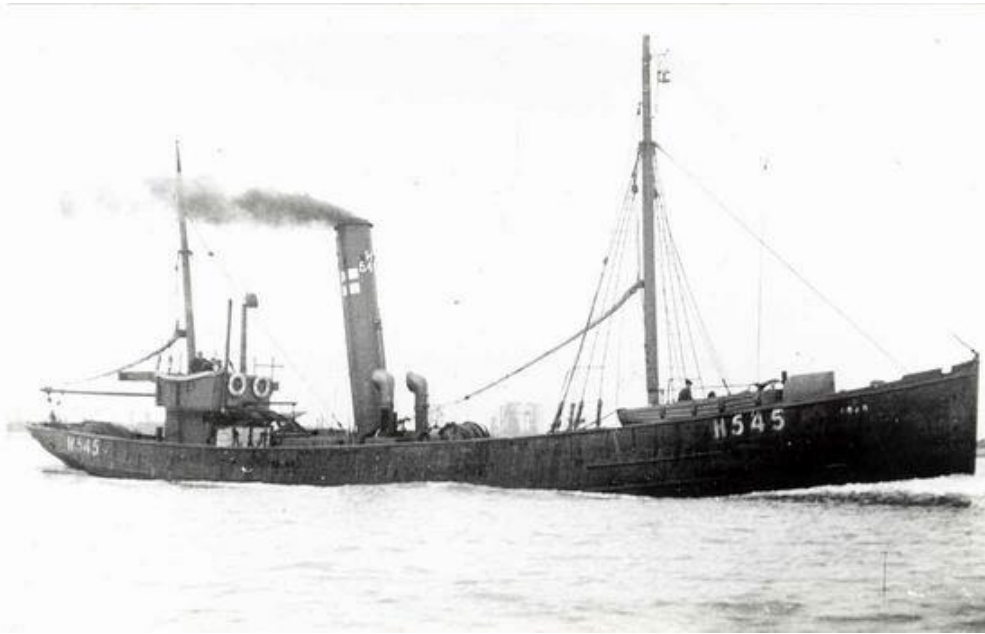


Fisheries expansion, overfishing and the role of subsidies

Daniel Pauly
Sea Around Us
Institute for the Oceans and Fisheries
University of British Columbia

