

# Sustainable Food Governance by Governments and Markets

## The Case of Sustainable Seafood Provision

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*The environmental consequences of the increasing global seafood production and consumption are substantial and drive a search for providing more adequate governance responses. In recent years, market-based approaches to sustainable seafood governance have gained considerable traction. Born in part out of perceived failures of state-based regulations, a range of civil society-led governance approaches have emerged. Private seafood governance arrangements interact with public seafood regulations and this may lead to competition, collaboration or hybridity. This interaction should however not be assessed in general but more closely related to the different stages in the regulatory cycle: agenda setting/negotiation, implementation and monitoring/enforcement. Collaboration between public and private global seafood governance arrangements occurs primarily in the first phase of the regulatory cycle but gets much less prominent in later phases where competition or even separation prevails. Harmonization between public and private sustainable seafood governance arrangements in the near future is therefore unlikely.*

## I. Introduction

Seafood is an increasingly important source of food security and protein supply for billions of people, but fisheries resources are also limited. It therefore comes as no surprise that current demand puts a pressure on capture fisheries and creates a drive to expand aquaculture. In recent decades, both fisheries and aquaculture have become severely criticised for their negative impacts on available fish stocks, biodiversity, natural ecosystems and local communities' livelihoods. Effective sustainable seafood regulation is recognised as necessary<sup>1</sup> but despite efforts within the WTO and the FAO no adequate global seafood government-based arrangement is put in place.<sup>2</sup> In response, multiple civil society-led initiatives aimed at promoting sustainable seafood provision have been introduced as they are less restricted when intervening at transnational scale. The presence of

these multiple public and private seafood governance arrangements elicits debate on their competition or complementarity, as well as on their respective legitimacy. In the literature, these issues are being debated in rather general terms when identifying and comparing public and private governance approaches as the basis for future global sustainable seafood governance. This article aims to contribute to a more refined analysis of the interactions between public and private governance arrangements along different phases of the regulatory process. Against the background of significant sustainability challenges it is important, in particular for private initiatives, to assess where different governance approaches are competing and where they are complimenting each other.

First the main challenges contemporary global seafood governance is facing are introduced, followed by an overview of the main transnational government-based arrangements. In section 4 we review different civil society-led global seafood governance arrangements and discuss the interactions with public actors. In the conclusion the perspectives for further complementarity between market-based governance and government-based arrangements are dis-

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1 FAO, *The State of World Fisheries and Aquaculture 2014*, (Rome: FAO, 2014).

2 J. Jacquet, D. Pauly, D. Ainley, S. Holt, P. Dayton and J. Jackson, "Seafood stewardship in crisis", 467 *Nature* (2010), pp. 28-29.

cussed with regards to their potential contribution to more sustainable global seafood provision.

## II. Challenges for Sustainable Seafood Provision

Nearly 40% of global seafood production, worth some 130 billion US\$ is traded internationally<sup>3</sup>, making seafood one of the most important globalised commodities. As more than 50 per cent of this quantity originates from developing countries<sup>4</sup>, seafood trade is important for the global South. At the same time, nearly 90 per cent of the world's fish stocks are considered fully fished or even overfished.<sup>5</sup> After a peak in 1996 total global harvest declined, from 86.4 million tonnes in 1996 to 79.7 million tonnes in 2012.<sup>6</sup> In response to the declining catchments from fisheries, aquaculture grew rapidly but, on its turn, this development also created environmental problems, such as mangrove loss, unwanted by-catch during the collection of wild seed and brood stock, introductions and transfers of non-native species, increased pressure on marine fish stocks when harvested for aquaculture feeds, spread of parasites and diseases, misuse of chemicals, and release of wastes.<sup>7</sup> Expanding aquaculture also has socioeconomic impacts, such as the privatization of public lands and waterways, loss of traditional fisheries' livelihoods, food insecurity, poor working conditions in the industry, and urban migration.<sup>8</sup>

