



# TIME TO GET THE MATH RIGHT

A BRIEFING ON FISHERIES SUBSIDIES

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**LET'S FEED THE WORLD,  
NOT INDUSTRIAL FISHING FLEETS**  
A CORNERSTONE OF A HEALTHY OCEAN  
AND SUSTAINABLE FISHING IS THE ELIMINATION  
OF HARMFUL FISHERIES SUBSIDIES

By BLOOM, with the VARDA GROUP



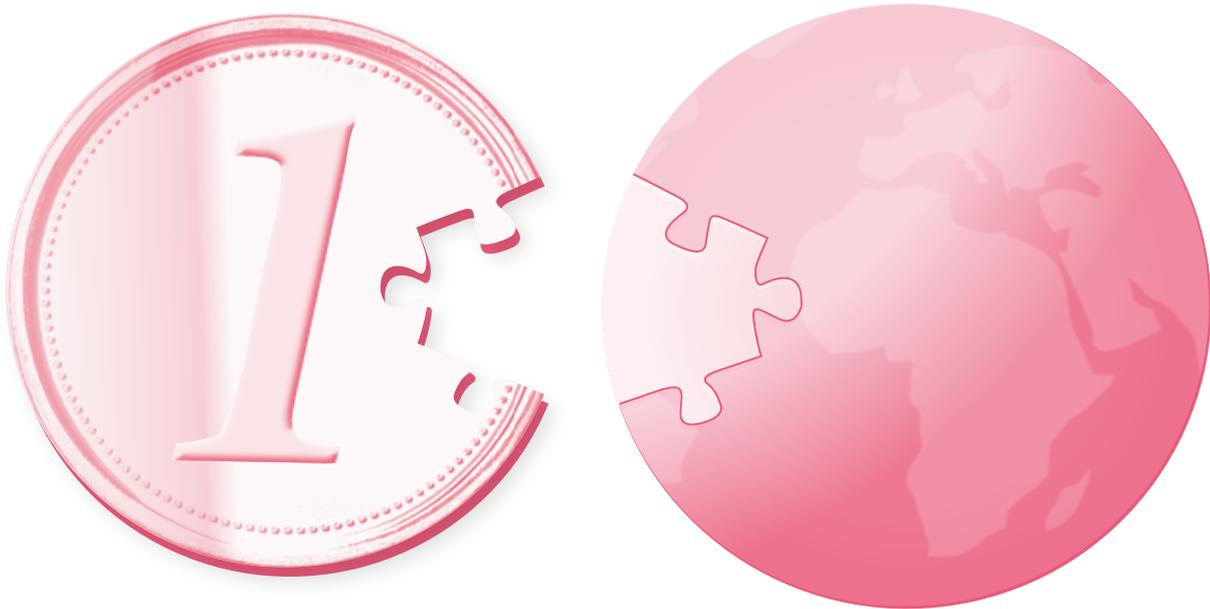


**The Sustainable Development Goal on the ocean and seas (SDG14) explicitly calls for the elimination by 2020 of subsidies that contribute to overfishing and illegal, unreported and unregulated (IUU) fishing (SDG 14.6).**

Approximately **US\$18 billion** are spent annually on harmful fisheries subsidies, while at the same time the international community is struggling to find funds in support of sustainable fisheries and a restored, productive, clean and healthy ocean. If only a portion of this amount were spent on the implementation of SDG 14 targets, it would set the ocean and humankind on the path of a win-win scenario: more biomass to fish, more food safety, less public expenditures, more socio-economic benefits and political stability.

Time has come to cut the bait\*, that is, the financial incentive that fuels fleet overcapacity and encourages overfishing. **A collective success is within reach.**

\*“Time to cut the bait” is the name of a past OCEANA campaign against harmful fisheries subsidies.



