elsewhere increases risks for people over there: exploitation, child labor, pollution, destruction of biodiversity. These turn up as moral risks for the population here.

1.2. Paradox II: Desire to Erect Borders in a Time when that Gets ever more Difficult

The traditional response of nation-states to such threats from abroad - in itself nothing new under the sun - has been to try to keep them out: by delineating, maintaining and enforcing borders and erecting walls to keep threats out - the very essence of a *territorial* state; and by controlling if not blocking the 'import' or intrusion of 'foreign' goods, people, soldiers, criminals, diseases, ideas, and information considered 'harmful' to the security of their citizens (and/or not infrequently: the security of the political power holders). This old 'city wall' philosophy has lost nothing of its currentness, as testified by modern phenomena like strict border controls by a huge department of Homeland Security in the US, fences on the US-

Mexican border, and the erection of a 'Fortress Europe', with high barbed wire fences from Melilla to Wlodava.

However, this strategy of building 'fortresses' becomes increasingly difficult in a globalizing world. First of all physically: Air- or waterborne GMOs easily cross over borders and affect 'wild' populations, whether genetically modified corn or farmed salmon. Secondly, politically and factually: Citizens demand goods available elsewhere and polities that have tried to keep seditious ideas out (the DDR, currently China) have failed dramatically in an age in which the world is interconnected by dense electronic and transport networks. Thirdly, legally: states trying to keep risks out are more and more constrained by international law, limiting protectionism. They can get punished by other states for protectionism.

1.3. Risk Regulation by Civil Society itself: Markets, Communities, Firms, and Associations

Both paradoxes create dilemmas for modern states. They get confronted with increasing expectations for protection against all kinds of risks and uncertainties; and ever greater difficulties in satisfying these demands.

Considering this, it may be useful to point out that throughout history states have not been alone in providing institutions that help to reduce risks and uncertainties for citizens. So have many organizations of civil society. Perhaps combinations of public and private institutions may provide solutions to the new squeeze national governments find themselves ever more in.

Markets provide on the one hand solutions to the risks of starvation, lack of shelter, and more in general poverty, they have on the other hand themselves become sources of new risks and uncertainties. Information asymmetries allow for fraud and deception. In the absence of some regulatory protection of the weaker parties, transactions may come to a halt. Hence capitalism could only develop parallel to some regulatory authority.

Long before the advent of nation-states in the later Middle Ages, merchants organized themselves in merchant guilds - starting already in the 10th century - and these together developed a system of law across Europe, the Lex Mercatoria or Law Merchant, to facilitate local as well as long distance trade and to adjudicate efficiently in commercial conflicts. Since then, an enormous variety of institutions have come about which aid in making markets possible and sustainable by facilitating transactions: gangs and the mafia aid in enforcing contracts; insurance companies insure calculable risks; clans and communities develop informal norms and customs sanctioning opportunistic behavior; trade unions that reduce the insecurities of workers in the labor market; guilds or trade associations that regulate the quality and reputation of products and their producers. Thus many market ordering regulations have emerged bottom up, as commercial information services, informal norms of subcultures and communities, more formal self-regulation by associations, from 11th century merchant guilds to modern-day trade associations and commercial rating agencies.

However, many of these private solutions to the risks and uncertainties of the market were sooner or later found out to have problems of their own, and/or turned out to be new sources of risk and uncertainty themselves. The mafia became itself a threat to the life, liberty and property of the very transaction partners that had engaged them at first; insurers went broke; norms of clans and communities limited market-entry from outsiders and hence competition; associations suffered from the threat of free riders; and a proliferation of competing private standards obfuscated markets rather than making them more transparent.

1.4. State Support for Private Regulation

Such deficiencies and problems have sooner or later induced the state to intervene and to provide support en credibility to such private risk and uncertainty reducers (Van Waarden 1985). That is, it does not only directly reduce risk and uncertainties, but also backs up private actors that aim to do so. This need for public support for private initiatives was actually one reason for the very emergence of nation-states. The state provides the basic legal infrastructure (property rights, contract law, judicial conflict resolution) within which markets, commercial risk reducers, communities and associations can function. Commercial civil law, which does so, rests in part upon the earlier private initiative mentioned, the *Lex Mercatoria*. The state has furthermore increased the public trust in commercial risk and uncertainty reducers such as accountants, lawyers, insurance companies and banks, by holding these themselves up to standards, obliging them to insure themselves, and by creating appeal procedures for aggrieved clients. The state helps self-regulating associations solve collective action problems by recognizing them, giving them privileged access, or by backing their private regulations with public law. Where the market and commercial organizations produce a proliferation of standards which threaten to make markets again intransparent, it does set uniform and authoritative standards: for weights and measures, pricing units, vocational training or university degrees. To this end states have over time produced a great many specialized organizations that aid in risk and uncertainty reduction on markets: the land register, offices for the registration of patents and other intellectual property rights, central banks, weights and measures offices, food, drugs, and veterinary inspections, schools and universities, standardization and certification bodies, and regulators for specific markets.

1.5. Paradox III. From Private to Public Regulation and now again back to Private

Re-regulating domestic markets in order to reduce risks and uncertainties and to increase trust among transaction partners is easier for nation-states than re-regulating global markets. The latter requires extending jurisdiction beyond their own territorial borders. How do countries try to influence regulatory standards elsewhere? Economically or politically powerful nations can and do occasionally (try to) impose their standards on other nations, through trade relations (the ‘California effect’, Vogel 1995), or by political, diplomatic, and if need be even military pressures, as we have seen in the ‘battle against terrorism’. More frequently used however are less asymmetric forms: inter-national regulatory cooperation and negotiation, harmonization initiatives (mediated) by supra-national organizations that have already been created by the nation-states in the past. A great variety of mechanisms of harmonization and convergence of regulatory standards have in the meantime been identified in the literature, among them formal negotiated harmonization, soft harmonization, generalized exchange involving subtle pressure, the open method of coordination, mutual learning and imitation, etc. Thus attempts have been made to centralize regulation to levels above that of the nation-state.

Even if countries manage to export their standards to others or to agree on more or less binding international regulations, they remain dependent on these other countries for the actual implementation and enforcement on the street levels, shop floors, or harbors there. Standards still measurable on products or people can be checked at the borders, but this is difficult if not impossible for process standards or product-standards that can no longer be identified in the product.

Mutual trust between countries in their enforcement practices and value of certificates is however complicated because the discretionary authority of street level bureaucrats and their enforcement styles tend to differ significantly between countries (Vogel 1986, Van Waarden 1999a, 199b). Given these differences in styles, countries that maintain stricter enforcement procedures may be hesitant to trust others that are known for having less strict ones.

Thus states need help, notably in implementation and enforcement. This can and does come from private information providers, regulators or enforcers: critical scientists and their organizations, the press, other information providers like the World Resources Institute, commercial certifiers (auditors, Transfair USA), private and semi-public accreditation bodies (ISO, DAP), International Standard Setting Bodies (ITU, Basel II), national and international trade associations, e.g. the rather active European Advertising Standards Alliance, public interest associations and other NGOs, large corporations.

These have the advantage that they are not bound by territorial jurisdictions and can cross national borders easier. Their identity is a functional rather than a national one. And they can use other sanctions. In stead of administrative fines or criminal punishment they can spread information, affect reputations by rating them, engage in naming and shaming, or can refuse to buy or distribute products. In addition to sanctions they also often dispose over rewards. Thus the opposite of many sanctions is a reward: positive rather than negative information or rating. Whereas public officials, e.g. food inspectors, are often forbidden or limited by law to name businesses that do not meet minimum quality standards, private enforcers have no such legal restraints and can engage in naming and shaming. Private actors can also easier discriminate and be protectionist. Public actors are restrained in doing so as they are bound by international treaties and the law. As Vogel (2007: 21) wrote: ‘An important advantage of civil regulations as a global regulatory vehicle is that their provisions are not currently governed by the WTO, whose rules primarily apply to regulations formally adopted by governments. ... The reliance of civil regulations on private, market-based standards and enforcement thus represents a major “loophole” in international trade law’ (Vogel 2007: 21). A curious paradox: the legal is illegal. But what does not have the form of (national) law is not illegal at the international level. Private regulations have also the advantage that they can mix informants and inspectors from different nations with different traditions of regulatory enforcement, potentially enabling them to overcome or correct for national differences in enforcement styles.

While earlier stages in history have seen a move from private to public regulation, we now see an opposite movement, back again from public to private, as I have argued before for the field of food regulation (Van Waarden 2006). On the new international interface between public and private organizations complex mixes of regulation and standard setting by a variety of public and private organizations emerge. This paper deals with one such sector, namely the regulation of global commons, in casu the protection of the biodiversity of forests and oceans.

2. Risks to the Environment: Loss of Biodiversity

A major source of risk and uncertainty, which for nation-states comes also - if not largely - from beyond their own borders, is the threatening loss of biodiversity around the globe, i.c. loss of diversity of species, of habitats and ecosystems, and loss of genetic diversity. These losses are aspects of one specific dimension of globalization, namely biological international interdependence. And the threatening loss is caused by another dimension of globalization, economic interdependence.

Biodiversity is of course first of all a value in itself and loss of it hence an intrinsic and universal problem. With humanity's powers to control and intervene in nature comes also a responsibility for its maintenance. However, loss of biodiversity is also a direct threat to our interests. It endangers our very survival. The biosphere is our source of food, shelter, medicine, and other basic and less basic needs. Depletion of these resources threatens the future supply. Furthermore, loss of greenery reduces the capacity of the earth to absorb CO₂ and convert it back into oxygen. As we know by now, that contributes to global warming, acid rain, changes in sea currents and levels, in dominant winds, and climate and produces more severe weather. Reduction of biodiversity decreases the creative capacity of nature and hence its power to recuperate from its own losses and to produce new sources for food, medicine, etc.

Whatever happens to the environment across our borders affects us indirectly and even directly. That holds for generic consequences such as global warming and loss of genetic diversity. But also for specific consequences. From close neighbors: the Dutch suffer from the pollution France and Germany dump in the Rhine and the British in the air. But also from distant 'neighbors': Concrete pollution can get carried over long distances. A 2004 study found that plumes of dirty air containing poisonous chemicals such as mercury were carried by the jet stream from factories in China all the way to New England USA (Pottinger et al 2004). Pollution and the weather moves across borders. So do animal and plant species (the latter through their seeds), and they move easier using our planes, ships and cars, invading other ecosystems and uprooting the equilibria there. Barriers between ecosystems get broken down, ecological niches disappear, new struggles of survival of the fittest species take place, some species loose out, and cross-breeding, e.g. between wild and farmed salmon, reducing genetic variety.

Globalization means interdependence (c.f. also Chanda 2007). And there is interdependence in suffering the consequences, but also in being responsible for the causes. Special to this threat is not only that it comes upon us, including from abroad, but also that we cause it, including abroad. In many different ways and roles do we contribute to the loss of biodiversity elsewhere: as consumers, producers, traders, tourists, soldiers. We cause it, along the global trade chains in global markets that are so typical for globalization. Pollution and species may move, but so do goods, services, finance and we ourselves. Hence it is in a way a self-induced risk, coming back to us. But because it takes a detour via other countries it is less directly under our control.

In reaction to our demand for goods and services elsewhere a great variety of natural resources are harvested from the earth: petroleum, copper, chrome, uranium and other minerals, tropical forests, fish, etc. Not only does this entail a depletion of these finite resources, their mining or harvesting is often done under conditions destructive of ecosystems: mining wastes pollute if not poison whole regions, clear-cutting of forests destroys complete forest ecosystems, mass fishing techniques such as trawling destroy deep sea life and net-fishing for yellowfin tuna (who tend to stay near dolphin pods to seek protection against sharks) also kills many dolphins.

The global demand for agricultural products equally endangers biodiversity. Forest ecosystems disappear also by radical 'slash-and-burn' practices to make room for growing crops. If these are replaced by tree plantations this results in monocultures low on biodiversity. Competitive pressures to increase productivity foster large scale resource intensive industrial farming, using fertilizers, pesticides. As increasing prosperity allows us to demand more fancy foods, e.g. meat instead of grains, the food production chains get only longer and impose more negative externalities on the environment. Thus Greenpeace traced across a trade chain of 7000 km soybeans, grown on 2.5 mln acres of for that purpose cleared rainforest in Brazil, via huge

agricultural traders like Cargill to European poultry producers that supplied fast-food restaurants like McDonald's with the meat that goes into chicken nuggets and sandwiches (Greenpeace 2006, also Watts 2005). To protest this, Greenpeace plastered McDonald's restaurants with posters of Ronald McDonald carrying a chain saw. Deforestation for short-term crops planting also frequently results in desertification, being a more permanent loss of biodiversity. To be sure, deforestation in itself is nothing new. Already a millennium ago, countries like Britain and Iceland were robbed of their forests (Iceland was once for 25% covered by forests) in response to the need of Normans and Britons for lumber for their (war)ships. However, the scale of deforestation has increased dramatically, due to population growth and way more productive harvesting and transport technologies.