Addressing these impacts from captured and aquacultured seafood has become a challenge for different government actors. National governments developed and implemented several regulations, but these have not led to effective protection of the remaining fishery resources not even through collaborative endeavours through multilateral agreements.<sup>9</sup> In response, different non-governmental actors have introduced voluntary certification schemes and other private initiatives. These developments result in the creation of a heterogeneous global seafood governance landscape involving multiple (public and private) actors and institutions. This paper focuses on governmental and on civil-society-led sustainable seafood governance initiatives and leaves industry-led ones aside. The main reason for this selection is that governments and civil society organisations engage in public debate when trying to achieve their goals while B2B initiatives are generally not oriented to creating support among the general public.<sup>10</sup>

## III. Government-based Global Fisheries Governance

Multilateral fisheries governance effectively started with the UNCLOS (UN Convention on the Law of the Seas) in 1982, which provided a legal framework for managing fish stocks. So far, this convention is implemented only to a limited extent, except for the 200 mile Exclusive Economic Zone (EEZ) which has been introduced by all states. Ten years later the 1992 UNCED (UN Conference on Environment and Development) underlined the need to create more effective fisheries' and coastal areas' management regimes to protect the threatened fish stocks. The FAO Code of Conduct for Responsible Fisheries (1995) and the UN Fish Stocks Agreement (1995) introduced concrete guidelines for governments to protect existing fish stocks. More than 100 multilateral, regional and bilateral treaties were introduced to supplement the UNCLOS and national measures, involv-

- 3 OECD, *Globalisation in Fisheries and Aquaculture; Opportunities and Challenges*. (Paris: OECD, 2010).
- 4 I. Kelling, "Responsible Retailers": Policy Challenges Raised by Private Standards in the Seafood Sector", in A. L. Shriver (ed.), *Achieving a Sustainable Future: Managing Aquaculture, Fishing, Trade and Development* (Nha Trang, Vietnam: International Institute of Fisheries Economics & Trade, 2008), pp. 1-12.
- 5 FAO, *The State of World Fisheries and Aquaculture 2014*, (Rome: FAO, 2014).
- 6 J. Jackson, M. Kirby, W. Berger, K. Bjorndal, L. Botsford, B. Bourque, R., Bradbury, R. Cooke, J. Eerlandson, J. Estes, T. Hughes, S. Kidwell, C. Lange, H. Lenihan, J. Pandolfi, C. Peterson, R. Steeneck, M. Tegner and R. Warner, "Historical Overfishing and the Recent Collapse of Coastal Ecosystems", 293 *Science* (2001), pp. 629-637.
- 7 T. Pillay, *Aquaculture and the Environment*, (Oxford: Fishing News Books, 1992).
- 8 B. Belton and S. Thilsted, "Fisheries in transition: Food and nutrition security implications for the global South", 3 *Global Food Security* (2014), pp. 59-66; C. Folke and N. Kautsky, "Aquaculture with its environment: Prospects for sustainability", 17 *Ocean & Coastal Management* (1992), pp. 5-24; M. Islam, *Confronting the Blue Revolution. Industrial Aquaculture and Sustainability in the Global South*, (Toronto: University of Toronto Press, 2014); J. Primavera, "Overcoming the impacts of aquaculture on the coastal zone", 49 *Ocean & Coastal Management* (2006), pp. 531-545.
- 9 E. Allison, "Big laws, small catches: global ocean governance and the fisheries crisis", 13 *Journal of International Development* (2001), pp. 933-950; J. Barkin and E. DeSombre, *Saving global fisheries: reducing fishing capacity to promote sustainability*, (Cambridge MA: The MIT Press, 2013).
- 10 Some B2B schemes take efforts to engage other societal actors as well. See for an example on GlobalGAP: A. Tallontire, M. Opondo and V. Nelson, "Contingent spaces for smallholder participation in GlobalGAP: insights from Kenyan horticulture value chains", 180 *The Geographical Journal* (2014), pp. 353-364 and on the RSPO: E. Cheyngs, "Multi-stakeholder Initiatives for Sustainable Agriculture: Limits of the 'Inclusiveness' Paradigm", in S. Ponte, P. Gibbon and J. Vestergaard (eds.), *Governing through*

ing 14 UN agencies and 19 International Governmental Organizations.<sup>11</sup> Illustrative for the complexities in multilateral seafood governance are the challenges faced by Regional Fisheries Management Organizations (RFMOs) and debates within the World Trade Organization (WTO).