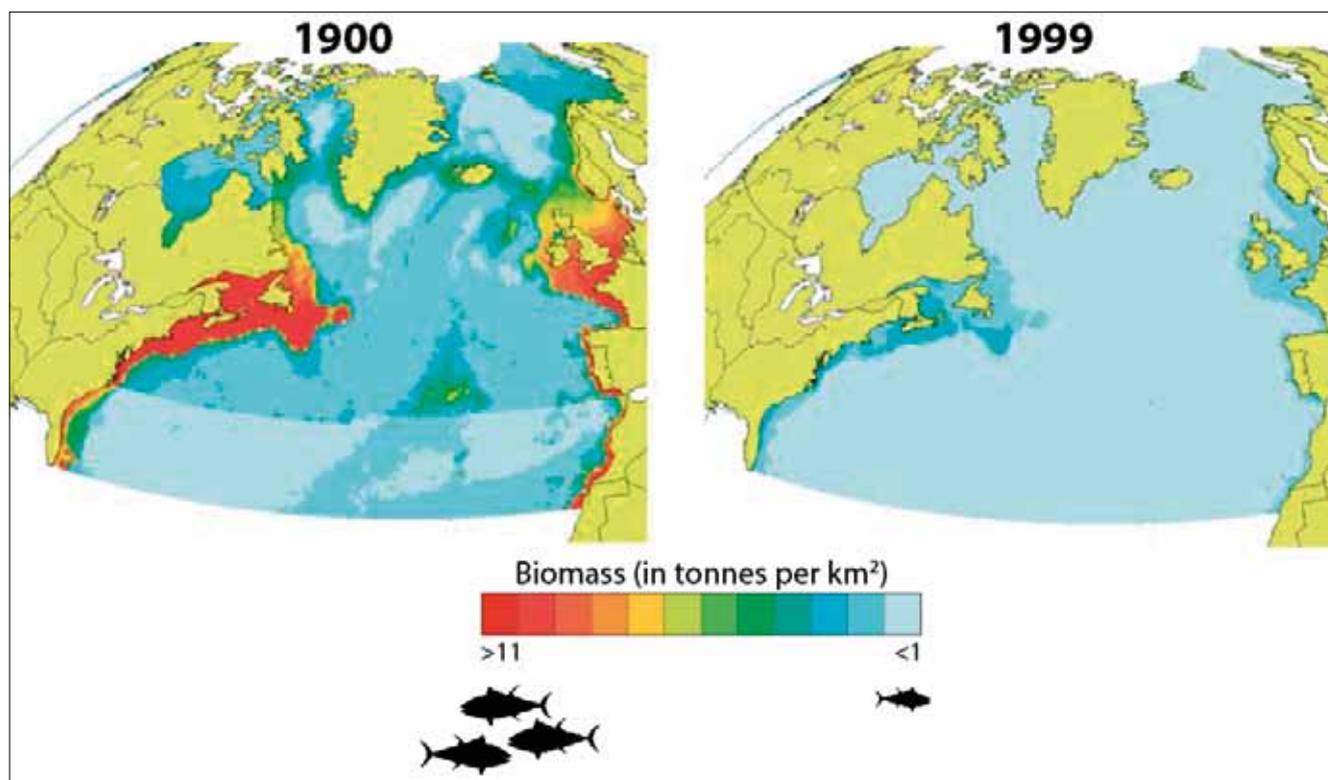
# 1. WHAT'S THE PROBLEM?

## The vicious circle of subsidized fleets and overfishing

The post-WW2 industrialization of fisheries resulted in the collapse of numerous fish stocks around the world within a few decades. Overall, populations of large predatory fish such as tuna, swordfish, marlin<sup>1</sup> and sharks were reduced by up to 90% between the mid-1980s and 2000.<sup>2</sup> The iconic Atlantic cod from Labrador and Newfoundland collapsed by 99% in 1992<sup>3</sup> and has not recovered so far. By the end of the 1980s, a quarter of the world's fish stocks were already overfished<sup>4</sup> and the traditional fishing grounds of industrialized nations such as the Northeast

Atlantic were vastly overexploited (decline by a factor of nine for predatory fishes between 1900 and the end of the 1990s.<sup>5</sup>