Our demand for goods has also fueled industrialization elsewhere. As world trade grew, millions of factories joined the global supply chain. Though in itself a positive consequence of globalization, it has negative externalities. Accelerated burning of coal and use of chemicals to fuel the export machine pollutes the environment there and eventually also here. The production facilities in many parts of the world are frequently more primitive, and in the absence of effectively enforced regulation, these industries dump their untreated wastes directly in the environment: acids used in dyeing jeans flow in local rivers, and carbon and heavy metals disappear through the smokestacks in the air. Industrialization in turn induces increasing prosperity, population growth and further urbanization, with ecosystems getting bulldozed over.

Even after our consumptive needs have been satisfied, we still contribute to further destruction of natural environments elsewhere, as with the export of used electronic products to developing countries, where they are taken apart by cheap labor to harvest precious materials for recycling - in itself positive - yet done under unsafe working conditions and with poisonous wastes without commercial value being dumped in the environment.

Not only by buying imports, but also by traveling as tourists to foreign countries we may inflict assaults on the local environments: roads are built for our transportation into sensitive ecosystems; fields cleared for building hotels and growing crops; airplanes, cars and air conditioners burn fossil fuels, etc.

Economists tend to see this 'economic globalization' as a contribution to prosperity of us and others. But it comes at a price: exhaustion of nature. And this price is often not included in the price consumers pay. It is a typical negative externality, passed on to the public at large, here, there, and in the future. In this sense we are all in the same boat. Biodiversity is a classical common pool resource (Ostrom 1990) and protective measures have all the characteristics of a common good, a global common good. We cause it, but can we also control it? That depends among others on the specific characteristics of the threatened resources. Let us take a closer look at some.

3. Fish and Forests

Fish and forests are such typical common pool resources. They are in principle both renewable resources and their ecosystems are rather large, but reproduction takes time, especially in the case of trees, and hence overharvesting can deplete these 'commons'. For a long time land and sea were seen as inexhaustible sources of resources to feed and house people: forests seemed to be endless and oceans teeming with fish. However, modern technology has increased the scale of harvesting, up to the point that the common pool resources are threatened to be no longer self-sustaining.

Forests and fish are both species that are threatened because they are cut, slaughtered and traded because they themselves have commercial value as food or building materials (see on the increasing extent: Richards and Tucker 1988, Dauvergne 2001, and on more recent illegal logging in Russia for China and indirect Western markets Khatchadourian 2008). Insofar they differ from other species which are threatened because their ecosystems are disappearing and hence their chances of survival. Both seas and forests form such ecosystems for other species and thus deforestation and overfishing threatens other species, from tigers to fungi and rare butterflies or seasnails.

Both fish and lumber are essential and major resources for providing humans with food and shelter. For 2.6 billion people (40 pct of the global population) fish makes up at least 20% of their annual protein intake. 200 mln people depend on the fishing industry to earn their daily 'bread'. Fish is also the most heavily traded good in the world. Its value is larger than that of the exports of coffee, tea, rice and sugar combined (FAO 2008)

While fish and forests have commonalities, they also have differences. Fishes are mobile and can move freely in and out of different waters, and are either not owned by anyone as in the open ocean, or can easily leave a marine territory owned by someone. Trees by contrast have a fixed location, on land, and can more easily be appropriated and turned into someone's private property, who then has an interest to care for this resource. Even where forests are originally a 'commons', enclosure is possible and usually relatively easy. For fishes in the open ocean that is much more difficult. Hence privatization and markets can be a solution to the tragedy of the forest commons, but hardly for the tragedy of the fish commons.

Where privatization of a common pool resource is not possible (assuming that it is desirable) a 'Leviathan' may have to be called upon, i.e. regulation by an actor, or a conglomeration of actors that can effectively enforce protective regulation. That too is easier in the case of forests, again due to their immobility. They stand on land which is usually within the jurisdiction of a nation state; which could in principle regulate it. The mobility of fishes, including in and out of the territorial waters of nation-states makes their harvesting more difficult to regulate by such states.

Another difference is that trees can be seen and counted; fish, being underwater, are less easily seen and move and hence it is more difficult to estimate the biomass of specific species of fish and hence the threat of overfishing. For forests there is less scientific uncertainty as to the size of the resources, now and in the future. That facilitates long-term sustainable management. With fishes there is more uncertainty, which makes protective policies more susceptible to controversy.

With forests the problem is less one of threatening lack of wood, except in a few cases of wildly desired wood of which there is only a limited supply, e.g. due to slow growth. This concerns usually hardwoods such as redwood, mahogany, and some other tropical wood. With forests the problem is more the destruction of important ecosystems such as old-growth or tropical forests. Hence, unlike with fishes rationing of scarcity is less often used as a measure of sustainable policy. The emphasis is more on sound long-term management of the whole forest. With fish the problem is in the first place overfishing. Still, sound fishing management is also important, i.e. renouncing destructive fishing methods, such as net-fishing for tuna, the use of cyanide and dynamite, and water pollution, which all affect both threatened species and threatened habitats.

4. Public Regulation

Obviously, there is something to be protected here. And this has been recognized in the meantime by a great variety of actors. *Who* could do that, and *how*, by which means? Sources of regulation could come of course, as we have become accustomed, from the state. However, in global markets and as regards global public goods, the tentacles of the state may not be long enough, its powers may not suffice. Other, private, actors have attempted to fill the void: commercial businesses, associations, communities, hierarchies, either alone, or in close cooperation among themselves, or in cooperation with states. Given the nature of the resource to be protected, some seem to have offered advantages over others.

States have made efforts to protect biodiversity by regulation in so far as it lies within their power, that is, their domestic jurisdiction. Most countries have legislation in place to protect endangered species. Thus the US has its Endangered Species Act of 1973 or its *Marine Mammal Protection Act* of 1972, the Netherlands its *Natuurbeschermingswet 1968*, elaborated in the *Wet bedreigde diersoorten 1977* and eventually the *Flora and Faunawet 2002*, and even Thailand, for many years known as a center for illegal trade and smuggling of threatened wildlife species, eventually enacted in 1992 a *Wild Animals Reservation and Protection Act*.

However, such national regulatory measures have severe limitations, if only because biological niche boundaries do not respect national ones. The Dutch may protect their birds, but if these get shot on their migratory travels over Italy, Spain or Malta then that protection is not very effective. The protection of species in the territorial waters of one nation is less effective as the fish swim into the territorial waters of another one or even the open, 'free' ocean. As indicated earlier, there is a global interdependency both as regards the consequences suffered from loss of biodiversity as well as its consequences. Hence international cooperation is required to solve the problems effectively. Global governance is required.

Therefore, international treaties to protect biodiversity have been concluded, usually under the umbrella of the UN. In the course of time several such agreements have been agreed upon, e.g. the Convention on International Trade with Endangered Species of Wild Fauna and Flora' (CITES). It was integrated with other treaties in what was to be an 'umbrella convention', the Convention on Biological Diversity (CBD), signed at the UN Conference on the Environment and Development (UNCED) in Rio de Janeiro, 1992. The first draft was drawn up already in 1989 by a private NGO, the International Union for the Conservation of Nature (IUCN). This organization has also been active in identifying species threatened with disappearance, and has published 'red lists of endangered species', e.g. the Global Biodiversity Outlook of 2001; and a second version of 2006. Other NGOs have been involved in this as well, such as the World Resources Institute in Washington DC, which has drafted the 'Millennium Ecosystem Assessment: Ecosystems and Human Well-being', published by the World Resources Institute in Washington DC. The Convention has attempted to reconcile ecology with economy, embodied in the concept of 'sustainable development'. It resulted out of a compromise of ecological, economic, and social interests (the latter of indigenous peoples) and hence addressed not only the issue of conservation of biological diversity; but linked it to economic interests - commercialization of nature, (intellectual) property rights, (exchange) value, distribution conflicts over the use of genetic resources, technology transfer, etc - and social interests, notably the rights of indigenous people. These economic and social aspects were further elaborated in the 'Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of its Utilization', signed in The Hague 2002. (Brand et al 2008: 53).

Already before general biodiversity protection treaties were concluded, product- or ecosystem specific conventions were agreed upon. As regards ocean fisheries the first treaty was already concluded in 1958, the UN Convention on Fishing and Conservation of Living Resources of the High Seas. It was followed by treaties further elaborating protection such as the 1982 UN Convention on the Law of the Sea (UNCLOS) and the 1995 UN Fish Stocks Agreement. In addition, international fishery regulatory organizations for specific species or regions were established. For tuna the International Commission for the Conservation of Atlantic Tunas ICCAT, the Western Central Pacific Ocean Fisheries Commission, the Inter-American Tropical Tuna Commission, the Indian Ocean Tuna Commission, the International Commission for the Conservation of Atlantic Tunas and the Commission for the Conservation of Southern Bluefin Tuna; for cod among others the Northwest Atlantic Fisheries Organization NAFO focused on cod (Carr and Scheiber 2004: 122-123),

Notwithstanding the number of protective treaties that have been agreed upon, and the international fisheries organizations created, biodiversity remains being seriously threatened. Forests are depleted, ecosystems destroyed and oceans over-fished. Thus of 23 commercially exploited types of tuna, nine are classified as fully fished, four as over-exploited, three as critically endangered, and three as vulnerable to extinction. Thus state regulation, whether national or supra-national, does apparently have its problems. The CBD and other conventions have no sanctions and as such are difficult to enforce (Carr and Scheiber 2004, Vogel and Kagan 2004). That is only possible by national law of individual nation-states. Many of the latter had already enacted laws of their own, often with sanctions. The Convention gives such national regulations international legitimacy and norms to go by; what is more, it obliges the countries which have ratified the treaties to enact binding legislation to implement the treaties. This makes countries dependent on one another for effective enforcement.

However, not every national government gives biodiversity an equally high political priority. Furthermore, there are problems of shortage of administrative resources, lax enforcers, and outright corruption in the long principal-agent chains, as well as conflicts with cultural traditions. Thus e.g. the Thai Kaithong restaurant in Chiangmai - paradise for exotic gourmets - boasts to serve 'snake steak' with a picture of a giant king cobra, and other 'exotic delicacies', like pythons, crocodiles, wild boar, soft shelled turtles, monitor lizards, mountain frogs, hares, eels and partridges. Patrons can select a live king cobra and have it cooked to their taste for 4,499 bahts (\$180) - quite an incentive for poaching or corruption.

How can countries force each other to 'obey the law'? The conventions and treaties allow trade sanctions in so far as they ban possession, trade, transport, and import of endangered species or products made from them without a license. These have indeed been applied, and worked sometimes, at first sight. Thus Thailand finally enacted its 1992 endangered species act after the Secretariat of CITES urged its members in 1991 to ban trade with Thailand in any species included in the CITES appendices, notably birds.

But a law-in-the-books is not yet a law-in-action. Black letter law can be patient. It is only affective if it is effectively enforced. And that is frequently missing in many countries. In Thailand, for example, 'there was a lack of control over the import and export of plants. The management authority for processing export permits consistently issued blank CITES permits to the exporter who then supplied the necessary information. No physical inspections were carried out ... All exports were supposed to go through one of nine designated check points. However, the Wildlife Conservation Division maintained only a small staff at each of these points, and few members, if any, are trained in the identification of wildlife products ... This notorious lack of control over trade in wildlife has made Thailand the center of illegal wildlife trade and smuggling activity in Indochina. More importantly, Thailand has become an outlet

for illegal wildlife from all over the world, often acting as a laundering point for wildlife to enter from other countries.’ (Trade Environment Database TED, Case 68, American University Washington DC, <http://www.american.edu/ted/thaibird.htm>)

Even if there is effective enforcement, this may only work for species on the CITES endangered species list. Regulation and enforcement is more controversial for species not yet on the endangered species list, but whose over-harvesting threatens the sustainability of the common pool resource; or where the *process* of growing or harvesting threatens the survival of specific ecosystems. Illegal products can be blocked at borders if the political will and the administrative capacity exist, but that is less clear-cut with products whose *production* has negative externalities for biodiversity, such as bad forest management or sea bottom trawling. Processes in other countries are more difficult to regulate than products, which can be blocked at borders. An interesting exception to the rule is the well-known tuna-dolphin case, where imports have been blocked for tuna coming from fisheries or regions suspected to use nets that kill dolphins.

The enforcement problems are particularly great in the matter of ocean biodiversity, for one, because of the public good nature of fishing reserves. As long as there is the threat of poaching and free riding by fisheries of other states, countries have less of an incentive to enact and enforce strict rules on sustainable management of ocean fishing stock. Their savings would only benefit others and the goal, preserving the common pool resource, would not be reached. Thus most countries continue to subsidize fishing fleets and encourage fishing by their own fishermen.