## 1. Regional Fisheries Management Organizations (RFMOs)

RFMOs are 'the primary organizational mechanism through which states work together to ensure the long-term sustainability of shared fishery resources'.<sup>12</sup> In these organisations national governments collaborate to manage particular high sea and EEZ fisheries.<sup>13</sup> Examples are the North East Atlantic Fisheries Commission (NEAFC) managing all marine species in the Northeast Atlantic and the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) managing the Bluefin tuna, a fish stock straddling across several high seas. All states having a stake in a particular region or fishery may take part in a RFMO, so, for instance the EU is participating in 17 RFMOs<sup>14</sup> across the globe, including six tuna-based ones.

The governments participating in RFMOs design common policy measures but their implementation and enforcement usually remains the responsibility of the flag states and the border states. This may lead, as Hilborn<sup>15</sup> shows, to competing interests while the inadequate enforcement capacity of many flag and border states restricts the effectiveness of RFMOs.

## 2. The World Trade Organization (WTO)

In its Doha-Round, the WTO has also engaged in discussing fisheries subsidies. Direct subsidies to fisheries are substantial as their total was estimated at US\$27.2 billion for the year 2003 while subsidies are considered responsible for encouraging excess capacity of fishing fleets resulting in overfishing.<sup>16</sup> Some US\$16.2 billion of these subsidies is considered 'capacity-enhancing', particularly through fuel subsidies<sup>17</sup> and boat construction and renovation programs, representing 23% and 11% of this amount respectively.<sup>18</sup> Japan, China and the EU were the biggest subsidizers globally, with respectively about US\$4.6 billion, US\$4.1 billion, and US\$2.7 billion of annual fisheries' subsidies.

NGOs and different governments (including Iceland, Norway and the US) tried to use discussions within the Negotiating Group on Rules of the WTO to eliminate these fisheries subsidies. In 2007 a proposal was introduced to abolish subsidies for the construction of new fishing vessels and also for the reduction of operating costs of fishing, whereby developing countries were offered some exemptions on this.<sup>19</sup> However, strong resistance came from Japan and other countries who argued that subsidies cannot be simply categorised as capacity-enhancing and that negative impacts should be demonstrated much more concretely.<sup>20</sup> These conflicting views have stalled negotiations within the WTO because without consensus among its members the organisation has no authority to intervene. This stalemate illustrates

*Standards; origins, Drivers and Limitations* (Houndmills, Palgrave MacMillan, 2011), pp: 210-235.

- 11 A. Hakon Hoel, A. Sydnes and S. Ebbin, "Ocean Governance and Institutional Change", in S. Ebbin, A. Hakon Hoel and A. Sydnes (eds.), *A Sea Change: The Exclusive Economic Zone and Governance Institutions for Living Marine Resources* (Dordrecht: Springer, 2005), pp. 3-16; M. Shaw, *Theory of the Global State. Globality as an Unfinished Revolution*, (Cambridge: Cambridge University Press, 2000).
- 12 FAO, *The State of World Fisheries and Aquaculture 2014*, (Rome: FAO, 2014), at p. 81.
- 13 J. Barkin and E. DeSombre, *Saving global fisheries: reducing fishing capacity to promote sustainability*, (Cambridge MA: The MIT Press, 2013); D. Freestone, "Modern Principles of High Sea Governance - The Legal Underpinnings", 39 *Environmental Policy and Law* (2009), pp. 44-49; A. Sydnes, "Regional Fisheries Organisations and International Fisheries Governance", in S. Ebbin, A. Hakon Hoel and A. Sydnes (eds.), *A Sea Change: The Exclusive Economic Zone and Governance Institutions for Living Marine Resources* (Dordrecht: Springer, 2005), (pp. 117-135).
- 14 [http://ec.europa.eu/fisheries/cfp/international/rfmo/index\\_en.htm](http://ec.europa.eu/fisheries/cfp/international/rfmo/index_en.htm) (accessed 13 June 2014)
- 15 R. Hilborn, "Moving to Sustainability by Learning from Successful Fisheries", 36 *AMBIO: A Journal of the Human Environment* (2007), pp. 296-303.
- 16 FAO, *Multilateral Trade Negotiations on Agriculture: A Resource Manual*, (Rome: FAO, 2000); T. Potts and M. Haward, "International trade, eco-labelling, and sustainable fisheries – recent issues, concepts and practices", 9 *Environment, Development and Sustainability* (2007), pp. 91-106; U. Sumaila, A. Khan, A. Dyck, R. Watson, G. Munro, P. Tydemers and D. Pauly, "A bottom-up re-estimation of global fisheries subsidies", 12 *Journal of Bioeconomics* (2010), pp. 201-225.
- 17 T. Binet, *Fuelling the threat for sustainable fisheries in Europe*, (Brussels: WWF European Policy Office, 2007).
- 18 U. Sumaila, A. Khan, A. Dyck, R. Watson, G. Munro, P. Tydemers and D. Pauly, "A bottom-up re-estimation of global fisheries subsidies", 12 *Journal of Bioeconomics* (2010), pp. 201-225.
- 19 [http://www.wto.org/english/tratop\\_e/rulesneg\\_e/fish\\_e/fish\\_intro\\_e.htm](http://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_intro_e.htm) (accessed 12 June 2014)
- 20 P. Oosterveer, "Governing global fish provisioning: Ownership and management of marine resources", 51 *Ocean & Coastal Management* (2008), pp. 797-805.