To match the resulting loss of catch and keep fish volumes stable on internal markets, **subsidies<sup>7</sup> were allocated to support the triple expansion of fisheries:** 1) *geographically*: fishing vessels sought access to remote fish stocks further ashore, including in waters of developing countries; 2) *bathymetrically*: fishing ships deployed their gear in ever deeper waters to capture fish; and 3) *specifically*: the introduction on markets of new fish species (hitherto discarded species or deepwater specimens) was supported by public monies.<sup>8</sup>



**Figure 1.** Decline in the distribution of predatory fishes in the North Atlantic between 1900 (left) and 1999 (right). Adapted from Christensen et al. (2003).<sup>6</sup>

## We missed a first opportunity to get the equation right

Instead of bringing fishing capacity of oversized fleets in line with the natural productivity and availability of marine resources, larger and more efficient vessels were built, which increased the overall fishing effort on already dwindling stocks. As a result, in just a few years, the overexploitation rate crept up to 30% of the world's fish populations.<sup>9</sup> Together, overexploited or fully exploited fish populations now amount to 90% of global fish stocks.<sup>10</sup> **The global catch of wild fish has been dropping at an annual average rate of 1.2 million tons per year since 1996.**<sup>11</sup> Researchers predicted the "slippery slope to slime" of our collective marine trajectory.<sup>12</sup> The recent development of fisheries targeting animals low on the food chain such as krill or jellies has proven them right.<sup>1</sup>



## 2. WHAT ARE THE CONSEQUENCES?

### A lose-lose scenario

Subsidized fleets did not simply deplete fish stocks, they also targeted the largest, most valuable fish species first, progressively turning to lower species on the food web as the first ones went missing ("fishing down" process).<sup>14</sup> **The mean size of fish have therefore dropped vertiginously over the past few decades.** The World Bank alerts that *"This situation has contributed to lowering the average price of landed catch compared to what would otherwise have been the case"*. **The average catch per fisher per year has been divided by two over the past forty years.**

### Harmful subsidies lead to overcapacity

Even without subsidies, the tendency in fisheries is to overcapitalize and overfish because of the common property nature of fish stocks. The provision of harmful subsidies has intensified this tendency resulting in **overcapacity that is estimated to be more than double of what is needed to fish sustainably.**<sup>15</sup> The global fleet reported to the FAO has more than doubled over the past forty years. In 2012, it comprised a total of more than 4.7 million decked and undecked units (FAO 1999; FAO 2014b). Given the state of fish stocks in many parts of the global ocean and high levels of overcapacity, **the world has no option but to reduce current fishing capacity by up to 60%.**<sup>16, 17</sup> We know that this is politically difficult to do because of the short term economic and social costs that it would entail. But, **to continue to reap the medium to long term economic, social and biodiversity benefits from ocean fisheries, a drastic reduction in fishing capacity is required.**

### Overcapacity leads to overfishing

**The global fishing fleet has led to a fourfold increase in the fishing effort over the past four decades.**<sup>18</sup> Fishing overcapacity puts both fisheries resources and fishers at risk, because it leads to overfishing, and thus, to diminishing fish catches.

### Overfishing leads to economic losses, food insecurity and eventually to political instability

The World Bank recently reestimated<sup>19</sup> to approximately **\$83 billion a year** its calculation on economic benefits lost because of the crisis of global marine fisheries. In its revisited "Sunken Billions" report, the World Bank insists on the need to urgently reduce overfishing in order to allow recovery of overexploited fish stocks and the development of sustainable fishing activities, which would eventually lead to higher economic yields.