Webinar for WTO fisheries subsidies negotiators
September 7, 2020

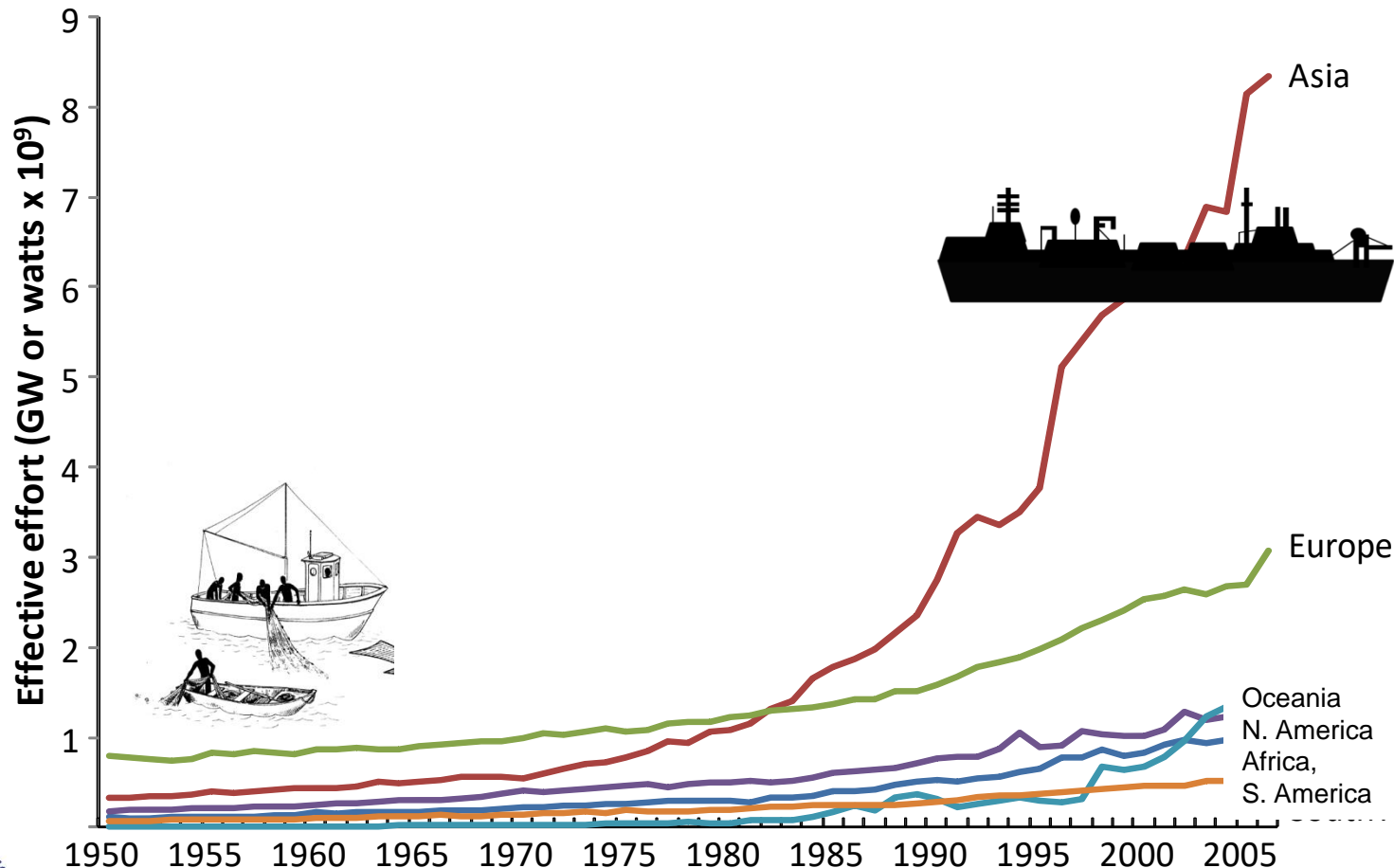




Our story will start with the start of industrial start of industrial fishing in 1880, when Britain unleashed the first steam trawlers.



The pressure on the world's fish stocks is increasing relentlessly, notably by the distant-water fleets of a few countries...



Anticamara et al. (*Fisheries Research*, 2011)

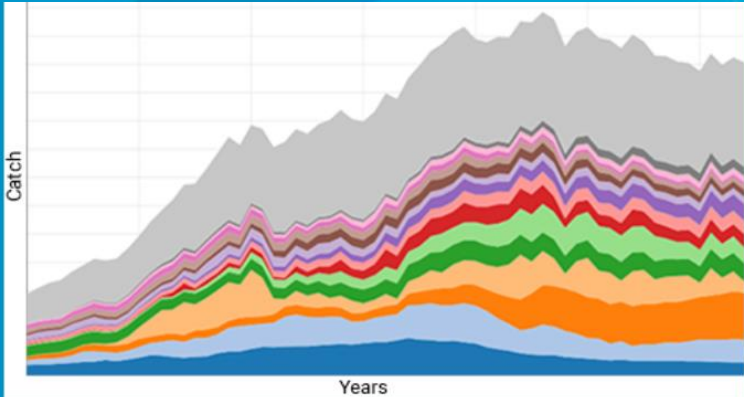
Let's see on www.seaaroundus.org....

Browser tabs: BlueWave portal, BlueWave portal, Google, Sea Around Us | X, Sea Around Us | Fish, Google. Address bar: www.seaaroundus.org/

SEA AROUND US
FISHERIES, ECOSYSTEMS & BIODIVERSITY

UBC

TOOLS & DATA GETTING STARTED PUBLICATIONS NEWS PEOPLE PROJECTS PARTNERS HELP

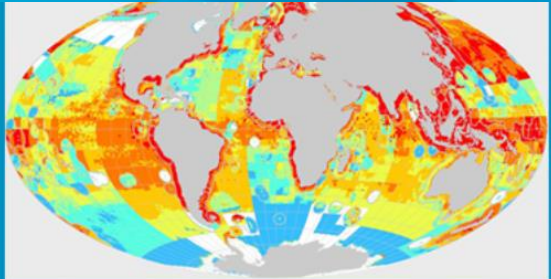


Catch

Years

Our interactive graphs »

Click graph for catches, data access and related information.