the complications of coordinating and harmonising government-led fisheries policies at the global level.

Governments remain important and active in global seafood governance but they are confronted with serious limitations in their effectiveness. In response, civil society-led interventions promoting sustainable seafood management are emerging.

#### IV. Civil Society-led Global Seafood Governance

Since the 1990s, civil society-led governance arrangements have been introduced to promote global sustainable seafood provision. Illustrations are the multiple product labels and certification schemes that can be found in supermarkets in Western Europe and the US, as well as consumer information guides and (shrimp and swordfish) boycott campaigns.<sup>21</sup> These initiatives try to persuade consumers to refrain from buying unsustainable seafood and encourage them to make more sustainable choices.<sup>22</sup>

The introduction of 'Dolphin Safe'-tuna certification in 1990 marked the start of civil society-led seafood labelling.<sup>23</sup> Since then several other initiatives have been introduced to certify and label sustainable seafood from capture fisheries and aquaculture. Well-known labels are the Marine Stewardship Council (MSC), Friends of the Sea (FoS), Aquaculture Stewardship Council (ASC), Best Aquaculture Prac-

tices (BAP) and IFOAM-organic.<sup>24</sup> These voluntary labelling and certification schemes provide information to consumers about the sustainability of the capture/production process and allow for traceability of the product throughout the supply chain.<sup>25</sup> Certification for these labels is mostly done through an independent third party that audits a particular fishery or fish farm to assure that the scheme's standards are being complied with.

Private labelling schemes are attractive because they are flexible, can be introduced independently from governments and are considered legitimate by many consumers in Western countries. By now, these private labelling and certification schemes have acquired a solid position in the constellation of global seafood governance arrangements, particularly in Europe and the USA<sup>26</sup>, although their uptake in the global seafood market remains rather low.<sup>27</sup>

Voluntary labelling and certification schemes have substantial impact in global seafood provision.<sup>28</sup> The expansion of labels on the global seafood market, however raises a number of contentious issues. First, as most voluntary standards are developed with European and US consumer concerns in mind, in many instances their requirements hardly fit local practices in developing countries.<sup>29</sup> Fishermen in these countries often lack the necessary technical capacity and the financial and human resources to successfully apply for certification.<sup>30</sup> However, without certification these producers have no access to attractive markets

21 P. Oosterveer and G. Spaargaren, "Organising consumer involvement in the greening of global food flows: the role of environmental NGOs in the case of marine fish", 20 *Environmental Politics* (2011), pp. 97 – 114 mention the following examples of consumer guides: the Monterey Bay Seafood Guide, others developed by the Conscious Choice and Seafood Choices Alliance (the United States), the North Sea Foundation (Stichting Noordzee) (the Netherlands), and the Blue Ocean Institute (the United Kingdom);

22 I. Kelling, "'Responsible Retailers': Policy Challenges Raised by Private Standards in the Seafood Sector", in A. Shriver (ed.), *Achieving a Sustainable Future: Managing Aquaculture, Fishing, Trade and Development* (Nha Trang, Vietnam: International Institute of Fisheries Economics & Trade, 2008), pp. 1-12.