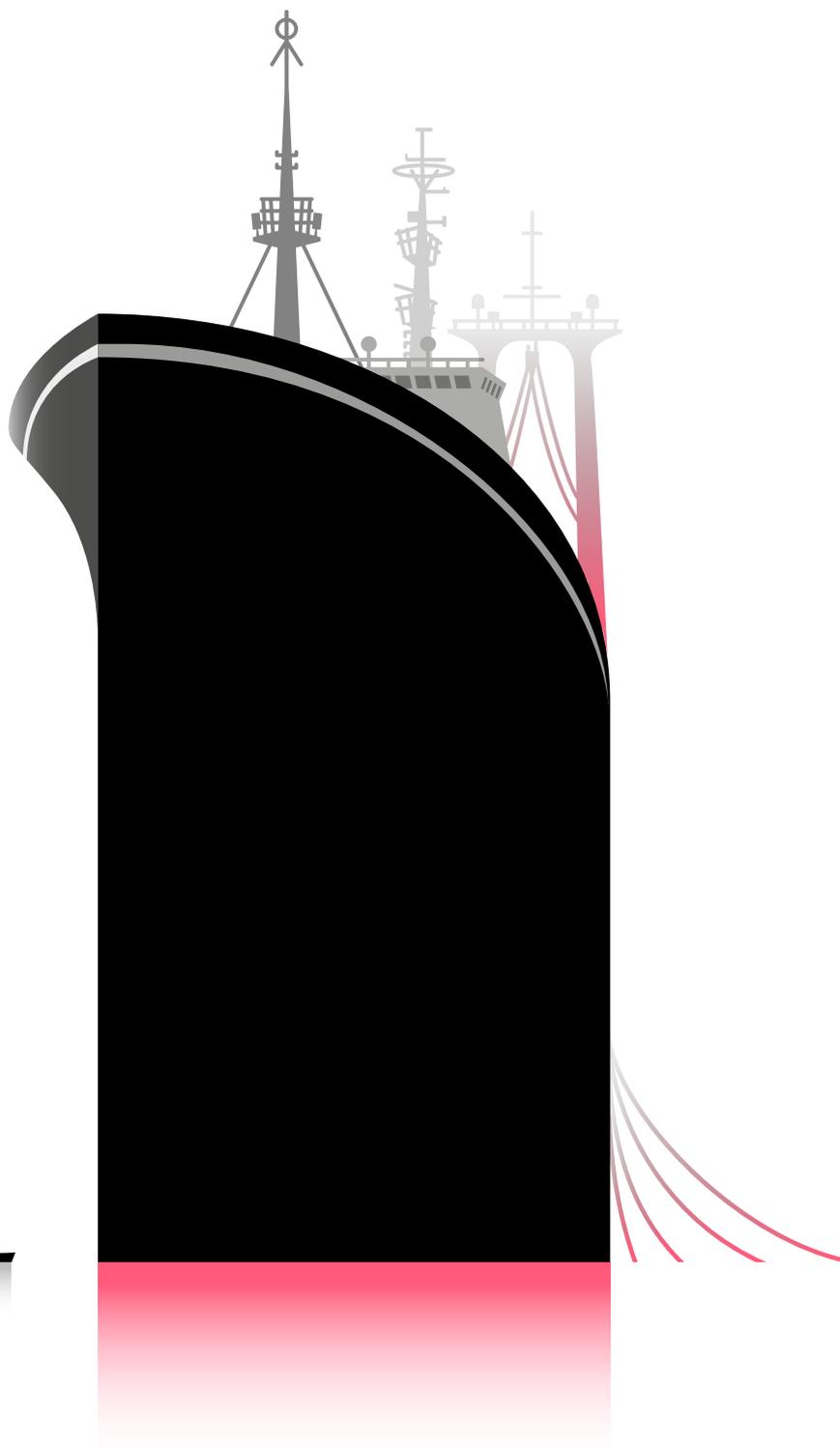
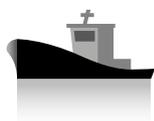
### 3. WHY SHOULD WE CARE?