The unwillingness to enforce harvesting restrictions is related to inability to do so. Responsible management is frustrated by ‘difficulties of policing fishing catches by thousands of highly mobile individual fishing boats, a lack of scientific consensus regarding the size of worldwide and regional fishing stocks, and the ability of fishing vessels to shift registration to countries whose conservation standards, as actually enforced, are less demanding’ (Vogel and Kagan 2004: 22). If it is already difficult for nation-states to police their own offshore EEZs, even more difficult will it be for country A to monitor country B whether it monitors effectively the thousands of ships in its own thousands of territorial square miles of water, not to speak of their control over the large expanses of water of the open seas. Monitoring forests is a bit easier, if only because they can be observed from the air or space.

Paradoxically, states may also be hindered in effective enforcement, just because they are bound by the law. Conventions on free trade as under the WTO constrain states in using import bans to enforce regulations protecting biodiversity. Just because they have to ‘obey the law’, the law (their own protective) is less useful to realize this policy goal. The legal road can be illegal.

These ‘government failures’ have led states to try seek the assistance of, or support, other sources of regulation, notably markets, hierarchies, associations and communities: markets for fish and lumber; hierarchies in the form of manufacturing, trading and retailing corporations; public interest and trade associations; and communities of environmental activists or of fishermen. Alternatively, these sources have taken themselves initiatives to provide alternatives to government regulation for protecting biodiversity.

5. Market-Based Regulatory Solutions

So called market-based regulation is not really a rule ‘created by markets’, but it concerns institutions created by political and/or economic actors with the intention to affect

market transactions in such a way that these have less or no negative externalities for biodiversity. The aim is to use the allocation mechanism of the market better, to serve not only private but also public interests. Such institutions may regulate access to the market, structure interests of the transaction partners involved, steer the competitive structure of the market, affect the costs and benefits of certain choices, provide information to influence those choices, or provide otherwise incentives 'to do good'. As value chains 'from fishery to fork' or 'from forest to furniture' usually consist of different markets, vertically related to each other, such institutions can affect one or more of these stages in the chains.

5.1. Privatization

A standard solution of economics to solve problems of depletion of common pool resources is privatization: turning communal or public (i.e. no one's) property into private (someone's) property. Owners of forests and fishing rights are expected to have an incentive to care for the sustainability of their resources, because they themselves have the exclusive rights to the benefits of their responsible behavior. Forests and fishes were originally common property. For forests, privatization has begun already over a thousand years or longer ago and has gone quite far. In so far as there are still commons of forests, logging rights could be given of by the state authorities under whose jurisdiction the forests were. The enforcement of such rights was also relatively easy, at least easier than for fish.

For fish stocks in the oceans, privatization has taken place more recently, in several steps. The 'enclosure movement' of the seas first entailed the appropriation of parts of the seas by still collective actors, nation-states. These divided a part of the global commons by agreeing on and recognizing each others' exclusive rights to parts of the sea. First 3 miles or 'a cannon shot' from their coastline (formulated in the early 18th century by Dutch jurists), extended gradually to 12 miles by many countries in the 20th century, and eventually to an Exclusive Economic Zone of 200 miles from the coastline (by the 1982 UN Convention on the Law of the Sea, which also codified the 12 mile territorial waters rule).

This collective property of nation-states has subsequently been further privatized in the form of fishing rights to quota's of specific fish ('individual transferable rights' ITQs) given to fishermen, fishing corporations, or fishermen's associations. Thus the open access to fish-stocks, typical of the 'open seas' legal philosophy, was changed into restricted access. However, a condition for privatization ensuring responsible stewardship is effective enforcement of property rights. That was not easy for fish in the open seas. Effective enclosure is difficult there. For one, fish swim in and out of protected zones where rights were given, notably the larger fish. Furthermore, the threat of poaching is difficult to avert, given the aforementioned problems with controlling the large open seas. That in turn reduces the motivation of quota-owners to restrict themselves to their quota, under the adage 'If we don't catch the rest, the Japanese or Portuguese will do so'. In order to land and sell their over-catch, fishermen have been known to resort to fraud, or land them in countries not involved in the regulation of these waters. Thus the effect of such privatization has been limited. Furthermore, it has not directly affected the harm of fishing methods on other species or on the ecosystem.

More effective protection of property rights and control of methods has been a stricter enclosure measure as with fish farming. Many commercial species, including salmon, cod, catfish, barramundi, shellfish and crustaceans are nowadays raised in offshore net pens, where sea water flows through, or - in the case of freshwater fish like trout, catfish, or tilapia - in ponds and lakes. Trees are also farmed in plantations. Though this has taken some of the

pressure of overharvesting the common seas and forests, it has not solved the threats to biodiversity. For one, fish farms and plantations are monocultures, themselves low on diversity; these monocultures, as in any case of intensive farming, facilitate the quick spreading of diseases; and where they are in contact with natural environments, they threaten the biodiversity of species, ecosystems and genetic make up there. 'Salmon farms differ fundamentally from terrestrial farms because their effluent flows directly, untreated into contact with wild species. Scientists have dubbed salmon farms *pathogen culturing facilities*. Salmon are designed to move. Epidemics in wild fish are extremely rare, because, when pathogens strike - the sick drop out of the school and are eaten by predators. Intensive farming, however, breaks natural laws of density, distribution bio-diversity and survival of the fittest. Disease is nature's relentless response to over-crowding and so the farmers have to resort to drugs. Small bays which might support a few hundred salmon in intermittent bursts throughout the year, are now filled with up to 1,000,000 - 2,000,000 stationary salmon. This is the best thing to happen to fish pathogens like viruses, bacteria, and parasites. In such close proximity, the feces of the crowded fish pass over each other's gills. Because the fish are confined and unable to migrate, pathogens accumulate into a rich broth. Antibiotics can keep most farm salmon alive long enough to reach market size, but leave the fish contagious, shedding pathogens into marine currents.' (Raincoast Research Society 2003) Apart from the danger of diseases there is also the risk of genetic pollution of wild species with the farmed ones which could reduce genetic diversity. Farmed fish can also destroy local populations by devouring them literally, as has been the case with the aggressive Nile perch in Lake Victoria (cf. the movie 'Darwin's Nightmare' by Hubert Sauper). Furthermore, even if farming is a good solution, not all species lend themselves to it; and, after all, taking fish and lumber from the commons is cheaper.

Even where privatization and farming may offer a solution to the problem of overharvesting certain species (The Economist 2008), it still leaves the problem of the externalities of more 'efficient' production on the natural and diverse ecosystems. The owner of a forest may care for the reproduction of his trees, but he has less or no interest in the survival of a great variety of bugs and butterflies in his forests, especially where these also may reduce the productivity of his forests.

5.2. Certification

Privatization starts at the production end of the value chain. Other regulatory measures have started at the final consumer end of it. Attempts have been made to influence final consumer choices, thus using the market mechanism to steer demand for fish and forest products towards varieties that do not harm biodiversity, or do so less. This is done through information and persuasion. Information about the product and its producer is intended to influence the transactions consumers enter into. This is done by naming, blaming and shaming both biodiversity-unfriendly products and producers/sellers. 'Bad' products are censured if not criminated; 'good' ones are commended. In order to aid consumers in distinguishing the good from the evil, good ones are certified, given a seal of approval.

Such certificates provide information, possibly legitimizing higher prices for better rated products, and have been developed for countless markets before: medieval woolen cloth, wine and beer, kosher and halal food, financial services. Not only products have been certified, but also producers, and customers. Medieval craftsmen were certified by guild standards; employees are certified by diplomas, reference letters or psychological tests; and consumers

wanting to get a mortgage by their credit rating. The experiences of these many other rating systems can teach us something about the prospects of these biodiversity-safe certification systems.

A problem with biodiversity is that the quality of the product is usually not at stake here (unlike in the case of biosafety issues), so appeals to the self-interest of the consumer are difficult. For consumers, lumber from well-managed forests is not necessarily better than from wild non-managed forests. (Actually, in so far as there is a difference in the quality reputation of the products, 'natural' species like wild salmon or old-growth lumber or tropical hardwood are often considered more desirable. Either because it tastes or works better, or because it is more exclusive and hence satisfies the demand for ostentatious consumption.) Problematic is the source of the product or its production method. In principle this does not directly affect the utility the consumer derives from the product. Therefore, appeals can only be made to altruistic concerns, emotional feelings or moral values. The altruism may even be narrow: will there be food or a livable environment for one's grand-children?

Experience shows that that is not impossible. Even mainstream micro-economists have in the meantime discovered that human actors are not always the narrow minded self-interested actors that their models assumed or used to assume. Economic actors are also socially embedded, influenced by the opinions, approval and disapproval of others, by symbols to take serious, by honors bestowed or ostracism inflicted on them, by what their culture and society considers appropriate behavior. If enough people define specific species as pitiful and in need for protection, than that can become a social norm to be honored. Experience has however also shown that compassion develops easier for species with which we as humans somehow can identify or sympathize. At the very least they have to move like us humans, they have to be large enough that we can see them, and preferably they ought to be cuddly like a teddy bear. Ideal is if they have a high 'caressibility factor'. Not for nothing did the World Wildlife Fund adopt the koala bear as its symbol, and not a supposedly aggressive, cold-blooded slimy creature as a snake or alligator. Trees and fishes also do not directly meet those requirements. But forests can at least be associated with the koala bear: as being their 'home'. However, also more abstract concerns can become socially defined as a major concern for humanity, which few actors can afford to negate openly. Such has been the case with global warming and its causes.

These social, moral and emotional concerns have induced people to form public interest associations and to further mobilize support for their cause, as. e.g. the Rainforest Alliance, the Rainforest Action Network, Greenpeace, or the World Wildlife Fund. Such NGOs are self-appointed representatives of 'global public interests', bundling and focusing these as a kind of 'public interest burning glass' on something that can most easily be targeted. Their direct action led to the formation of certifying organizations for biodiversity-friendly forest products and fish: the Forest Stewardship Council and the Marine Stewardship Council are among the more well-known cases of such regulation through certification. In a way these are combinations of three sources of economic governance: markets, associations, and hierarchies. As we shall see, eventually also states got involved in these intricate systems of market governance.

6. Case I. Forests: The Forest Stewardship Council

The emergence of the Forest Stewardship Council FSC started with associations focusing in on hierarchies. Their activities led to the formation of the FSC, itself also an association. Public

interest associations like Friends of the Earth, Greenpeace, and the Rainforest Action Network did not see much use in addressing the amorphous mass of consumers directly. Instead, they targeted large firm hierarchies in highly visible retail sectors such as furniture and do-it-yourself/home improvement stores, frequented by consumers, and with well-known brand images: B&Q in the UK, IKEA, Home Depot, Office Depot, Staples, and Kinko's. By staging demonstrations, protests and boycotts, in the media, in front of these stores, and even within the stores, 'using the store's public address systems to sarcastically announce to consumers where they could purchase wood "ripped from the heart of the Amazon basin".' (Vogel 2005: 115), they have tried to 'burn' the public reputations of these retail capitalists - i.e. a form of social and economic ostracism - unless they would change over to selling (only) environmentally certified products.

The first initiatives date from 1985 when the Friends of the Earth UK organized a boycott of B&Q and some other retailers selling products from clear-cut logging in tropical forests. A bit later the World Wildlife Fund started to develop a tropical forest policy. In April 1991 the Rainforest Action Group, Friends of the Earth UK and Earth First! began a sustained campaign against retail chains. 'They organized mock chainsaw massacres outside stores depicting the destruction of the world's forests. Customers and store managers were systematically leafleted. In some cases, smoke bombs were set off inside home improvement stores. In one weekend, there were around 30 demonstrations outside B&Q facilities alone' (Austin and Reficco 2006: 2). The media amplified the effect of these direct actions by giving them extensive coverage. This social movement in the UK blew over to Germany, the Netherlands, and the US.

At the end of 1991 ten UK retailers gave in. They promised to change their sourcing policies and buy wood only from well-managed forests. They would either cut suppliers or convince them to change forest management practices. They did not so much react to a consumer demand for responsible wood but they disliked controversy and feared for their reputation in general. It was a kind of risk management. 'As an executive of UK retailer B&Q stated: "We weren't ever going to have customers demanding sustainable timber in our stores. But we knew that if our name, B&Q, was associated with destruction of tropical forests or even temperate forests, our brand namewould be damaged.'" (Counsell and Loraas 2002: 12, quoted in Taylor 2005: 142.).

Market competition worked. Once major retailers like B&Q had come round, the environmental issue became a means of differentiation among competing retailers in the competitive do-it-yourself market. Therefore their competitors felt compelled to follow. Thus major hierarchies like B&Q could not only regulate their suppliers, but indirectly also their competitors.