23 L. Gulbrandsen, "The emergence and effectiveness of the Marine Stewardship Council", 33 *Marine Policy* (2009), pp. 654-66.

24 G. Auld, *Constructing Private Governance. The rise and evolution of forest, coffee, and fisheries certification*, (New Haven and New York: Yale University Press, 2014).

25 P. Oosterveer and D. Sonnenfeld, *Food, Globalization and Sustainability*, (London and New York: Earthscan, 2012).

26 S. Bush and P. Oosterveer, "Vertically differentiating environmental standards: the case of the Marine Stewardship Council", 7 *Sustainability* (2015), pp. 1861-1883.

27 A. Kalfagianni and P. Pattberg, "Fishing in muddy waters: Exploring the conditions for effective governance of fisheries and aquaculture", 38 *Marine Policy* (2013), pp. 124-132.

28 Steering Committee of the State-of-Knowledge Assessment of Standards and Certification, *Toward sustainability: The roles and limitations of certification*, (Washington, DC: RESOLVE, Inc., 2012).

29 S. Bush, B. Belton, D. Hall, P. Vandergeest, F. Murray, S. Ponte, P. Oosterveer, M. Islam, A. Mol, M. Hatanaka, F. Kruijssen, T. Ha, D. Little and R. Kusumawati, "Certify Sustainable Aquaculture?", 341 *Science* (2013), pp. 1067-1068; M. Hatanaka, "Governing sustainability: examining audits and compliance in a third-party-certified organic shrimp farming project in rural Indonesia", 15 *Local Environment: The International Journal of Justice and Sustainability* (2010), pp. 233 - 244.

30 B. Belton, M.M. Haque, D.C. Little and L.X. Sinh, "Certifying catfish in Vietnam and Bangladesh: Who will make the grade and will it matter?", 36 *Food Policy* (2011), pp. 289-299; L. H. Gulbrandsen, "The emergence and effectiveness of the Marine Stewardship Council", 33 *Marine Policy* (2009), pp. 654-660; M. Hatanaka, "Certification, Partnership, and Morality in an Organic Shrimp Network: Rethinking Transnational Alternative Agrifood Networks", 38 *World Development*, (2009), pp. 706-716; A. Wilkings, "Fisheries and Aquaculture Certification: Implications for Southeast Asia", In: *Fisheries Transitions in Southeast Asia, 2011-2014; Working Paper Number 2*. (Ottawa: University of Ottawa, 2012).

in Europe and the US. Market-based sustainable seafood governance arrangements are biased in the sustainability issues they address as well as in the species covered, as most attention is given to concerns expressed by Western consumers, NGOs and retailers. Also the species that are considered are the ones available on the market in Europe and the US while many other species are ignored.<sup>31</sup> Consumers in Asia, buying more than two-third of the world's seafood production, hardly take any notice of sustainability labels when buying fish, mostly on fresh markets.<sup>32</sup> The consequence is that the sustainability impact of private schemes on seafood provision is biased with respect to the people, goals, areas and species included. Second, the increasing number of seafood labels is contentious because 'different certification systems make different claims about sustainability, depending on their interpretation of sustainable practices.'<sup>33</sup> Consequently, retailers and consumers may get confused while producers are faced with additional costs when forced to be certified through multiple schemes.<sup>34</sup> The presence of multiple certification schemes and the need to choose between them strengthens the position of certain supply chain actors.<sup>35</sup> In particular retailers have a direct influence on the selection of sustainability labels and there are indications that they rely more on avoiding bad publicity than on the performance of a particular scheme.<sup>36</sup> This means that the popularity of a label, the one with the highest share in the market is not

necessarily the one with the largest sustainability gains.<sup>37</sup> The market share of a scheme depends rather on its capacity to build a network and to gain legitimacy in the eyes of the general public than on transparency and democracy in its internal procedures and the effectiveness of its environmental regulation.