#### Subsidies are a barrier to social and environmental sustainability

*“Overexploitation is not a good strategy to manage a renewable natural resource like fish stocks for steady profits, reliable jobs and long-term growth”.*

**The World Bank, “Sunken Billions” report<sup>20</sup>**

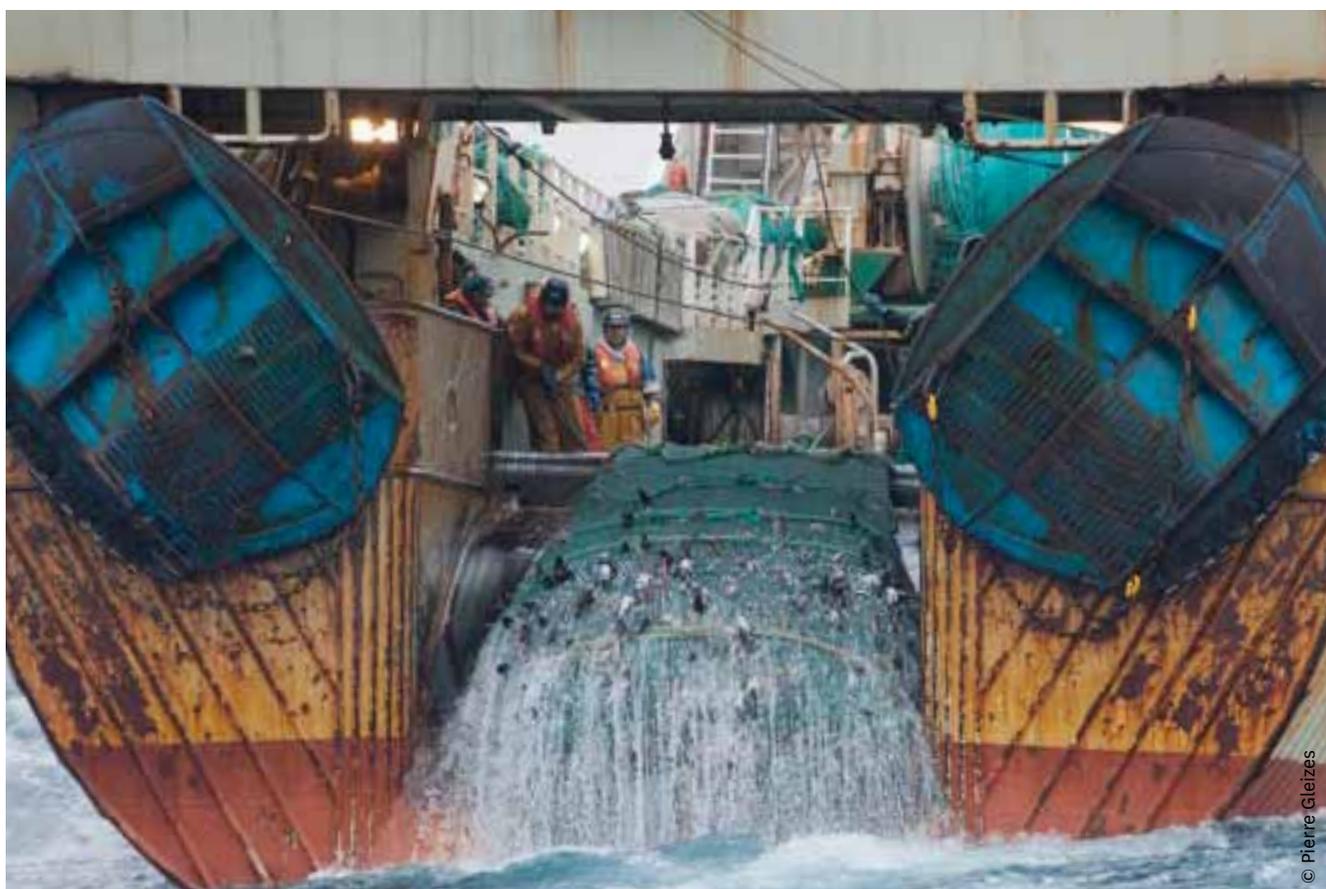
Governments, researchers and NGOs have increasingly recognized subsidies as a major barrier to the transformation of the fishing sector to an economically viable and environmentally responsible activity, especially because **subsidies are discriminatory against small-scale fishers: over 80% of global subsidies go to large-scale fisheries.**<sup>21</sup>



## 4. THE WAY FORWARD: ELIMINATE HARMFUL SUBSIDIES

**Time has come to turn our back on unsustainable practices and to embrace practical and sustainable solutions that benefit all.**