The WWF would monitor and give feedback to companies. To this end it mediated between environmentalists and retailers and formed buying groups in which these participated and discussed policy options. These buying groups gained quickly ground. By 2002 around 700 companies had formed 17 such buyer groups, mostly in Europe and North America. They included the biggest retailers: B&Q, Home Depot, Lowe's, Sainsbury, Homebase, Texas, Do it All, IKEA. Major timber producers also joined, e.g. Canadian exporters to Europe, whose exports to these retailers fell (Austin and Reficco 2006: 3). The groups formed the Global Forest and Trade Network, which included manufacturers, media, local authorities, environmentalists and end users.

Their aim was regulate the supply chains and bring supply and demand for wood from well-managed forests together. That turned out to be not easy, for one because demand quickly exceeded supply, but also because clear standards were lacking. Soon every retailer claimed to

buy environmentally friendly; but claims were hard to substantiate. Thus need arose for a credible system of standardization.

This led to the formation in 1993 of the Forest Stewardship Council. Its goal became to preserve biodiversity, especially in tropical and old-growth forests; and to support responsible and sustainable forest management. And to do so via certification.

6.1. Functions

The FSC has three main functions: standard setting, accreditation, and trademark assurance..

First it sets standards for responsible forest management, using an open and transparent process of decision making involving all affiliated stakeholders. These standards are codified in 10 principles and criteria of forest stewardship. Typical for these basic FSC standards is that they take a broad view of forest stewardship. They concern of course environmental impact: biodiversity, water resources, soils, fragile ecosystems and landscapes, hazardous pesticides and chemicals, or integrity of the forest. But also economic concerns such as economic viability and efficient use, social concerns such as rights of indigenous peoples and forest workers, transparency of tenure, use rights of the land and community relations, as well as legal and practical concerns: legality (no corruption), management plans, monitoring and assessment. There are separate principles regarding high-conservation value forests and forest plantations. Special concern is there also for cultural or sacred sites, habitat of endangered animals or plants. The principles also prohibit the cultivation of genetically modified trees.

These principles are elaborated into more specific national, regional or local standards by national working groups which need approval from the FSC's board of directors. Standards are to be based on 'best available science'. This is done in a open and transparent discussion process involving all stakeholders - thus providing legitimacy - and aiming for consensus, meaning they are usually political compromises. Arriving at them is both a political and technical activity.

There are standards and certificates for two types of products: a) for forests and their management; and b) so called 'chain-of-custody certification', for products whose sources are traceable to sustainable managed forest. This requires tracking products along the whole value chain, from forest to final product. For every stage (or 'custody') in the chain, a certificate is issued that informs the subsequent stage about the 'purity' of the intermediate product, i.e. that it is not mixed with uncertified wood. Wherever that is difficult to ascertain, because certified and uncertified wood were indistinguishable when they went into the subsequent product, as with paper, a special certificate is issued, certifying a percentage claim, minimal x pct of certified wood. (Later further differentiated in subcategories as 'FSC mixed sources'.)

The second function of the FSC is accreditation. It does not certify itself whether producers comply with the standards, but it recognizes and accredits other certification bodies who do so. These have to be independent third party organizations, which are competent in forest-evaluation. Certification has to be done following clear and pre-defined procedures. To this end the FSC has created an Accreditation Manual, which formulates the norms that certification bodies have to meet in order to be accredited.. In 2005 FSC created Accreditation Services International GmbH (ASI) to manage the FSC accreditation program. I.e. the FSC certifies the certifiers - and it does so at least once a year. If they are found not to comply, the certificate is withdrawn. Getting certified is formally a voluntary choice by the forest producer; de facto it can of course be imposed by the customer.

The certifying bodies can be of different nature. Among them are local NGOs, international NGOs present in different countries like the Rainforest Alliance network, or commercial certifiers like consultants, dependent also on what organizations are available in a specific country. Some subcontracted the actual implementation and enforcement in turn again. The SGS Forestry was based in Europe but delegated actual control on the spot in Africa to local subcontractors. Thus the control chain was occasionally even longer. The greater principal-agent problems resulted occasionally in questionability of the experience, competence and hence effectiveness and reliability of certification. In particular where distant local certifiers had to be relied upon. After all: many forests are in out of the way places.

Thirdly, the FSC manages its logo, the FSC trademark. Use of the logo means that products satisfy the FSC standards. The FSC licenses firms, including final consumers, to use the logo on wood products.

6.2. Funding

Originally the FSC International was mainly funded by donations. In 2001 from European governments (40%), American Foundations such as Rockefeller and Ford (40%) and environmental NGOs as the WWF (20%) (Austin and Reficco 2006: 16). Membership fees and accreditation charges were minimal and covered mostly the costs of those activities. Being dependent on donations was risky. Therefore it has tried to reduce its dependency on such donations. By 2008 donations accounted for only 60%. The other 40% was collected from fees (membership, accreditation, logo-use and others) and services rendered.

Auditing and Certification could be expensive, esp. where it concerned large tracks of forest in remote areas, and lots managed complicatedly in order to increase yield, yet abide by FSC-norms. They could vary from \$ 500 to \$ 50,000 (Austin and Reficco 2006: 7). In addition to these initial costs, the audits and certification had to be repeated annually, and this cost about 50% of the initial fee. Furthermore, there were the costs for carrying out suggested changes in forest management.

These auditing and certification costs had to be borne by the forest owner. Therefore it deterred many lumber producers, particularly the smaller private forest owners in Europe. They could split the bill by engaging in group certification.

6.3. Success

The FSC has been quite a success story. It has grown fast since its inception in 1995. By 2002 25.5 mln hectares forest - the size of the UK - in 66 countries had been FSC-certified. After another 6 years, in December 2008, this had risen to more than 106 million ha forest in 81 countries (out of an estimated total of 600 mln ha of commercial forest in the world). Though the majority of certified forests are still in the temperate and boreal zones of the earth, there is now also a growth in certified tropical forests. In the tropics, where the founders of the FSC were most concerned about, growth in certification was originally very slow. However, by 2008 15 mln ha has been certified. Another originally slow growth area, Russia's boreal forests, is now also being certified, 18 mln ha in 2008. Altogether 940 forest certificates have been issued. With 11,847 chain-of-custody certificates to companies in 92 countries, the number of companies along the forest product supply chain committing to FSC certification peaked at 40% in 2007. The value of FSC labeled sales has risen from \$ 1 billion in 2002 to \$

20 billion in 2008 (Source: FSC website, accessed Febr. 2009). The FSC has now offices in 46 countries. Thus the FAO has called the FSC the fastest growing forest certification system in the world (UN FAO, 2007)

The FSC is also increasingly marketing its own product: certification. It has developed a licensing program for the FSC-logo and the increased use of it, especially on all kinds of paper has substantially increased its visibility to the general public. One can find it on kitchen furniture, pencils, magazines, books, sweepstake tickets, food packaging (recently Tetrapak got a chain of custody certificate and in a short time the logo appeared on 100 mln cartons), and even cosmetics and gin: a Belgian gin called *Dennenknopje* made from pine cones from a certified forest. Recently, President Obama's inaugural invitations bore the FSC-logo.

7. Case II. Fishes: The Marine Stewardship Council

The Marine Stewardship Council (MSC) had a start somewhat different from the FSC. Here no protests, demonstrations, and boycotts forcing large firms to consider environmental concerns. On the contrary, here one such large firm was - voluntarily - among the major initiators. It was Unilever who took in 1997 together with the WWF the initiative to form the MSC. Of course, protests may have indirectly played a role in convincing Unilever to do so. Spectacular environmentalist direct action regarding the forest ecosystems was a recent event and Unilever would have surely noticed it. Its executives may have feared that the wrath of environmentalists could turn upon them after their success with the FSC.

However, Unilever had also a private interest in sound management of the seas. As world's largest producer of frozen seafood it had a direct - though long term - interest in securing the health and continued productivity of the oceans. Here the size of its 'hierarchy' favored environmental governance. It was large enough that it could not so easily externalize the costs to others, cause it was itself 'these others'. Icelandic fishermen could still reason 'If we don't catch the fish, the Portuguese will'. But both the Icelanders and the Portuguese might supply Unilever. Whereas smaller actors had no incentive to care for the sustainability of the ocean commons, a large one like Unilever did. The global fish commons was in large part its own pseudo-private 'property', at least in so far as it could itself reap the benefits of responsible management of the renewable resources in the ocean commons.

Its size, diversity and resources allowed it also to take a long-term perspective. Whereas individual fishermen had good reason to be concerned about tomorrow's daily bread, Unilever's survival did not depend on tomorrow's supply. It could wait a bit, diversify risks, allowing it to take a long term perspective. It could think in terms of decades, when the individual fisherman would be long dead.

Hence it saw the depletion of the renewable fish resources as a threat to its long-term interests. And given the difficulty of establishing a global regulatory authority for the oceans it considered market-based certification a means to govern the global fish commons. As we know from the history of trade association formation at the national level: very large firms may have an incentive to sponsor and even fund collective action of the industry on their own (Olson 1965, van Waarden 1992). Not only that they cannot externalize costs of free riding, they can also not reason that their contribution to collective action does not count, that others would not note its free riding. Given their size, the benefits that they derive from collective action - even if only the more neutral letter head - are large enough that these outweigh the costs. What is more, the resources needed for collective action are peanuts for such large hierarchies.

So history repeats itself, now at the international level, with a large firm taking the initiative to found an association to regulate the resources on which the sector as a whole depends. Unlike in forests here the initiative did not come from the retail, but from the producer side. For one, in forestry there were no producers the size of Unilever. Furthermore, forestry producers did not have important brand names whose standing could be increased by association with sound resource management. Finally, Unilever was not only producer but also buyer. Certification of fisheries could make it easier to control its many suppliers over the world.

The Marine Stewardship Council was formed in 1997, four years after the FSC. That was no coincidence. The FSC clearly formed a model for the MSC. Not only the similarity in name indicates that. In many ways, diversity of stakeholders, functions, structure, finance, the MSC was almost a copy of the FSC. Soon the organization included among its members conservation associations, scientists, fisheries, seafood companies, and large food retailers. It set itself fundamental standards, also called 'principles and criteria'. There was certification both for harvesting/source management and for chain-of-custody management. The MSC did not itself do the certification, but accredited certifiers who did the auditing of fisheries and canners against the standards. And it managed its MSC-logo, licensing fisheries, seafood companies, retailers or restaurants to use it if they caught, processed, sold or prepared fish according to its criteria for sustainable fishing. Funding came largely from charitable grants.

The MSC had a bad start. It met various setbacks: suspicion and opposition by large parts of the industry who found that the auditing process was too long, bureaucratic, and hence costly; national governments as in Scandinavia who found that certification should be done by governments and not by an NGO; tensions with environmentalists who wanted stricter standards; bad management; financial crises. Many of these problems could be traced back to a fundamental problem, which distinguished the MSC from the FSC: As it was difficult to 'see underwater', it was more difficult to evaluate whether fisheries had observed the standards and performed well. As a critical Greenpeace campaign director remarked, 'We disagree fundamentally with MSC's claim to certify sustainable fisheries. We believe that it is nearly impossible to claim that a fishery is sustainable. You need so much data to make that claim. And most fisheries do not have that data. They might have some evidence that they manage the fish stock in a way that it hasn't gone down. But that is not sustainability as we see it, namely managing a stock within a whole ecosystem and wanting the whole ecosystem to restore.' (quoted in Nick 2006). The difficulty to demonstrate effective ocean management meant that the credibility of MSC certificates was questioned, and hence also of the organization itself. Did 'green stamps' for seafood really mean something?

Another problem, which made it differ from the FSC was caused by the fact that the MSC was started by firms mid-way along the supply chain, seafood processors like Unilever. Although it had, given its size, quite an influence in global markets, firms like Unilever needed to convince both the original suppliers, the fishermen, and the consumers/retailers to adopt the standard, to live up to it, respectively to demand it. As Nick (2006) formulated it, the dilemma was: 'no supply meant no market and no market meant no supply'. By contrast, the FSC was started at the end of the chain, by the retailers. There, there was an initial market, which looked for suppliers.

After a reorganization, change in leadership, further elaboration of standards and performance indicators, new certification methodology, further research into the benefits of certification, increasing transparency, and new internal checks and balances like an accreditation committee double checking accreditation decisions, the MSC recovered.

In 2008 the MSC eco-labeled the 2000th product, a box of scallops from the Patagonian scallop fishery, certified in 2006. Growth has been increasing. It took the MSC 7 years to get from the first MSC labeled product to the 500th, only 9 months to get to the 1,000th and another 12 months for the 2000th. By 2008 also 28 fisheries had been certified, including the first tuna and shrimp fisheries, and 77 were in the process of being certified. 580 companies had received a Chain of Custody certification. MSC certified products are available in 36 countries, sales total 250 mln items at a net worth of US \$ 1 billion (up 100% from 2007). Many major food retailers have committed themselves to selling MSC-certified seafood, like Loblaws, Tesco, Target, Sainsbury, Wal-mart, Whole Foods, Carrefour, Metro, Lidl, Casino, Spar. Some of them, like Tesco and Wal-mart, committed themselves for a number of years to sell only MSC-certified fish. In addition to large hierarchies, also associations of retailers joined the program. Thus the association of Dutch retailers agreed that by 2011 all wild caught seafood at every food retailer in the Netherlands would be MSC certified. In order to organize all this, the MSC set of regional offices in Edinburgh, Seattle, Berlin, Tokyo, Cape Town, The Hague and Australia.