These contentious issues challenges the effectiveness of private global seafood governance initiatives and makes further analysis of its interactions with global governmental regulations relevant.

## V. Interactions between Public and Private Seafood Governance Arrangements

When public seafood governance is hardly effective at the global level, while the alternative private governance labelling and certification schemes are seriously limited as well, the question whether both approaches can be complementary becomes interesting. The literature reports extensively on the interactions between public and private global environmental governance arrangements.<sup>38</sup> Bartley<sup>39</sup> distinguishes three forms of interaction between private standards and public regulation: complementarity, rivalry and hybridity. However, whereas Bartley makes this differentiation in general, in this paper the distinction is made dependent on the stage of the regulatory process<sup>40</sup>, because complementarity, rival-

- 31 S. Bush, B. Belton, D. Hall, P. Vandergeest, F. Murray, S. Ponte, P. Oosterveer, M. Islam, A. Mol, M. Hatanaka, F. Kruijssen, T. Ha, D. Little and R. Kusumawati, "Certify Sustainable Aquaculture?", 341 *Science* (2013), pp. 1067-1068; M. Hatanaka, "Governing sustainability: examining audits and compliance in a third-party-certified organic shrimp farming project in rural Indonesia", 15 *Local Environment: The International Journal of Justice and Sustainability* (2010), pp. 233 - 244.
- 32 C. Boyd and A. McNevin, "An early assessment of the effectiveness of aquaculture certification and standards", in Steering Committee of the State-of-Knowledge Assessment of Standards and Certification, *Towards sustainability: the roles and limitations of certification*, (Washington: RESOLVE Inc., 2012), pp. A-35-A-69.
- 33 A. Miller and S. Bush, "Authority without credibility? Competition and conflict between ecolabels in tuna fisheries", *Journal of Cleaner Production* (in press), at p. 1.
- 34 M. Boström, "Establishing Credibility: Practising Standard-Setting Ideals in a Swedish Seafood-Labeling Case", 8 *Journal of Environmental Policy & Planning* (2006), pp. 135-158.
- 35 G. Auld and L. Gulbrandsen, "Transparency in Nonstate Certification: Consequences for Accountability and Legitimacy", 10 *Global Environmental Politics* (2010), pp. 97-119; S. Vasilev, *How do Dutch retailers and importers of shrimp cope with the multiplicity of certification schemes on sustainable shrimp?*, (Wageningen: Wageningen University, 2014).

- 36 S. Vasilev, *How do Dutch retailers and importers of shrimp cope with the multiplicity of certification schemes on sustainable shrimp?*, (Wageningen: Wageningen University, 2014).
- 37 A. Miller and S. Bush, Authority without credibility? Competition and conflict between ecolabels in tuna fisheries, *Journal of Cleaner Production* (in press); S. Ponte, "Roundtabling' sustainability: Lessons from the biofuel industry", 54 *Geoforum* (2014), pp. 261-271; T. Smith and M. Fischlein, "Rival private governance networks: Competing to define the rules of sustainability performance", 20 *Global Environmental Change* (2010), pp. 511-522.
- 38 K.W. Abbott and D. Snidal, "The governance triangle: regulatory standards institutions and the shadow of the state", In W. Mattli & N. Woods (Eds.), *The Politics of Global Regulation* (pp. 44-88). (Princeton, NJ: Princeton University Press, 2009); T. Bartley, "Transnational Governance as the Layering of Rules: Intersections of Public and Private Standards", 12 *Theoretical Inquiries in Law* (2011), pp. 517-542; L.H. Gulbrandsen, "Dynamic governance interactions: Evolutionary effects of state responses to non-state certification programs", 8 *Regulation & Governance* (2014), pp. 74-92.
- 39 T. Bartley, "Transnational Governance as the Layering of Rules: Intersections of Public and Private Standards", 12 *Theoretical Inquiries in Law* (2011), pp. 517-542.
- 40 L.H. Gulbrandsen, "Dynamic governance interactions: Evolutionary effects of state responses to non-state certification programs", 8 *Regulation & Governance* (2014), pp. 74-92.

ry and hybridity may be contingent on whether the interaction concerns agenda setting/negotiation, implementation or monitoring/enforcement.