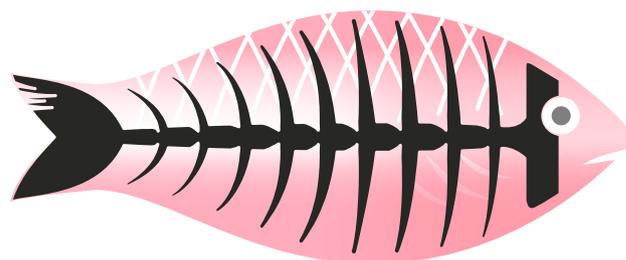
Instead of fueling overcapacity and overfishing, eliminating harmful fisheries subsidies is the way forward to make more economic, environmental and social sense of public financial concourses to fisheries.



Through the analysis of the legal audited accounts of French deep-sea fleets, BLOOM has shown that they operated at a loss despite substantial public subsidies.

## Subsidies act as a financial incentive that jeopardizes social, ecological and economic balances.

If we are serious about curtailing overfishing and halting detrimental social and economic consequences, there is no way around addressing the subsidies issue. **The absolute goal is to reduce the fishing effort worldwide, which dictates to stop creating the financial incentive for capacity building in fisheries.**



## Not all subsidies are bad

### → The good, the bad and the ugly (i.e. 'ambiguous')

In a well-known publication,<sup>22</sup> fisheries economist Rashid Sumaila and colleagues classified subsidies in three categories: "the good, the bad and the ugly", showing that certain subsidies can increase chances to reach sustainable fisheries while others contribute to enhance fishing overcapacity and thus directly lead to overfishing. Overall, fisheries subsidies are estimated to amount to US\$ 30 billion per year globally, 60% of which are considered as 'harmful'.<sup>23</sup>

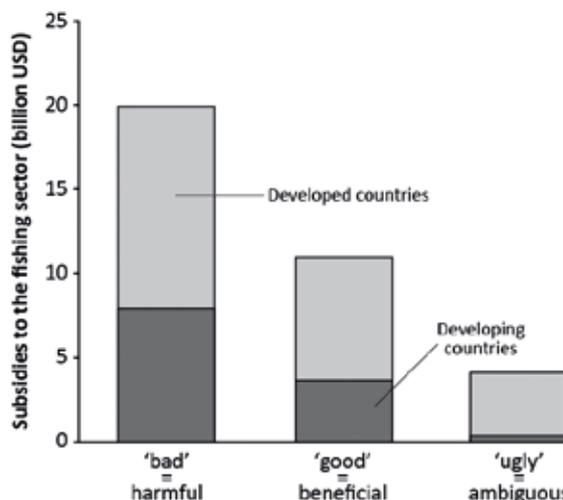
→ **'Harmful' subsidies** enhance the fishing capacity of fleets, for example by favoring the construction of new vessels or by increasing the efficiency of the fishing gear.

→ **'Good' subsidies** lead to investment in natural capital assets to a social optimum.<sup>24</sup> They ensure the optimum use of the resource. Good subsidies include, for example, monitoring, control and surveillance programs, fisheries research and development, and fishery habitat enhancement programs.<sup>25</sup>

→ **'Ambiguous' subsidies** are expenditures that, depending on their use, can either enhance fishing capacity or contribute to sustainability. Such 'ambiguous' subsidies include for example fisher assistance programs, vessel buyback programs, and rural fisher community development programs.<sup>26</sup>

→ **Subsidies that "encourage" IUU fishing** are taxpayer's money that is consciously or unconsciously given to a fishing company or fishing fleet that engages in IUU fishing activities.

→ **What are subsidies that "encourage" bad practices?** These are subsidies that go to fishing companies or fishing vessels, which engage in bad practices such as destroying fish habitats, employing fish workers in slave-like conditions, which capture a large proportion of bycatch, etc.