Our interactive maps »

Click above for catch maps.

Global catches



ARTICLE

Received 27 Feb 2015 | Accepted 19 Nov 2015 | Published 19 Jan 2016

DOI: [10.1038/ncomms10244](https://doi.org/10.1038/ncomms10244)

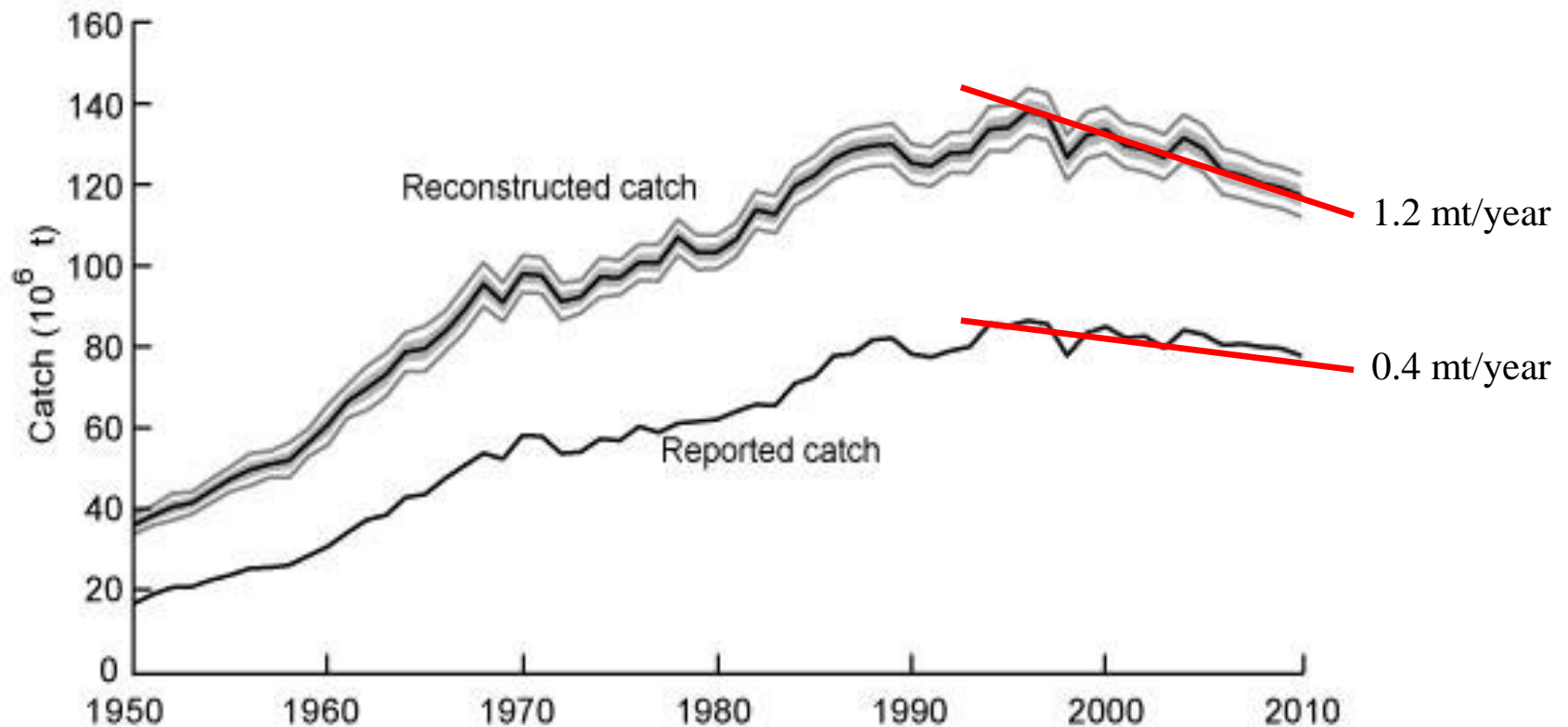
OPEN

Catch reconstructions reveal that global marine fisheries catches are higher than reported and declining