In the meantime, the founder Unilever backed out of the frozen fish market and sold its division, due mainly to fierce competition from retailers creating their own brands. Not only were they cheaper than Unilever's brand products like Findus and Bird's Eye, they got also preferential access to their shelves.

8. FSC and MSC as Associations: the Problem of Management of Diversity

What distinguishes the FSC and MSC from others certifiers, e.g. corporations, is that they have, as associations, members. Together these make the policies. The membership base of these international associations is very broad and diverse. They harbor representatives of different stages in the value chain and with different interests in them: small and large fishing and forestry businesses, associations and cooperatives of them, the forestry profession, suppliers, processors, distributors and retailers, the forestry profession, the scientific community, indigenous peoples' organizations, fishing and forestry communities, conservation groups. Furthermore, the councils have also to deal with other stakeholders outside the organization but in its domain. And that in many different countries where the circumstances and interests in forestry and fishing are again very diverse. Both the FSC and MSC were a kind of peak association, an international association of such other national and international associations and organizations, differing by function, sector, region and nationality.

Cooperation of these diverse interests was not easy. Each of them was confronted with the choice, either to be pragmatic or principled. Pragmatic meant to cooperate with the others in joining the councils. The benefit was broader representation and legitimation, but at the costs of having to make concessions, diluting one's own pure interests and ideals, and losing legitimacy among the more radical wing of their rank and file. Principled meant remaining true to one's own immutable convictions, and not, or only hesitantly, cooperating. The benefit is that one runs less of a risk to alienate oneself from the rank and file; but at the costs of remaining an outsider, and lacking representativeness. It is the typical dilemma in any political arena: from national parliaments to the Israeli-Palestine conflict. In this case the radical principled were organizations as Greenpeace, local fisheries, or the American forest and paper association. In between were pragmatists such as the WWF and some state foresters.

Reason for cooperation is that the different parties depend on each other. The environmentalists can exert pressure, lobby, publish, criticize, demonstrate, boycott as much as

they want, but in the end the responsible management of forests and seas has to be done by the foresters and fishermen. Retailers are needed to impose standards on producers. Conversely, retailers and producers depend on critical environmentalists to give their sustainability efforts recognition in the public eye, and to legitimize the certification. They may need each other, yet, they also can get in each other's way. Standards demanded by environmentalists may be considered unrealistic, too strict, or too costly by the industries. Conversely, involvement of industrial interests in the certification process tends to threaten the legitimacy of the certification and could even damage the reputation of the cooperating environmental organizations in the eyes of more critical environmentalists. Critical conservationists call such 'self-regulation' quickly 'greenwashing'. They believe that one should not involve the turkey in deciding on the Christmas dinner.

The management of such diversity poses quite a challenge to these organizations. The governance problems are akin to that of a state, which has citizens as its 'members'. Building such broad coalitions requires a careful balancing of interests and maintenance of some neutrality by the leadership in order to keep the organization together, given the conflicting interests involved. To this end the MSC, and especially the FSC, developed a governance structure that on the one hand meant to engage interested stakeholders, and on the other hand balance their interests. There was a general assembly with individuals and representatives from all member organizations. It was divided in three chambers: environmental, social, and economic. This allowed maintaining a balance between all three types of interest, without having to limit the number of members. Each chamber was in turn divided in a north and south sub-chamber, northerners were from high income developed countries, southerners from developing countries. Altogether there were hence six sub-chambers each with 1/6th of the vote, a kind of corporatist democracy. Decisions required a 66,6 % majority of the votes in the general assembly. The same careful composition was used in the board of directors. Furthermore, the international FSC was decentralized into 'national initiatives', in order to give the organization a grassroots base. These were again organized on the same tripartite basis.

From the leadership it also requires a balancing act, on the one hand to engage members, on the other to keep some distance from individual members/associations in order not to alienate others. Though large member organizations like Greenpeace and WWF gave the association legitimation and strengthened its reputation with the general public, too much intimacy with them might be counterproductive. Industry could fear a domination of such environmental NGOs, could come to perceive the council as an extension of Greenpeace.

Yet it remained, certainly in the beginning, a rather unstable coalition. The councils are and remain political organizations. The membership base was a complicated Baptist-bootlegger coalition. It shared an interest in credibility of fish and lumber, but from very different interests. The costs of protecting relatively rare species are privately born and concentrated on a few specific industries, e.g. fishermen, foresters, or expanding and polluting industries. The benefits are public, and thinly spread over all of humanity. Public choice theory teaches us that in such a case those with whom costs are concentrated will have a stronger incentive to organize against protective regulation. Whereas when benefits are diffused among many, these will have less of such an incentive. Yet this theory is not confirmed in these cases. Because people are not only motivated by interests but also by ideals. The public interest has been represented by idealistic self-appointed activist NGOs and the scientific community.

Mutual distrust and adversarialism have plagued the councils. Repeatedly there have been conflicts and walk-outs. Already at the first meeting of the FSC in Toronto, the more radical environmentalists such as Greenpeace, FoE, the Rainforest Action network, and Rettet

den Regenwald left the assembly temporarily when the industry was granted representation. The US and Canadian foresters associations choose to remain outside the FSC and create their own competing certification systems.

The diversity of interests complicated agreement and hence affected the nature and acceptance of private associational standards. Some environmentalists found the councils too soft and wanted stricter standards, whereas others believed that a private market-based regulation could never solve the problem and that governments should get more involved. In their eyes such certification councils might be excuses not to do anything. Fisheries, foresters and industries wanted less strict standards. They found certification too bureaucratic and expensive. The territorial diversity requires adjustment of standards and rules to local circumstances. But too much variety in standards could blur their identity, undercut them, and threaten their credibility. Different elaborations of standards could even compete with each other.

9. The Problem of Enforcement: Using Hierarchies

Typical for associations is that they are voluntary. Hence they tend to have problems with enforcement of their regulations and standards. They may be able to bind their members through membership contracts, but, since these are free to leave, that power is limited. Even more difficult is it for such associations to impose standards on outsiders. They do not have the legal sanctions that public authorities have.

Historically, economic associations have been able to impose regulations on outsiders through 'exclusive trade agreements' with other associations. Thus e.g. members of an association of book printers were only allowed to buy paper from suppliers organized in the one paper trade association. Conversely, its members, paper suppliers, were only allowed to supply printers organized in the book printing association. Similar 'closed shop' arrangements existed between employers' associations and trade unions. They forced economic actors to be organized in their respective association and made for 100% density ratios. This compulsion allowed for the associations to regulate their industry, in the first place their own members, as these did not have an exit option, short of leaving the industry. However, it also allowed for one association regulating the members of the other association, usually in exchange for a similar favor to the other association. However, the legality of such arrangements is questionable in many countries, as they come close to cartels. Furthermore, due to the concentration in certain markets, associations have become de facto replaced by large firm hierarchies with dominant market shares.

What associations may not be able to do, firm hierarchies can: they can impose their standards legally on their suppliers, and have also the resources to control and audit them. The opposite is of course also possible: that major suppliers refuse to sell to customers if the latter do not abide by their standards for handling their products, such as major car producers selling exclusively to car dealers under their control. Yet, rule imposition by those at the end of the commodity chain happens more frequently.

The concentration of the retail sector into a few very large retail hierarchies has given the latter so much market power that they can regulate the markets back up the commodity chain by imposing their own standards. The global furniture retailer IKEA can serve as an example. In 2008 the corporation had 631,780,000 visitors (equal to the combined population of Europe and the US) in its 285 stores in 37 countries. Their total turnover was 33.5 billion Euros. Its products are manufactured by 1600 suppliers spread across Europe, North America,

and Asia. It obtained timber from 44 countries. Products are made according to IKEA's specifications. Its main business, furniture retailing, requires huge quantities of wood. These suppliers could damage the reputation of IKEA if they would do something illegal or considered illegitimate. Thus, in addition to its many product quality standards, it developed a code of conduct for its suppliers. In 2000 it introduced the 'IKEA Way of Purchasing Home Furnishing Products', short the IWAY standards. It specified working conditions, labor, environment, chemicals, waste, procurement and forestry management practices that were expected from suppliers. IWAY contained 17 different standards regarding 90 specific issues. In this, IKEA oriented itself to international treaties like the 1948 UN Declaration of Human Rights, the 1988 ILO Declaration on Fundamental Principles and Rights at Work, and the 1992 Rio Declaration on Environment and Development. From its standards it derived directives for its suppliers, who all had to sign an agreement with IKEA agreeing to comply with the directives. It helped and trained smaller suppliers to adopt environmental friendly operations. Among others it forbade the use of wood that originates from intact natural forests in their area. It used information from the Global Forest Watch, an NGO which mapped locations of intact natural forests. Before a first delivery it conducted a first IWAY audit of this supplier. (all info ICMR 2006)

Given such buying power, and their routines of already imposing standards on suppliers, NGOs focused from the very start on such large, highly visible retail firm hierarchies trying to get their biodiversity concerns included in such chain regulation. They realized that it would be much more difficult to influence the decisions of millions of individual consumers than those of a few very large retailers.

For one, the Olsonian problem of collective action is much more serious in a very large group than in a smaller one (Olson 1965). Individual consumers, being with millions, can be tempted to free ride. Even if they support the goal of maintenance of biodiversity, they can reason that their individual contribution is so small that the collective goal can also be realized without their participation. A small number of very large retailers with dominant market position cannot reason like that. Furthermore, large retailers are much more visible than most individual consumers. As such they are likely to care more for their reputation, as any blemish on it will be known immediately to masses of people, who they have to see back in their stores as their customers.

Thus the NGOs knew that retailers had invested a lot in their brand names, and could be quite sensitive to any damage to their reputation. Thus NGOs tried to instrumentalize the retailers' market power to use it to demand not only low prices or good product quality, but also biodiversity-friendly production. Once they succeeded to convince retailers, the latter have become the means for the MSC/FSC to impose their certification on fisheries and foresters. 'As consumer demand for certified wood was nonexistent, WWF-buying groups were the motor, the driving force behind the emergence of the certification movement. Indeed, the power of these buying groups appeared considerable: they encompassed about 700 companies, including the biggest retailers - like Home Depot, Lowe's, B&Q, Sainsbury - and controlled about 7 % of the industrial roundwood global trade' (Austin and Reficco 2006: 3). Their domestic market shares in prosperous western countries were even higher.

In food retailing, market shares of supermarket chains are even higher. And many food retailers are internationally active. Thus the French Carrefour is, with 15,000 stores in 32 countries and 490,000 employees, the second largest food retailer in the world. It used to have its own 'responsible fishing cod' certificate for its product-line Eco-Planète. However in 2008 it adopted the MSC certificate. Lately even fast-food restaurant chains have reacted to the pressure. McDonald's replaced in 2005 the much criticized Styrofoam hamburger boxes by

cardboard ones, made for 75% out of recycled fibers from FSC certified wood - for which it even got a prize - and the fish for its fish-burgers is also MSC certified.

Not only are such large retailers more responsive than individual consumers, the hierarchies can also aid in informing consumers and propagating environmentally responsible consumption. It is often heard that consumers do not care. While they may be environmentally concerned in their political choices as voters, they apparently are not or less in their economic transaction choices. Economic leaders like retailers can inform and educate them, bring environmental concerns to their attention, and promote environmentally certified products. Thus they would be like good political and association leaders, who should not only passively aggregate and pass on interests and opinions they receive from their grassroots, but also define, and redefine the interests in the context of what is possible, and confront their voters and members with them. Such leadership is not always easy. McDonald's has been trying to propagate vegetarian food (as being healthier and more environmentally friendly), still salads, french fries, onion rings and veggie burgers make up only 1 percent of sales (Olthuis 2009).

What makes wood differ from fish (and coffee or sugar) is that the supply chains in wood are longer, and involve many stages of processing and transportation - at the simplest: foresters, primary manufacturers (eg sawnwood), secondary manufacturers (paper, furniture), wholesalers/exporters, retailers -, hundreds of companies, and frequent changes in product ownership. Along the chain there is a large number of different wood products, often produced by different companies. This detracts again from the degree of concentration. Yet, at the very beginning of the chain the degree of concentration is also increasing. 'Almost half the annual global wood harvest is now processed by 50 forest products companies' (Taylor 2005: 135, quoting the WWF). Similarly the production of frozen fish is also rather concentrated, with Unilever in the past a major player.