In the agenda setting/negotiation stage of the regulatory process, private sustainable seafood initiatives played critical roles. For instance, private initiatives have put the issue of overfishing as a consequence of fisheries' subsidies on the agenda of the WTO and attracted public attention to problems of sustainability in fisheries more generally<sup>41</sup> thereby creating pressure on governments to address the issue and install effective regulation. Even when implemented, private certification schemes are not necessarily competing with public regulation because they may be complementary when governments are making use of private initiatives to realise public goals. In this respect, private standards are not replacing governments but 'use their first-mover status to become an additional instrument for rule development and implementation'.<sup>42</sup>

The implementation stage of the regulatory cycle towards sustainable global fisheries' governance involves multiple forms of interaction between public and private actors. First, governments uphold a legal framework which is necessary for private initiatives to emerge and be implemented.<sup>43</sup> Complementarity may be triggered because some governments consider their capacity to be restricted due to international trade agreements while domestic political pressures

favour a more active engagement with sustainable fisheries. Private initiatives are not restricted in this respect and may thus 'enhance state capacity by allowing the state to escape innate constraints'.<sup>44</sup> For instance, the Dutch government supports the Sustainable Trade Initiative (IDH) to promote the introduction of ASC certification for aquaculture in different developing/transition countries.<sup>45</sup> Also, the Dutch government subsidised private certification in domestic fishery supply chains<sup>46</sup>; the Western Australian government gave financial support to local fisheries to gain MSC certification<sup>47</sup>; while the Vietnamese government considered private certification of *Pangasius* necessary to be successful on the global seafood market<sup>48</sup>; the Canadian government collaborated with the MSC to certify a regional shrimp fishery.<sup>49</sup>

An important element in the implementation stage concerns the credibility of a regulation. It seems, many consumers in OECD-countries consider private voluntary schemes more credible than government regulations because they are seen as less biased by political or economic considerations and allow for more scientific rigour, inclusiveness, transparency and independence.<sup>50</sup> In this respect both kinds of initiatives are competing, which also occurs with regard to their legitimacy. Often governmental regulations are considered more legitimate because they generally rely on formal, transparent and often

41 B. de Vos and S. Bush, "Far More than Market-Based: Rethinking the Impact of the Dutch *Viswijzer* (Good Fish Guide) on Fisheries' Governance", 51 *Sociologia Ruralis* (2011), pp. 284-303.

42 I. Kelling, "Responsible Retailers: Policy Challenges Raised by Private Standards in the Seafood Sector", in A. Shriver (ed.), *Achieving a Sustainable Future: Managing Aquaculture, Fishing, Trade and Development* (Nha Trang, Vietnam: International Institute of Fisheries Economics & Trade, 2008), pp. 1-12, at p. 10.

43 P. Foley, "National Government Responses to Marine Stewardship Council (MSC) Fisheries Certification: Insights from Atlantic Canada", 18 *New Political Economy* (2012), pp. 284-307.

44 S. Ponte, "Roundtabling' sustainability: Lessons from the biofuel industry", 54 *Geoforum* (2014), pp. 261-271, at p. 263.

45 IOB, *Riding the wave of sustainable commodity sourcing. Review of the Sustainable Trade Initiative IDH 2008 - 2013*, (The Hague: Ministry of Foreign Affairs of the Netherlands, Policy and Operations Evaluation Department, 2014).

46 B. de Vos, A. Bikker and K. Soma, *Eco-labels voor visserij en viskweek. Benchmark aan de hand van FAO-richtlijnen*, (The Hague: LEI-Wageningen UR, 2010).

47 See: <http://www.msc.org/newsroom/news/western-australian-government-14.5million-fund-for-fish-and-fisheries> (accessed 19th June 2014). 'Western Australian Government announces \$14.5 million fund to secure a prosperous future for fish and

fisheries'. The fund is split in \$8 million for research and management and \$6.5 million for assessment to gain MSC certification.

