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Electronic Supplementary Material

Title: **Global challenges for seagrass conservation**

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Supporting Information

S 1. Information sources used to calculated current documented global area of seagrass

Seagrass meadows range in size from a few square meters to thousands of square kilometres. Maps of seagrass distribution are either individual observations (points) or measured areas (polygons or vector-based). As polygon maps provide the only quantitative measure of spatial extent, they were used exclusively for areal estimates. Point data was used only to indicate seagrass presence.

The most extensive collection of seagrass maps is located at the UNEP World Conservation Monitoring Centre ((UNEP-WCMC and Short 2016)). This collection includes maps from various times, of various scales (ranging from 1:1,000 ((Telesca et al. 2015)) to 1:28,510,000 ((National Geographic Society 2000))),from variable sources, and ranging from anecdotal (no documented/visual evidence) to accurate field validation ((UNEP-WCMC and Short 2016)). Although detailed, this collection remains incomplete, as not all researchers and/or agencies contribute data. For our estimate of global seagrass area we have used UNEP-WCMC and Short ((2016)) and where available, included additional polygon data from published literature. Where possible, we have also corrected some of the anecdotal polygon data.

Table S1: Data sources for documented seagrass polygon area (km^2) data (as of November 2016) for each seagrass bioregion.

Seagrass Bioregion	Data Source
1. Temperate North Atlantic	(Boström et al. 2014, Cunha et al. 2014, UNEP-WCMC and Short 2016, Wilkes et al. 2017)
2. Tropical Atlantic	(Green and Short 2003, Murdoch et al. 2007, DaCosta-Cottam et al. 2009, Krupp et al. 2009, Ballhorn et al. 2014, Samper-Villarreal et al. 2014, Creed et al. 2016, UNEP-WCMC and Short 2016)
3. Mediterranean	(Deyanova et al. 2013, UNEP-WCMC and Short 2016)
4. Temperate North Pacific	(Green and Short 2003, CEC 2016, UNEP-WCMC and Short 2016)
5. Tropical Indo-Pacific	(ICMAM PD 2001, Bujang and Zakaria 2003, Green and Short 2003, Orosco and Amir Sharifudeen 2004, McKenzie and Rasheed 2006, BAE Systems 2007, UNEP 2007, Fortes 2008, Vibol 2008, Boggs et al. 2009, Coles et al. 2009, Kamal and Khan 2009, Sridhar et al. 2010, Waycott et al. 2011, Boggs et al. 2012, Luong et al. 2012, Nobi et al. 2012, Susila et al. 2012, Nobi et al. 2013, Yaakub et al. 2013, McKenzie et al. 2014, Marine and Mangrove Research and Development Center 2015, Rajamani and Marsh 2015, McKenzie et al. 2016, Poonian et al. 2016, UNEP-WCMC and Short 2016, Cuvillier et al. 2017)
6. Temperate Southern Oceans	(Poiner et al. 1987, Green and Short 2003, Roelofs et al. 2005, UNEP-WCMC and Short 2016)

S 2. Method used to examine changes in research effort and grant funding for seagrass over time.

First, data on private research and conservation funding 2006-2016 (retrieved from the Foundation Center database: foundationcenter.org) shows that the number of grants and the total funding to grants including the word 'coral' exceeded those to 'seagrass', 'mangrove' and 'marsh' grants by 1-2 orders of magnitude (Fig. 1A). Moreover, the 'coral' grants were allocated to more recipients

(researchers, practitioners, etc.) by >1 order of magnitude. Second, data on research effort over the past 25 years (estimated as yearly number of publications in ISI Web of Science during 1992-2016) shows that publications including the word 'coral*' in title, abstract or keywords not only dominate (Fig 1B), but that 'coral' and 'mangrove' research effort has grown exponentially. At the same time, 'seagrass' and 'salt marsh' effort has only grown linearly and considerably slower. Finally controlling for the fact that ecology and ecosystem science in general has grown considerably (by calculating what proportion of yearly publications retrieved using the search string 'ecosystem* OR ecolog* OR species*' that also included the words 'coral*', 'mangrove*', 'seagrass*' or 'salt marsh*') a striking pattern emerges. The proportion of publications increased more or less linearly for all four ecosystems until the mid 2000s (indicating an increasing interest for and/or effort in coastal ecosystem research), after which the proportion of 'coral' and 'mangrove' research effort kept rising, but the proportion of 'seagrass' and 'salt marsh' publications instead levelled off and decreased.

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