The long supply chains, esp. in wood, complicate enforcement and control. Wood and seafood from responsibly managed forests and oceans have to be traceable along the supply chains, in order to guarantee the value of the certificates. The FSC and MSC do their best to build in more checks and balances along the chain: DNA testing, unannounced audits, random checks. And they employ commercial auditors and certifiers to do so. If not cumbersome, it is at the very least costly. In principle retailers could aid in this endeavor. They have their inspectors out to audit the quality of lumber and fish anyway, and could just as well check whether the FSC/MS standards are being observed. However, that would require quite some trust between the councils and retailers, and, what is more, trust in such arrangements by environmentalists and customers. That is not likely. Therefore, 'third party certification' is necessary to double check.

The certification councils use retail-hierarchies and their market power, yet it makes them also dependent on such retailers. This entails risks. For one, that their association with the certificate could harm its reputation. Furthermore, such retailers could after a while decide to go at it alone and try to link environmental stewardship directly with their own brand reputation, which subsequently competes with that of the councils. Initial participation in the collective certification could help them get started to get an environmentally friendly image. This has happened before with e.g. collective certification of French Bordeaux wine growers (Colman 2003) and of the Dutch dairy industry and opticians (van Waarden 1992).

Finally, it might be noticed that there is something paradoxical in the role of large firm hierarchies as regards the regulatory protection of biodiversity. Their growth and internationalization have at first frustrated this. MNOs have contributed to the increase in international trade, moved capital around the globe, moved resources and their 'vehicles' to different jurisdictions, e.g. reflagging fishing fleets (Carr and Scheiber 2004: 120), thus

undercutting the effectiveness of national state regulation, and have more in general furthered trade and regulatory liberalization. Yet, just because they have become such huge private hierarchies, they have now made it also easier to control trade flows and regulatory standards, if only outside parties promoting the public interest can get a grip on these MNOs. Increasingly the latter have been open to this as their size and broad presence around the globe have made them more visible and concerned about their public reputation.

10. The Problem of Maintaining Certificate Credibility and Reputation

The effectiveness of private certification as a way to protect biodiversity depends in the end on the credibility and reputation of the certificate. Inflation can set in due to pressure from various sides and sources.

10.1. Success breeds Problems: Shortage of Supply

First, it can come from success. As more and more retailers join the certification scheme the demand for certified wood and fish increases. The supply may not be able to keep up with this demand. That may induce the certifiers to lower the standards or 'reduce the bureaucratic burdens' for foresters and fisheries, in order to increase supply, out of fear for losing retail-participants.

The large retailers have an interest in a large, and a stable, continuous and consistent supply. That was not easy to meet for the FSC and MSC. 'The global corporate demand for certified timber exceeded already in 2001 the levels of supply by more than 10 times.' (Harv 9). Certification went fastest in the northern boreal and temperate forests of North America and Europe, and not in the tropics, for which the FSC was created in the first place. There were several reasons for this: more difficult access due to remoteness, lack of roads, unclear land ownership, lack of political stability, understaffed forest administration agencies, demographic pressure on the forests, hidden slash-and burn practices, corruption, etc. Yet the demand for certified wood concerned also such relatively rare timbers, such as teak, mahogany, or plywood. For some of those, supply might never meet demand, as sustainable forest management might require a decrease in cutting.

In order to meet the demand, the certifying council could and did take several measures.

First, it focused on those foresters and manufacturers which could more quickly satisfy the need for greater supply, either because they controlled large tracks of land or produced much wood; or because they had already sound management systems in place. This threatened to go at the detriment of small community-based forestries, esp. in developing countries. I.e. it negatively affected the competitive position of these smaller and less 'modern' producers (Taylor 2005: 138)

A second measure could be to lower the standards, either for the product or for the certification process. Lower standards tend to be cheaper for the forest industry to live up to, and they are likely to be able to supply larger quantities of lumber that satisfy them. Such might have been popular with the industries participating in the council; however it was anathema to the environmentalists (cf. Counsell and Loraas 2002). Retailers were also cautious, because inflation might reduce the usefulness of the certificates. A solution was found in differentiating standards. First, percentage-based certification was introduced, listing on the label the percentage of certified lumber used, with a minimum percentage threshold.

Then, also the minimum threshold was let loose, and under the ‘truth-in-labeling’ regime, the only requirement was that the percentage of certified lumber was clearly indicated. To cover those, three separate logo’s were introduced: ‘FSC 100%’, ‘FSC Mixed Sources’, and ‘FSC 100% Recycled’. The latter two are also frequently used for paper. In order to correct for disadvantages of small and medium-sized foresters vis-a-vis larger ones, the FSC created special certification procedures for SLIME (Small and Low-Intensity Managed Forests), including stepwise certification and aid in getting there.

10.2. Competition

Pressure to lower standards came also from competition. The initiative of the FSC led to the formation of competing certificates by the forest industry, which resented the FSC standards, because they did not want to cooperate with environmental and social groups and did not like the FSC’s inclusion of social issues and rights of indigenous peoples. By setting up their own certification schemes they tried to take the wind out of the FSC’s sails. Among them were: the 1995 Sustainable Forest Initiative SFI, created by the American Forest and Paper Association AF&PA, and made compulsory for its members; the 1996 Canadian National Standard on Sustainable Forest Management CAN/CSA Z809, created by the Canadian Standards Association following industry-directed guidelines; the 1999 the Pan European Forest Certification PEFC, from small and large foresters and industries in Finland, Norway, Sweden, Germany, Austria, and France, a decentralized system, based on national certification schemes that mutually recognized each other, provided that some basic standards were adhered to, such as independent certification; and the American Tree Farm System, for non-industrial forests in the US, sponsored by the American Forest Foundation. In addition, several retailers had their own certification scheme, as they wanted their own brand-name to stand for responsible forest management. Altogether quite a few schemes emerged, Vogel (2005: 118) speaks of ‘approximately fifty’. (Such proliferation is by the way not uncommon in capitalism, esp. in the US where almost all businesses, notably restaurants, claim to be ‘award winning’, leaving in the middle who gave this award. It could have been their grandmother.)

Thus a market for ethical certificates developed, and a competition for credibility in the eyes of the different stakeholders: forest industry, lumber processors, construction industry, retailers, consumers, environmental NGOs. The latter were suspicious of the independence of the industry-schemes and feared particularism, self-servingness. Conversely, many forest industries were resentful of the FSC. By 2006 still the majority of US leading forest firms bet on SFI/CSA. In order to increase the credibility of their industry-standard, many forest firms let their operations be audited by PriceWaterhouseCoopers on the basis of SFI standards. In addition, the SFI created in 2000 an outside independent board to oversee the certification scheme, including a variety of interests: environmental NGOs, State and federal officials, academics. The PEFC tried to export its decentralize system based on mutual recognition across the globe. With the SFI and CSA they formed the International Forest Industry Roundtable Initiative. However, NGOs objected to this ‘decentralized mutual recognition arrangement’ as they feared a race-to-the-bottom, with the lowest common denominator becoming the de facto global standard.

However, such competition could either lead to a ‘race-to-the-top, or a ‘race-to-the-bottom’. Which one of the two depends first of all on whose favors are most wanted, what is most scarce. If concerned customers are scarce, then quality may have to be raised; however, if suppliers are scarce, costs of certification may be successively lowered and with them the

standards. Secondly, it would depend on the transparency of the market, and whether prices or quality are easier to compare. Price comparison tends to be more straightforward and hence easier. Quality comparison is more difficult, in particular when the quality can not be seen directly from the product, but, as in the case of such certificates, relies on largely inaccessible detailed lists of standards, endorsement by authorities respected by consumers, and more in general on trust and reputation. The proliferation of labels does not make comparison easier. Consumers could no longer see the forest for the trees. After all, who would take the effort to read in detail what the standards were that were guaranteed by the label? A catchy label, or a familiar one, might be enough to appease one's conscience about buying lumber or fish. That might tempt the retailer to go for the cheapest label. As the industry-certification schemes had lower standards that were easier and cheaper for foresters to satisfy, retailers might be tempted to be satisfied with using them. That held in particular also for buyers who were less visible in the market, such as construction companies. They usually cared less about ethical issues than about price and supply.

So far, the FSC and MSC have managed to keep a competitive edge. Their credibility tends to be higher, because of their relative independence from the industries. In the FSC-case it was also important to certify paper users like publishers or packaging manufacturers, because they could be licensed to print the FSC-logo on their products, thus increasing its visibility and familiarity among consumers. Gradually, their logo's have developed as a 'gold standard', a global benchmark for responsible forest and fisheries management. Indeed, the industry-codes have come closer to these gold standards over time.

Whoever would appear to be winning the competition for a global standard would have a 'first mover advantage', as the WTO Technical Barrier to Trade Agreement TBT required national standardization bodies to adopt international standards wherever these existed, in order to reduce the diversity of standards, which could become technical barriers to trade. A first system to acquire some 'international' character would have a head-start in becoming enforced by the WTO as the one international standard. Thus the FSC applied for membership of the International Accreditation Forum, an international club of accreditation organizations with an increasing reputation. The FSC thus tried to cloak itself in the reputation of that organization.

10.3. 'Lumber Laundering', adulteration, and other forms of Fraud

The reputation of certificates can also be blemished if they are repeatedly falsely used. Just as products can be adulterated, so can quality certificates. As has happened already so often in history with quality certificates at the national level. If not higher prices, then at least easier access to markets can provide incentives for laundering illegal and non-certified fish and lumber. Fraud is especially easy in these markets, as it can often not be seen from the products themselves where they come from and whether they deserve a label for coming from responsibly managed sources. 'Stamping' fish or lumber at the beginning of the commodity chain is difficult if not impossible. Such 'stamps' have to be on the accompanying documentation, and that is easier to falsify.

In the lumber market the long commodity chain offers additional opportunities for fraud, especially since on the way, e.g. in the production of chipboard, wood-based panels, plywood, more in general construction lumber, paper and packaging, wood from various sources is mixed and it is difficult or at least expensive to distinguish and trace wood coming from different sources. Good willing processors had often to make an extra effort and incur

extra costs to exclusively use certified wood, as its supply was highly dispersed geographically and involved additional transportation costs (Austin and Reficco 2006: 9). Thus the temptation to short cut and avoid these extra costs would be high. The more so as their customers also did not have in incentive to be fussy, as they were usually short of sufficient certified forest products (Counsell and Loraas 2002, Cashore 2002, Cashore, Auld and Newsom 2004). Laundering was furthermore also facilitated by the afore mentioned problems; the proliferation of certificates and the resulting market intransparency, and the global character of the market with corruption being rampant in many parts of the world, especially in remote locations at sea or in distant forests.

Effective controls and audits along the long global supply chains required to uncover and discourage such fraud are also not easy, even with modern day satellite-, bio- and ICT-technology. What is often mentioned as a cause of state failure is also a problem for private certification: how to enforce, control, and monitor whether lumber in distant places is really coming from well managed forests, how it travels along the long commodity chains; or whether fishes are caught according to the rules set out by the MSC, in distant places, huge expanses of water; by fishermen, rugged individuals which have developed a culture of autonomy, individualism, being alone in these expanses of open sea, distant both physically, culturally and emotionally from the 'bureaucrats' drawing up quota's, standards and conditions, whether they are from the government or some private certification body.

11. Need for Supports

All these problems - competition, fraud, certificate inflation, limited audit resources - call for solutions. There is a need for support along the commodity chains. And there is a need to certify the certifiers in order to control for whether they do succumb to the temptations to inflate their certificates. These aids and controls are to help separate the wheat from the fraudulent chaff, to lend authority and trustworthiness to the most effective and independent certifier, and to be cautious about the development of perverse incentives, e.g. following professionalization of the certifying councils.

Who could control the controllers, certify the certifiers? Just like regulatory standards can come from a variety of sources: the market, commercial businesses - including the media, associations, communities, courts, states, and international organizations, so can backing or further accreditation come from such sources. One might yet add respected individuals in this row: famous people, charismatic leaders.

Commercial accountant firms like PWC can and do get chartered to double-check the audits of the fisheries and forests certifiers.

Public interest *associations* as Greenpeace or the Rainforest Alliance critically monitor as self-appointed watchdogs the work of the FSC and MSC as well that of the organizations that participate in them directly, the foresters, fisheries, processors, wholesalers, retailers. Greenpeace regularly checks the shelves of retailers for their use of certified fish, and absence of threatened species. Depending on their scores on these criteria they get a red, orange or green light. They also monitor distant fisheries, and the Rainforest Alliance does so for the Brazilian jungles. The media aid by publishing the critical findings of the NGOs and engage in their own investigative reporting. NGOs help them in this by organizing spectacular, newsworthy events. The World Wildlife Fund has not only stood at the cradle of the FSC and MSC but has also aided them in their work. They created regional Forest and Trade Networks, made up of companies from the beginning to the end of the product chain: forest owners,

timber producers, wholesalers and retailers of wood products, and large users such as construction companies. Belonging to these networks gave participants access to other firms in the supply chain also in these networks: Through these networks retailers could find their scarce suppliers, vis versa suppliers could find outlets. Thus these networks worked as a go-between for those having and those searching for certified wood.