**Figure 2.** Subsidies to the fishing sector (in billion USD). Adapted from Sumaila et al. (2016).<sup>27</sup>

## 5. CUTTING SUBSIDIES THAT FUEL OVERFISHING: A WIN FOR ALL

### 17 years of debate to reach a consensus

The global subsidy debate was initiated by the FAO in 1990.<sup>28</sup> The elimination of harmful fisheries subsidies has been the subject of discussions within the World Trade Organization (WTO) as far back as 1999.<sup>29</sup> The growing evidence of detrimental impacts of subsidies on the state of marine resources and their ripple-down negative social and economic impacts on fishing communities, food safety and political stability of all countries alike (as the domino effect expands far beyond coastal communities only) has brought the international community to recognize and accept that cutting harmful subsidies was a crucial way to give a chance to sustainable and profitable fisheries.

In Doha in 2001, WTO member States agreed to address the issue of fisheries subsidies,<sup>30</sup> but no agreement has yet been reached despite the recognition of its importance in many political declarations such as the Johannesburg Plan of Implementation (2002)<sup>31</sup>, the Rio+20 Declaration of 2012,<sup>32</sup> and finally the Sustainable Development Goals (SDG) adopted by the United Nations in September 2015.<sup>33</sup>

### A blanket regime on subsidies to create an even playing field for all

Many governments continue to support the development of fishing fleets and related infrastructure with direct and indirect subsidies because they fear to become uncompetitive relative to other fishing nations if they acted alone. A WTO agreement to implement SDG 14.6 on fisheries subsidies would therefore prevent uneven financial treatment to fishing fleets.<sup>34</sup>

### Elimination of harmful subsidies will accelerate the implementation of other SDGs

Not only can fisheries subsidies elimination help ensure that SDG target 14.6 is reached by 2020, but it will free substantial financial resources to be used to support the implementation of other SDG14 targets, for example, the reduction of marine pollution, coastal eutrophication, ocean acidification, increase of scientific knowledge, development of research capacity, and other SDGs such as:

**SDG 2** “End hunger and all forms of malnutrition by 2030. It also commits to universal access to safe, nutritious and sufficient food at all times of the year”

**SDG 8** “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”

**SDG 10** “Reduce inequality within and among countries”

**SDG 12** “Ensure sustainable consumption and production patterns”

**SDG 13** “Take urgent action to combat climate change and its impacts”

Etc.

### What are the benefits?

Cutting the financial incentive that fuels overfishing is the only way we can give a chance to sustainable fisheries and to a resilient, productive ocean that supports sustainable economic growth and stable livelihoods.

**DEFINITIONS** *Fishing effort is a composite indicator of fishing activity, including the number, type, and power of fishing vessels; the type and amount of fishing gear; the contribution of navigation and fish-finding equipment; and the skill of the skipper and fishing crew.*<sup>35</sup>