48 R. Bosma, C. Hanh and J. Potting, *Environmental Impact Assessment of the Pangasius sector in the Mekong Delta*, (Wageningen and Hanoi: Wageningen University and Ministry Agriculture and Rural Development / Department of Aquaculture Vietnam, 2009); S. Bush, N. Khiem and L. Sinh, "Governing the environmental and social dimensions of *Pangasius* production in Vietnam: a Review", 13 *Aquaculture Economics & Management* (2009), pp. 271-293; N. Tran, C. Bailey, N. Wilson and M. Phillips, "Governance of Global Value Chains in Response to Food Safety and Certification Standards: The Case of Shrimp from Vietnam", 45 *World Development* (2013), pp. 325-336.

49 P. Foley, "National Government Responses to Marine Stewardship Council (MSC) Fisheries Certification: Insights from Atlantic Canada", 18 *New Political Economy* (2012), pp. 284-307.

50 G. Auld and L. Gulbrandsen, "Transparency in Nonstate Certification: Consequences for Accountability and Legitimacy", 10 *Global Environmental Politics* (2010), pp. 97-119; M. Boström, "Establishing Credibility: Practising Standard-Setting Ideals in a Swedish Seafood-Labeling Case", 8 *Journal of Environmental Policy & Planning* (2006), pp. 135-158; C. Boyd and A. McNeven, "An early assessment of the effectiveness of aquaculture certification and standards", in Steering Committee of the State-of-Knowledge Assessment of Standards and Certification, *Towards sustainability: the roles and limitations of certification*, (Washington: RESOLVE Inc, 2012), pp. A-35-A-69.

democratic procedures designed to defend public interests while private seafood governance arrangements may be biased, lacking transparency and asymmetric in terms of access and influence between different stakeholders.<sup>51</sup> Private arrangements however, make legitimacy claims on the basis of the involvement of (scientific) experts, their defense of global public interests and the impacts they realise. Competing understandings of legitimacy<sup>52</sup> create complex interactions between both categories of initiatives and brings the competition to the level of defining legitimacy, the relevance of scientific expertise in policy-making and the balancing between different dimensions of sustainability.

The monitoring/enforcement stage seems involving less interactions as private initiatives have their own, rather technically elaborated<sup>53</sup>, modes of operation that often address issues beyond the legal requirement of governmental regulations. Governmental regulations are generally restricted through the existing national political and legal institutions and are difficult to apply beyond the national borders.<sup>54</sup> Nevertheless, competition occurs when the impact of different initiatives are compared.<sup>55</sup>

Competition between public and private global seafood governance occurs mostly in the implementation stage of the regulatory cycle although collabo-

ration occurs as well but is especially prominent in the agenda setting/negotiation stage. In the final stage of monitoring/enforcement there is very little interaction, while examples of hybrid global seafood governance were not encountered at all.

## VI. Discussion and Conclusion

Global seafood governance constitutes an importance challenge for environmental governance. In response, multiple, public and private initiatives have been introduced but to date none of these has proven capable of making an end to fish stock depletion. Governmental regulations are particularly weak in addressing transnational issues and in implementing cross-border regulations while private initiatives proved rather biased in the issues addressed, the actors involved and the strategies applied. Also, as Ponte<sup>56</sup> argues, many private initiatives are over-ambitious and aim for goals that are beyond their (limited) transformative capacity.

At present, global dynamics and multiple transnational governance arrangements entail 'a growing complexity of multiple overlapping and ambiguously connected sets of rules'.<sup>57</sup> Collaboration between public and private global seafood governance arrangements is particular intense in the first phase of the regulatory cycle but gets much less prominent in later phases where competition or even separation prevails. When a particular public or private governance arrangement has been constructed, the internal institutional dynamics and the interests of involved stakeholders seem to preclude active engagement with other governance initiatives. Different governance arrangements operate in separate institutional fields, each with their own understanding of legitimacy and effectiveness. Integrating or even harmonizing public and private global sustainable seafood governance arrangements is unlikely as the absence of hybrid arrangements illustrates. The future may therefore most likely witness the continued multiplicity of different governance arrangements. The main challenge is therefore not their harmonization but their expansion to also include the main markets of seafood beyond Europe and the United States.

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