Daniel Pauly¹ & Dirk Zeller¹

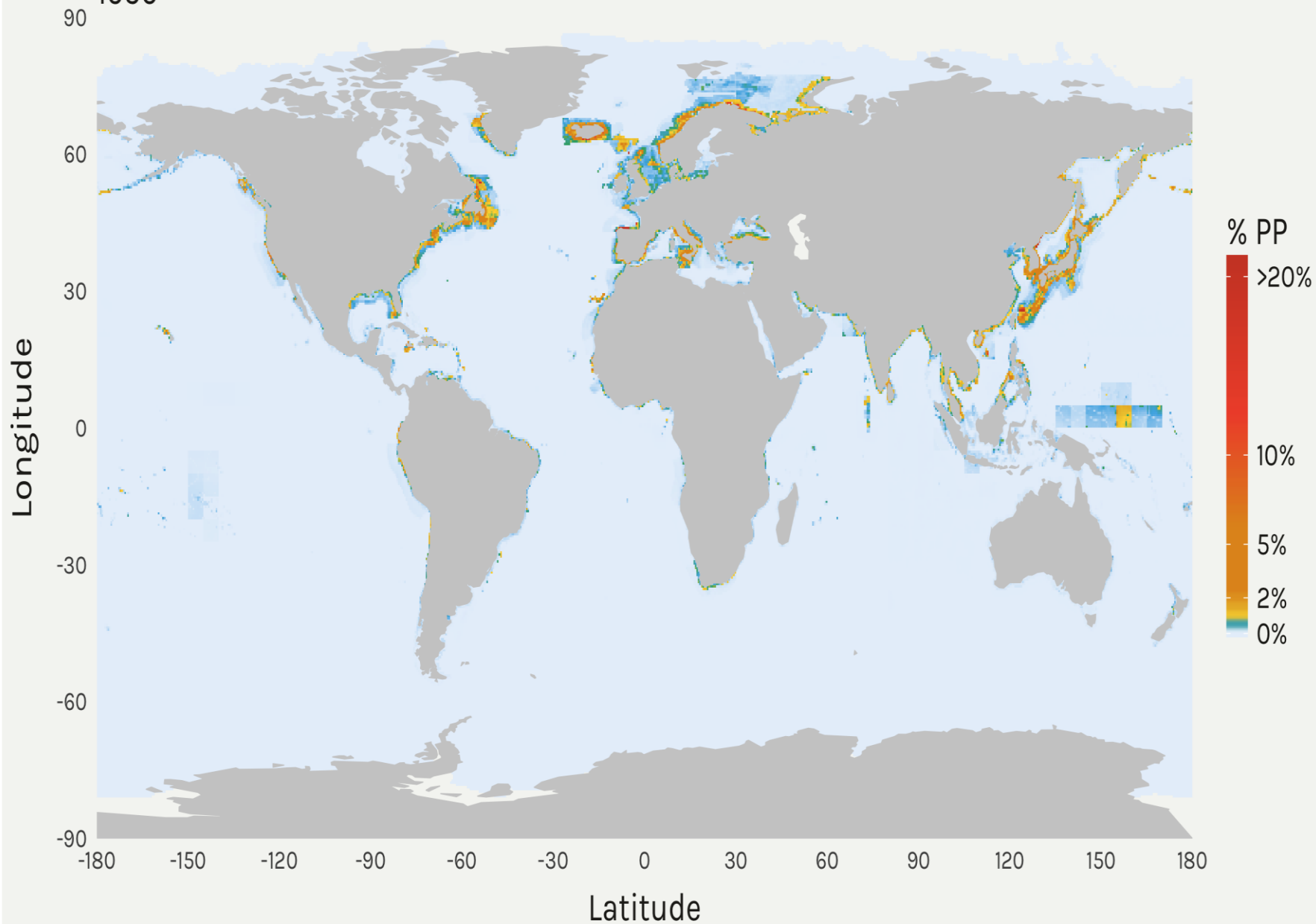


When added up, the country catch reconstructions confirm that the world catch has been declining for the last 2 decades. Important is also that the trend is more marked than in the officially reported catch.