## References

- 1 Myers and Worm (2003) Rapid worldwide depletion of predatory fish communities. *Nature* 423(6937): 280-283.
- 2 Baum et al. (2003) Collapse and conservation of shark populations in the Northwest Atlantic. *Science* 299(5605): 389-392.
- 3 Hutchings (2000) Collapse and recovery of marine fishes. *Nature* 406: 882-885.
- 4 FAO (2014) The state of world fisheries and aquaculture. Food and Agriculture Organization of the United Nations (FAO), Rome (Italy). xvi + 223 p.
- 5 Christensen et al. (2003) Hundred-year decline of North Atlantic predatory fishes. *Fish and Fisheries* 4(1): 1-24.
- 6 *Ibid.* Christensen et al. (2003).
- 7 A subsidy is defined by the World Trade Organization as a benefit conferred to any specific stakeholder, through either financial contribution or income/price support by its government or any public body of its country. Cf WTO (1994) Agreement on subsidies and countervailing measures. pp. 229-272 *In* Agreement establishing the World Trade Organization — Annex 1A: multilateral agreements on trade in goods. World Trade Organization, Geneva (Switzerland).
- 8 Swartz et al. (2010) The spatial expansion and ecological footprint of fisheries (1950 to present). *PLOS ONE* 5(12): e15143.
- 9 *Ibid.* FAO (2014).
- 10 *Ibid.* FAO (2014).
- 11 Pauly and Zeller (2016) Catch reconstructions reveal that global marine fisheries catches are higher than reported and declining. *Nature Communications* 7: 10244.
- 12 Pandolfi et al. (2005) Are U.S. Coral Reefs on the Slippery Slope to Slime? *Science* 307(5716): 1725-1726.
- 13 Pauly et al. (1998) Fishing down marine food webs. *Science* 279: 860-863.
- 14 *Ibid.* Pauly et al. (1998).
- 15 Sumaila et al. (2012) Benefits of rebuilding global marine fisheries outweigh costs. *PLOS ONE* 7(7): e40542.
- 16 *Ibid.* Sumaila et al. (2012).
- 17 World Bank (2009) The sunken billions: the economic justification for fisheries reform. World Bank and Food and Agriculture Organization of the United Nations (FAO), Washington, DC (USA) and Rome (Italy). 100 p.
- 18 World Bank (2017) The sunken billions revisited: progress and challenges in global marine fisheries. Environment and Sustainable Development series, World Bank, Washington, DC (USA). xiii + 99 p.
- 19 *Ibid.* World Bank (2017).
- 20 *Ibid.* World Bank (2009).
- 21 Schuhbauer et al. (2017) How subsidies affect the economic viability of small-scale fisheries. *Marine Policy* 82: 114-121.
- 22 Sumaila et al. (2010) A bottom-up re-estimation of global fisheries subsidies. *Journal of Bioeconomics* 12: 201-225.
- 23 Sumaila et al. (2016) Global fisheries subsidies: an updated estimate. *Marine Policy* 69: 189-193.
- 24 Khan et al. (2006) The nature and magnitude of global non-fuel fisheries subsidies. pp. 5-37 *In* Sumaila UR and Pauly D (eds.), *Catching more bait: a bottom-up re-estimation of global fisheries subsidies*. Fisheries Centre Research Reports 14 (6). University of British Columbia, Vancouver (Canada).
- 25 *Ibid.* Khan et al. (2006).
- 26 *Ibid.* Khan et al. (2006).
- 27 *Ibid.* Sumaila et al. (2016).
- 28 FAO (1992) Marine fisheries and the law of the sea: a decade of change - Special chapter (revised) of The State of Food and Agriculture 1992. FAO Fisheries Circular 853, Food and Agriculture Organization of the United Nations (FAO), Rome (Italy). 75 p.
- 29 WTO (1999) Agreement on Subsidies and Countervailing Measures, Marrakesh Agreement Establishing the World Trade Organization, April 15, 1994, Marrakesh (Morocco), Annex 1A.
- 30 "[...] aim to clarify and improve WTO disciplines on fisheries subsidies, taking into account the importance of this sector to developing countries" (Abstract from Paragraph 28 of the WTO Doha Declaration).
- 31 [www.un.org/esa/sustdev/documents/WSSD\\_POI\\_PD/English/WSSD\\_PlanImpl.pdf](http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf).
- 32 <https://sustainabledevelopment.un.org/futurewewant.html>.
- 33 [www.un.org/sustainabledevelopment/sustainable-development-goals](http://www.un.org/sustainabledevelopment/sustainable-development-goals).
- 34 Sumaila and Pauly (2007) All fishing nations must unite to cut subsidies.
- 35 *Ibid.* World Bank (2017).

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### About BLOOM

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→ BLOOM is a non-profit organization founded in 2005 that works to preserve the ocean and a socio-economic balance in the fishing sector. We run advocacy, education and awareness campaigns and conduct scientific research. BLOOM's actions are meant for the general public as well as policy-makers and economic stakeholders.

<http://www.bloomassociation.org/en/>

BLOOM is a member of the "Deep Sea Conservation Coalition" for the protection of the deep ocean:

<http://www.savethehighseas.org>



### About the Varda Group

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→ The Varda Group is an international consultancy established since 2003 to create maximum change for the benefit of people and the planet through developing and/or implementing projects leading toward the improvement of the environment, public health, and social welfare, by providing strategic input to NGOs, governments, business and/or intergovernmental organisations for the purposes of accelerating positive change.

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