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WTO must ban harmful fisheries subsidies

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*Published Version:*

Sumaila, U.R., Skerritt, D.J., Schuhbauer, A., Villasante, S., Cisneros-Montemayor, A.M., Sinan, H., et al. (2021). WTO must ban harmful fisheries subsidies. *SCIENCE*, 374, 544-544 [10.1126/science.abm1680].

*Availability:*

This version is available at: <https://hdl.handle.net/11585/836841> since: 2021-11-02

*Published:*

DOI: <http://doi.org/10.1126/science.abm1680>

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The final published version is available online at:

<https://doi.org/10.1126/science.abm1680>

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## WTO must ban harmful fisheries subsidies

Sustainably managed wild fisheries support food and nutritional security, livelihoods, and cultures (1). Harmful fisheries subsidies—government payments that incentivize overcapacity and lead to over-fishing—undermine these benefits yet are increasing globally (2). World Trade Organization (WTO) members have a unique opportunity at their ministerial meeting in November to reach an agreement that eliminates harmful subsidies (3). We—a group of scientists spanning 46 countries and 6 continents—urge the WTO to make this commitment.

To curb overfishing, biodiversity degradation and loss, and CO<sub>2</sub> emissions, and to safeguard food and livelihoods, WTO members must prohibit fisheries subsidies that cause harm, such as those that lower the cost of fuel and vessel construction and those that provide price support to keep market prices artificially high (2). Subsidies to distant-water fishing fleets must be eliminated to prevent overfishing on the high seas and in waters under national jurisdiction. Such subsidies threaten low-income countries that rely on fish for food sovereignty (4, 5). Exceptions to the rules—known as special and differential treatment—should be considered for small-scale fishers that use low-impact gears or that fish for subsistence, but only if decoupled from incentivizing overfishing (6).

An effective agreement must eliminate subsidies for fuel (7), distant-water and destructive fishing fleets (4, 5), and illegal and unregulated vessels in line with the aims of Sustainable Development Goal 14.6 (8). To ensure accountability, it should also support low-income countries' efforts to meet their commitments and transition to sustainable management. Finally, the agreement should require transparent data documentation and enforcement measures (9).

We call on the heads of state of the High Level Panel for a Sustainable Ocean Economy, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, and the United States–Mexico–Canada Agreement—who have already committed to eliminating harmful subsidies (10–12)—as well as other trade blocs and individual countries, to declare their support now for an agreement that enshrines these recommendations. WTO members must harness their political mandate to protect the health of the ocean and the well-being of society.

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1. D. Pauly et al., *Nature*418, 689 (2002).
2. U. R. Sumaila et al., *Mar. Pol.*109, 103695 (2019).
3. WTO, Negotiations on fisheries subsidies (2021); [www.wto.org/english/tratop\\_e/rulesneg\\_e/fish\\_e/fish\\_e.htm](http://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_e.htm).
4. D. Tickler et al., *Sci. Adv.*4, eaar3279 (2018).
5. E. Sala et al., *Sci. Adv.*4, eaat2504 (2018).
6. A. M. Cisneros-Montemayor et al., *Mar. Pol.*69, 229 (2016).
7. U. R. Sumaila et al., *ICES J. Mar. Sci.*65, 832 (2008).
8. United Nations General Assembly, "Transforming Our World: The 2030 Agenda for Sustainable Development" (2015).
9. M. D. Smith, *Science*364, 34 (2019).
10. High Level Panel for a Sustainable Ocean Economy, "Transformations for a sustainable ocean economy: A vision for production, protection and prosperity" (2020); [www.oceanpanel.org/ocean-action/files/transformations-sustainable-ocean-economy-eng.pdf](http://www.oceanpanel.org/ocean-action/files/transformations-sustainable-ocean-economy-eng.pdf).
11. M. A. Khan et al., *J. Econ. Struct.*7, 1 (2018).
12. A. M. Villarreal, I. F. Fergusson, "NAFTA and the United States-Mexico-Canada Agreement (USMCA)" (Congressional Research Service Report, 2020).