Other fellow certifying associations, like the Fair Trade Labeling Organizations International, the International Federation of Organic Agriculture Movements, the Marine Aquarium Council, or Social Accountability International, organized in the International Social and Environmental Accreditation and Labeling (ISEAL) Alliance, have jointly formulated a Code of Good Practice, and have recognized the MSC and FSC as satisfying that code. Other associations have used FSC or MSC standards and have thus recognized them de facto. Thus the LEED Green Building Rating System of the US Green Building Council is based on FSC standards.

Also informal *communities* could help. Communities of fishermen or of indigenous peoples could aid in enforcement ‘on the ground’, providing their practical knowledge at sea or of the forests. After all, they have an interest in the sustainability of the resource from which they live. However, that would require that collective action problems can be solved, e.g. by keeping foreign poachers out. And it might require special, less cumbersome bureaucratic procedures or less formal quantitative data demands. The trade-off is easier enforcement, because it is done largely voluntary, by the fishermen and foresters themselves. But it requires quite a leap of trust, which could be risky.

Such private supports have their limits. They cost money, depend often on highly motivated individuals, have no effective sanctions, and sooner or later their objectivity and neutrality can become controversial. Recent history has again shown that controlling agents like accountants and commercial rating agencies can, even after long periods of public trust in their objectivity, lose that following one scandal or crisis. Such is all the more likely if they get paid by those whom they audit and control.

Furthermore, private market-based regulation is in the end dependent on the voluntary cooperation of producers and/or retailers. The emergence of competing private standards indicates that quite a few firms resist joining schemes like those of the FSC and MSC. Voluntariness has its limits, in particular when the credibility of the certificates is prone to fraud and inflation.

Therefore, sooner or later such arrangements may need public support. After all, it concerns a public good, the protection of biodiversity. Public support might be needed for recognition, devolving authority, codifying standards for certification, helping in monitoring in distant places, funding auditing, control and development of new technological means to do so, more in general backing the reputation, and convincing less active nation-states through international pressure to enforce the standards in their territory.

12. State Support, Public-Private Partnerships: Will the ‘Gold Standard’ become the Global Standard?

Such public recognition of private standards is nothing new. It has often been done in history at the national level. Even in étatist countries like France. Thus the private Appellation d’Origine Contrôlée Syndicats for French wines are recognized and sanctioned by the state as long as they live up to the standards given by the state for such Syndicats by the INAO

(National Institute on Appellation d'Origine), which guards the domains of the 'produits du Terroir' (Colman 2003).

It has also happened at the international level. Vogel (2005: 167) gives examples of how governments have initiated, stimulated, funded, endorsed and/or recognized private standards. E.g. the international CSR codes on good working conditions in third world countries were supported and even initiated by the American Clinton government t in the US and the British government.

States can and do set minimum standards for access to their markets,. They have done so e.g. for pharmaceuticals. Why are they willing to do so for pharmaceuticals and hardly as regards biodiversity? Is the death of a single human a more accepted legitimization of regulatory intervention that annihilation of complete animal or plant species?

It must be said that the beginnings are there. Interstate treaties ban whaling and trading in endangered species, including in goods from those species, such as ivory, coral, or turtle shells. In 1990 the US Congress codified a private 'dolphin safe' tuna certificate, gave it monopoly recognition, and required it for imports. Though this trade ban was subsequently ruled impermissible by a GATT panel in 1991, tuna processors kept requiring 'dolphin safe' tuna from their suppliers, thus effectively closed the US market to tuna caught in ways endangering dolphins (Carr and Scheiber 2004: 131). The former public measure gave their policy choice legitimacy, also in the eyes of the general public. Here public-private cooperation makes possible here what either cannot: private actors lack sanctions, public ones lack formal legality. Together, they can impose the standard on the industry.

Should not FSC and MSC standards be elevated to that level? It seems to have come indeed. First, the MSC standards have been recognized, encouraged, and supported or even formally accredited to be a credible certifier and eco-labeler by both international public organizations (the UN Food and Agriculture Organization), semi-public ones as the International Council for the Exploration of the Sea (ICES) and private ones like the ISEAL, following its Code of Good Practice. Incidentally, but increasingly, public national and international organizations refer in their informal codes or formal legislation to such private standards and so do national and international courts, thus recognizing and helping to enforce them. In 2005 the UN FAO tried to regulate the certification market by setting minimum requirements for marine eco-labeling and certification, including autonomy, transparency, and stakeholder involvement. These principles were pretty similar to the ones the MSC already employed, thus de facto raising its reputation.

More importantly, very recently both the US and the EU banned the import of illegal wood. In the fall of 2008 the US banned the import, sale, or trade of all illegally harvested wood and forest products. It was an extension of the US Lacey Act which has long banned the import of tropical birds, elephant ivory, and tiger skins to illegally harvested wood of any species. All importers will henceforth have to declare each type of wood being imported and where it was cut. The EU followed suit, yet originally it intended to go less far as the US. The European Commission had proposed to require lumber traders only to search for certificates for their wood. It was the European Parliament, which, inspired by the US example, sharpened the regulation, by sanctioning it with an import ban. In February 2009 it decided that timber traders need to prove henceforth that they do not sell 'false wood'. Imported wood must be cut legally in order to be allowed on the European markets. In the parliament it was maintained that one-fifth of all wood imported into the EU was felled illegally. (Dutch Volkskrant of Febr. 18, 2009: 'Fout hout in de ban').

The acts have the potential of bringing environmentalists and lumber industry closer together, as they sealed a typical a Baptist-bootlegger coalition between environmentalists and

domestic foresters. Both share an interest in protectionism against ‘unfair’ competition from illegally cut wood elsewhere. That might come in useful in deciding what illegal is. According to which jurisdiction?

In order to determine that, the US and EU may have to rely on private certifications with enough credibility, as they do not themselves give as yet off such certificates. And both may not have enough trust in certificates given off by third world countries. Thus it is conceivable that they may provide monopoly recognition of FSC certificates, or else force mergers of the various private certifying programs. There are enough precedents for that. Thus ILO conventions have been implemented by private associations and labels. ‘FSC certification of wood products promises to be a pivotal tool in providing independent and credible verification of legality and social and environmental responsibility for companies importing wood’, states Corey Brinkema, President of FSC US. The FSC immediately markets its certificate to industry: ‘The Forest Stewardship Council certification offers US companies an important tool for demonstrating that they take legality seriously. The Lacey Act requires companies to know the origin of their wood supplies in order to avoid timber from illegal logging. As a global certification system that includes robust standards for both forest management and supply chain of custody, FSC clearly mandates that all FSC forests comply with national laws and regulations. Besides addressing international concerns on illegal logging, FSC also includes a balanced consideration of key social and environmental issues. "As the gold standard of forest certification programs, FSC certification is the best way to demonstrate legality and reduce the risk of having products seized and paying fines," says Phil Guillery from the Tropical Forest Trust.’” (The FSC Newsletter of sept 2008, FSC website).

The US and European measures are a classical case of a California effect: live up to our standards or you do not get access to our markets. However, they are only minimal standards: legality. FSC certification may be a guarantee for that, however it requires more than only legality. It remains to be seen whether the ‘gold standard’ will be enforced by these new laws. Technical standards can, according to the WTO, be a legitimation for protectionism, but they should be internationally recognized standards. Will the gold standard become the global standard?

De facto this comes down to Northern countries putting pressure on Southern ones. The link of forests with the suddenly highly salient political issue of CO2 absorption may strengthen them to do so. Not only could Northern countries buy CO2 rights by ‘buying’ forest rights in the south, they could also use trade bans and certification as means to ensure their continued existence through sound management.

Northern states could facilitate that by aiding in the costs of certification. As yet, these costs are borne by the foresters, and these may be too high for small-scale wood producing communities in developing countries. Such development aid would not only favor Southern countries, but would also contribute to the maintenance of a global public good. It would be a form of horizontal financial compensation, much like the horizontal ‘Finanzausgleich’ between the German Länder.

If need be, such costs of certification could be paid out of a global (?) tax on lumber products. Now part of the domestic costs of certifying pharmaceuticals are borne by states and financed out of tax income. The same holds for food inspections and many others. Why could, what is usual for domestic certifications and inspections, not also be used for global inspections of sustainable forest management, in our global collective interest?

13. Strengths of Emerging Mixed Economic Governance Regimes

The result of these trends is the emergence of new economic governance regimes, combining elements of markets, associations, hierarchies, and states. To these, other more informal ones may be added: communities, networks, circles, and round tables.

How effective these emerging networks of organizations actually are in formulating and enforcing standards we do not yet really know. Perhaps it is as yet too early to judge that. However, what we can see is that the combination and cooperation of different public and private organizations can mutually compensate for each other's weaknesses, liabilities, disadvantages, problems. NGOs and fishing cooperatives lack enforcement capacity at the 'fork side' of the chain. Here supermarket chains can provide the required enforcement sanctions. However, the latter lack often credibility, as they are easily suspected of narrow rent seeking. Such an image may be corrected by public interest NGOs willing to cooperate with them, the certificates provided by the Council itself and its supposedly independent status and reputation, and their backing up by public agencies such as the UN-FAO. The various participating organizations also complement each other's knowledge and information needed for detailing standards and certificates that could be effective but nevertheless also pragmatic and workable. And different organizations can help overcome each other's collective action problems. Thus NGOs could monitor and report on the compliance with agreed standards by firm-members of trade associations, including fishing cooperatives, and thus aid the latter in disciplining their members and avoiding free ridership: namely profiting both from a positive collective reputation of the product, yet making extra profits by individually dodging the standards. Like unions have been used by employer associations to help the latter in enforcing collective agreements among their members, with unions reporting free riders. Monitoring is more effective if it is complemented by naming and shaming. This promises to work better in a time of easy global communications, as multinational firms become more sensitive to stains on the reputation of their brand names, in which they may have invested a lot.

More in general, private organizations do not suffer from legal jurisdictional constraints, as nation-states do. However they have other constraints: different and possibly less powerful sanctions, limited resources to organize thorough and trustworthy inspections, commercial bias reputation, danger of 'public interests' getting lost behind particularistic ones, lack of authority, of neutrality, accountability and hence of legitimacy, danger of piling hallmarks and controls upon controls, leading to confusion and less transparency on the 'markets for certificates'.

Eventually such an organization can only be really effective if its regulations and certificates are recognized and enforced at both ends of the chain 'from fishing to fork', i.e. by local fishermen on the sending end and by local distributors and consumers at the receiving end. Thus inclusion of private organizations of producers and consumers at these ends of the chain in such a stewardship coalition is essential. These are likely to include private organizations, be they informal communities (of fishermen), formal associations (cooperatives of fishermen, fish store trade associations, conscious consumers), firm hierarchies (seafood packers like Unilever, supermarket chains), the media, consultants, advertisers and their associations. Thus large supermarket chains first of all have to abide by food quality standards in the consuming countries. However, as they care for their reputations among consumers, they tend to adopt also standards such as from these Councils that are no statutory requirement yet, provided that consumers know these standards consider them important. By advertising these standards supermarket chains help in making them better known.

Such cooperative networks of organizations increase in stability and effectiveness once their organizations, goals, and certificates are recognized and supported by local, national, or international public authorities and perhaps even backed up with some statutory privileges and powers, such as the Fairtrade Cities and Towns, or the FAO of the UN. Thus a private organization like the MSC can become the nucleus of a network of a variety of private and public organizations, all contributing to enforcing the agreed standards.

14. Conclusion: Mother Europe and Father America?

Around 1900, in the early days of bicycles and cars, a privately initiated association, the Dutch automobile association, placed the first direction signs along the rudimentary roads. They were ideal typical public goods. Eventually, its financing was taken over by a public organization, the state, who funds it out of general tax income, Yet the association still plans and orders the placing of the signs. The actual placement is done by a commercial organization. Thus this public good is now a collective endeavor of state, association, and hierarchy.

Around 2000, in the early days of globalization, privately initiated associations like the FSC and MSC placed biodiversity friendly signs on products, again typically public goods. Will states eventually also publicly finance and sanction such initiatives? It is already a collective endeavor of associations and hierarchies. Will states join? As indicated a start has been made.

States may have to. As history and logic have taught us, private production of public goods is likely to run into serious problems, some of whom have been discussed here. What can be learned from past experience as to the various options available, notably in a country with a rich experience of private market regulation, the Netherlands? Typical supports that such states have given private regulation over time are, in order of increasing strength: recognition; public certification or accreditation of private certification; forcing a reduction of proliferation and intransparency of markets for certificates; exclusive right to certain monopoly goods in support of private regulation (1917 NL exclusive rights to 'export certificates' for dairy hallmarks, 2010 exclusive rights to 'import certificates' for lumber?); monopoly recognition of one major certificate; raising it to statutory status; public funding, lowering costs for participants.

Such public supports for private regulation, and eventual take-over, may be less easy in the international arena. The development of such public-private partnerships in market regulation in the Netherlands have been made possible by a long standing culture - ever since the 17th century - of a well organized civil society, engaged in ordering its own markets, and only framed and incidentally supported by public authorities, eventually turning into full-blown corporatism by the end of the 19th century. In the international arena, countries with rather different national styles of regulation, different traditions as regards state-industry or state-civil society relations have to cooperate in developing an international public authority.

However, they find themselves confronted by a burgeoning organization of an emerging international civil society, a process reminiscent to that in the Dutch 17th century. International interest associations are being formed as well as many public interest 'do good' societies, in a diversity of social, developmental, economic, political, environmental, and even animal well-being fields. The ones discussed in this paper are only a small subset of this world. Modern transport and ICT-technology, the engine behind globalization, has also furthered this process. The public interest organizations are backed by another international community, that

of scientists and their universities, research organizations, and consultancies. There is quite some unity here.

How will the diversity of states with their different traditions confront this trend? Their institutional and cultural differences have been substantial, both between the EU and the US and within each of them. The EU covers quite a diversity of national traditions of public-private cooperation, which each have emanated out of different national paths of state formation over the last five centuries. Somewhat simplified: state-civil society and state-industry relations have been historically close, with frequent mutual support, in countries like Germany, the Netherlands, Austria, Switzerland and Scandinavia. Often, new associations formed as private initiatives, bottom up from civil society. Soon however, they got recognition and legal and/or material support the state, which saw them as useful aides in policy implementation, as 'bridgeheads' in civil society. No constitutional ban, tradition on separation of state and civil society, or state and church hindered this. More distant and distrustful have state-society/industry relations been in étatist France - with its strict separation of state and church and its distrust of corps intermédiares ever since the French revolution. Distrustful were also in the liberal UK and in most of Southern Europe. The US, which lacks a diversity of state traditions, has less drawn out differences between its constituent units, yet it is neither a monolith. California has different regulatory traditions from Texas, and they again from Wisconsin or Delaware. Yet all these states share, as part of America and similar to France, a sharp constitutional separation of church and state and a distrust of private associations, usually perceived as mouthpieces of narrow particularistic interests, trying to capture the state and/or its policies.

Some of these states have also been more concerned about environmental issues than others. Thus in the US, California has frequently taken a leading role in environmental regulation, pulling or pushing the others. In the EU such a role has been performed by the countries of North-Western Europe, notably Germany, the Netherlands, Scandinavia, and Austria. As indicated, especially these European countries have traditionally state-civil society relations rather different from those in the US.

In the management of global public goods and the regulation of global public markets these different traditions collide - or could they perhaps complement each other? Europe, in the mother-role, with the 'carrot', with supports, finance, housing, etc. perhaps? And the US as the father-figure (or perhaps better, the 'son?'), with the 'stick', strong, pugnacious, expecting mischief, and having strict standards and rigid enforcement with severe punishment?

Much of what we know about regulatory styles in the US versus North-Western Europe fits this metaphoric distinction. The US is known for adversarial relations in the economy, in politics, and in the relation between state and economy. There is a strong belief in the idea that the best, or the truth, will emerge out of conflict and competition: in the economy with its emphasis on freedom and competition, in politics with its first-past-the-post winner takes all system, in academia, in the courtroom with its formal adversarial procedures, and in state-industry relations. Industry is suspicious and antagonistic to state intervention; conversely citizens and bureaucrats have the idea that entrepreneurs are self-serving and need to be kept short. Among citizens there is a strong distrust of both politicians and businessmen. In the end they are all suspected of being motivated by self-interest, and as that is expected, one also does not have to be ashamed of that and can be open about it. The institutionalized suspicion leads to the state enacting strict regulatory standards and rigid and universalistic enforcement (Vogel 1986), up to the point that it has been considered unreasonable (Bardach and Kagan 1982). Punishment can be severe, leading to a relatively large percentage of the population spending their life behind bars. Societal and economic conflicts are formalized in court procedures,

suspicion and greed fuels the explosive use of tort law, which in turn has forced economic actors as well as state regulators to be even more formal and bureaucratic in their external and internal relations. Kagan (a.o. 2001) has termed this ‘adversarial legalism’.

By contrast, the countries of continental North-Western Europe are characterized by more consensual institutions and cultural values: in the economy, in politics, and in the relation between politics and the economy. Cooperation among business firms has been common and accepted, notably in the Netherlands which used to be considered a ‘cartel paradise’, both by its own citizens and outside observers as the OECD or the European Commission up until 1998 (Unger and Van Waarden 1999, Van Waarden and Drahos 2002). The political systems are based on proportional representation, and the noted political scientist Lijphart has dubbed these states consensual democracies (Lijphart 1999). Courts use formally inquisitorial rather than adversarial procedures. State-industry relations have been historically close, and found expression in the many corporatist institutions that these countries have created over time, and in their reliance on trade associations both as regulators of their economic sectors and as implementers and enforcers of state regulation. Apparently they could be trusted to serve not only their own narrow particularistic interests, but also the public interest. Hence states have historically also provided all kinds of supports for private regulation: recognition, registration, enforcement of private rules with public power, monopoly recognition, raising private regulations to a statutory status as with the extension of labor contracts and in some countries cartel agreements, authorizing private organizations to implement public regulations, reference to private standards in courts, and even funding of indirect financial supports as payment for specific services trade associations performed.

This distinction comes back in how the US and European countries have dealt with global private regulation in the cases of the FSC and the MSC. Typically, European countries like Germany and the Netherlands have provided public supports. Germany has aided the FSC with new offices in Bonn, and several European country governments have provided some public funding for both the FSC and the MSC. By contrast, the latter did not receive any financial support from American state authorities. However, they did receive financial support from US civil society: private charities, foundations and associations, and in substantial amounts. In 2008 the MSC depended for 77% of its income on charities and public interest associations, almost all of it American ones, among them charitable foundations, but also associations as the WWF, Sierra Club, Conservation Alliance for Seafood Solutions, Fishwise, Fishchoice, the Canadian Parks and Wilderness Society, even the Monterey Bay Aquarium. These public interest associations also provided other forms of support: information, contacts, membership, organizational support. Only 5% of the income came from governments, all European ones, though this share is increasing. While parts of civil society provided supports, other sections resisted. In line with adversarialism, the American forestry industries reacted most fiercely by competing with their own FSI-standard, and nowhere were relations more hostile than in the US, between the FSC and the AF&PA, and between the latter and related NGOs.

As far as the state is concerned, while ‘mother’ Europe provides supports, ‘father’ America provides ‘sticks’. It took the lead in potentially backing FSC standards with public sanctions, the amended Lacey Act.

One could carry the mother-father metaphor yet a bit further. Both the EU and the US have been environmentally concerned, notably the indicated leading states in both federations. However, they differ in the environmental issues they are concerned about and have regulated first or most.

Europe, as the mother, has been most concerned about pollution in its household, the *oikos*. North-western European countries gave priority to the problem of packaging waste. Both nation-states and the EU have enacted legislation to discourage use of unnecessary packaging and to force collection, recycling and reuse (Haverland 1999). Germany took a lead here with its Grüne Punkt system and its deposits on aluminum cans. Every German town square is embellished with rows of colorful containers for collecting glass in different colors, plastic, paper, cardboard, and cans. Its organization is a typical public-private partnership: a contract between the state and the industries involved over the organization and funding of recycling and reuse. Germany inspired the European Union to enact recycling legislation and it in turn imposed this duty on Southern and Eastern European countries. In the US however, packaging waste seems to be of no concern to Americans. It is used in much greater amounts and varieties, and it is to be thrown away immediately. That holds not only for paper and plastic, but also for single use plastic cutlery, cups, plates, etc. Typically plastic supermarket bags are filled much less, and are less strong than those in Europe, which are meant for repeated use.

By contrast, ‘father’ America was much earlier concerned over the pollution spilling of its cars into public space, the *polis* so to say. Long before Europe, it forced the introduction of unleaded fuel, and ever since the exhaust emissions have been a major concern and subject of regulation.

Could this ‘father’ and ‘mother’ learn from each other when it comes to protective regulation of biodiversity? How intimate are the relations? Is a real partnership possible? Could their cohabitation produce healthy offspring? A beautiful bio-diverse baby, alive and kicking?

It could be a joint Ecological Public-Private Partnership (EPPP), where private initiatives such as the FSC and MSC are publicly supported but also chastised and controlled. California and North-Western Europe could, as the most environmentally concerned states, take the lead in this.

Support might be needed in providing ‘sticks’, such as the recently enacted trade legislation. This legislation could occasion formal recognition of such private certificates in national legislation and perhaps also in international treaties. After all, corporate governance regulation and shareholder protection has also led to formal recognition, and their regulation, of accountants. Monopoly recognition would go even further, and reduce also the confusion on the market due to the proliferation of certificates. After all, there is a public interest in transparency of the market for certificates. For similar reasons societies have in the past also formally recognized and sanctioned only one weights and measures system. States could also provide recognition through their private role as buyer on markets. Governments are major buyers, e.g. on construction markets. They could, for a start, require FSC certificates for the lumber used. Some local governments have already been doing so. The stick could be made heavier yet by mandating biodiversity-safety certification for all marketed goods, also domestically. Governments do already set minimum standards for the marketing of pharmaceuticals and food. But why should we protect only the health of the consumer, and not of the biosphere on which the survival of all of mankind rests? Maybe a crisis or a scandal is needed. The FDA and the regulations it has to enforce were also only initiated after a food poisoning scandal. The link between forest/ocean management and global warming could provide such an occasion. In particular if it finds expression in more spectacular storms and floodings. Such sticks would represent the American way, either to be initiated from that side of the Atlantic, or to be adopted by mother Europe.

Support could also be given in the form of ‘carrots’, the more motherly European way, e.g. financial support. For the moment FSC and MSC certification is paid for by the recipients of the certificates. That harbors a danger of bias. When word would go out that one can ‘buy’ a good rating, the reputation of the certificate is shattered. As the saying goes, trust comes on foot, but leaves on horseback. That is not unimaginable, as the Enron-Andersen case has taught us. Certifiers like accountants could be bought. He who pays the piper calls the tune. Good reason to reduce this dependency, by having certification paid out of public funds, filled by a compulsory levy - a tax - on all industry or even all citizens. Industry would still pay, but it would no longer be linked to a specific performance. Just as is done with the application and implementation of other forms of public regulation.

It might be worth considering something akin to a Tobin tax: a tax on all trade in fish and lumber across the globe. While James Tobin saw this as a means to stabilize global financial markets by putting a penalty on short-term speculation, such a fish/lumber tax might help stabilize biodiversity. Following the further elaboration of Tobin’s idea by Ramonet, editor of *Le Monde Diplomatique* (in his 1997 article ‘Disarming the markets’), who suggested using the income for public aid, one could use such tax income to fund buying biodiversity reserves, which could then be placed under the stewardship of organizations like the WWF. In addition to Unesco World Heritage Sites we might get WWF World Biodiversity Sites. National governments do already create such parks and reserves and frequently place them in the custody of private associations (National Trust, Natuurmonumenten), but with such tax income they could also be realized in parts of the world, notably the biodiverse tropics, where local governments either do not have the resources or do not give such a policy enough priority to devote scarce resources to. There would be enough justification for such a global tax: the public good would benefit the global public. The income could form the nucleus of an emerging global governance of global public goods. As this might not be immediately realizable at the global level, again the example of the Tobin tax could be followed: local and national governments could start with it, e.g. the more environmentally concerned states in the US and Europe.

Both fatherly and motherly approaches could come together in public support for the daunting task of monitoring, enforcement and control of the compliance with the standards all over the ‘global ground’, in combating illegal harvesting and laundering of lumber and fish. Once the state bans illegally cut lumber or caught fish, it has an interest in effective monitoring. It could do so by auditing the auditors, but also more actual public-private collaboration: sharing of expertise, experiences, knowledge, technology (e.g. satellite observation), benchmarking, learning, etc. This could lead to the curious paradox that public agencies might be enforcing private standards. Are there perhaps legal precedents for this?

Finally, the North-Western European experience with consensual politics, also in associational politics, might inspire cooperation in global EPPPs. In these countries quite diverse interests, e.g. of associations of employers and employees, have been able to work well together in institutionalized ‘Social Partnerships’. These could offer learning experiences for cooperation of environmentalists and industrialists, and of private and public actors in ‘Ecological Partnerships’. That is actually what the FSC and MSC aim to be.

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