Primary production required

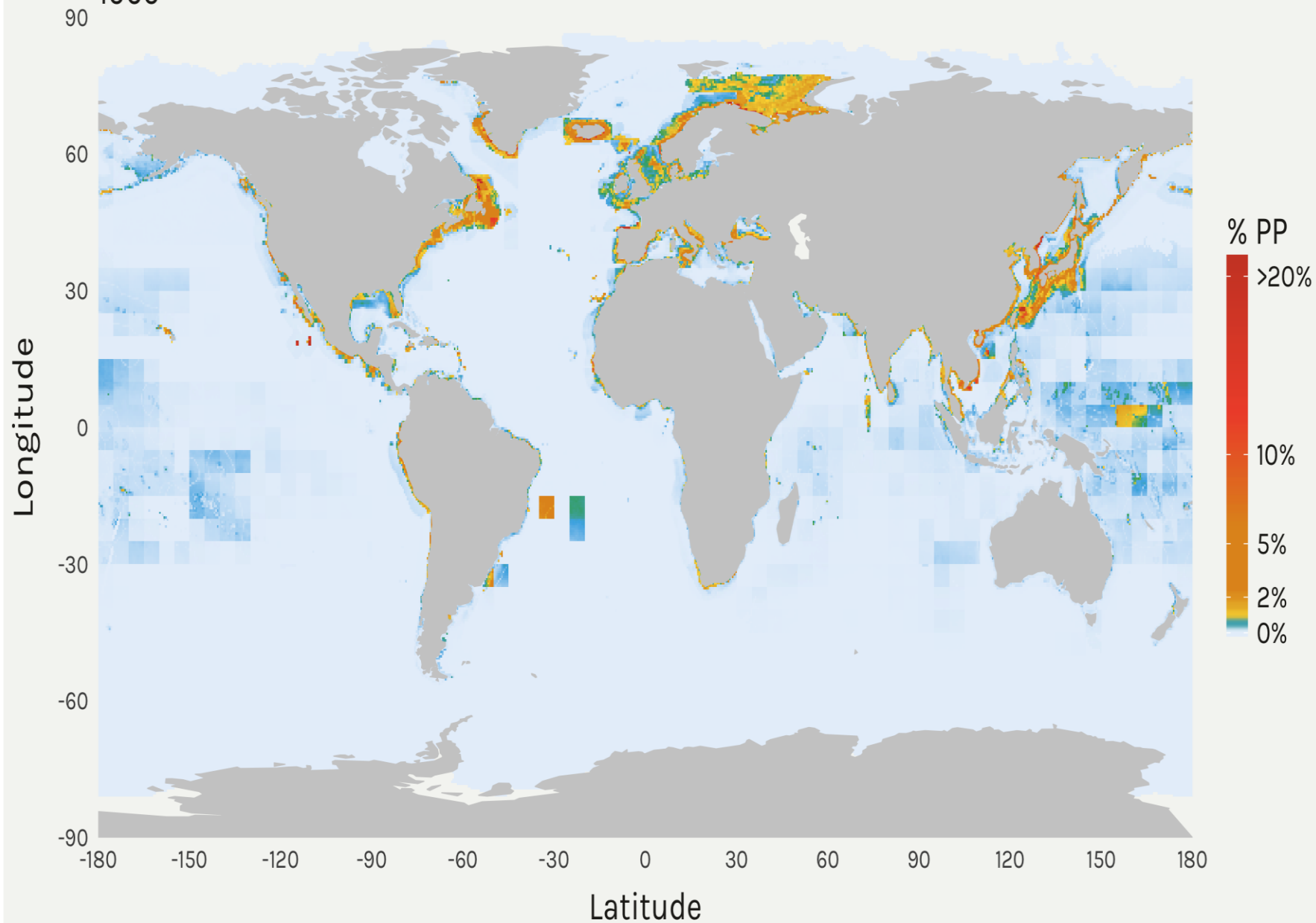
1950



Data: Sea Around Us, 2018

Primary production required

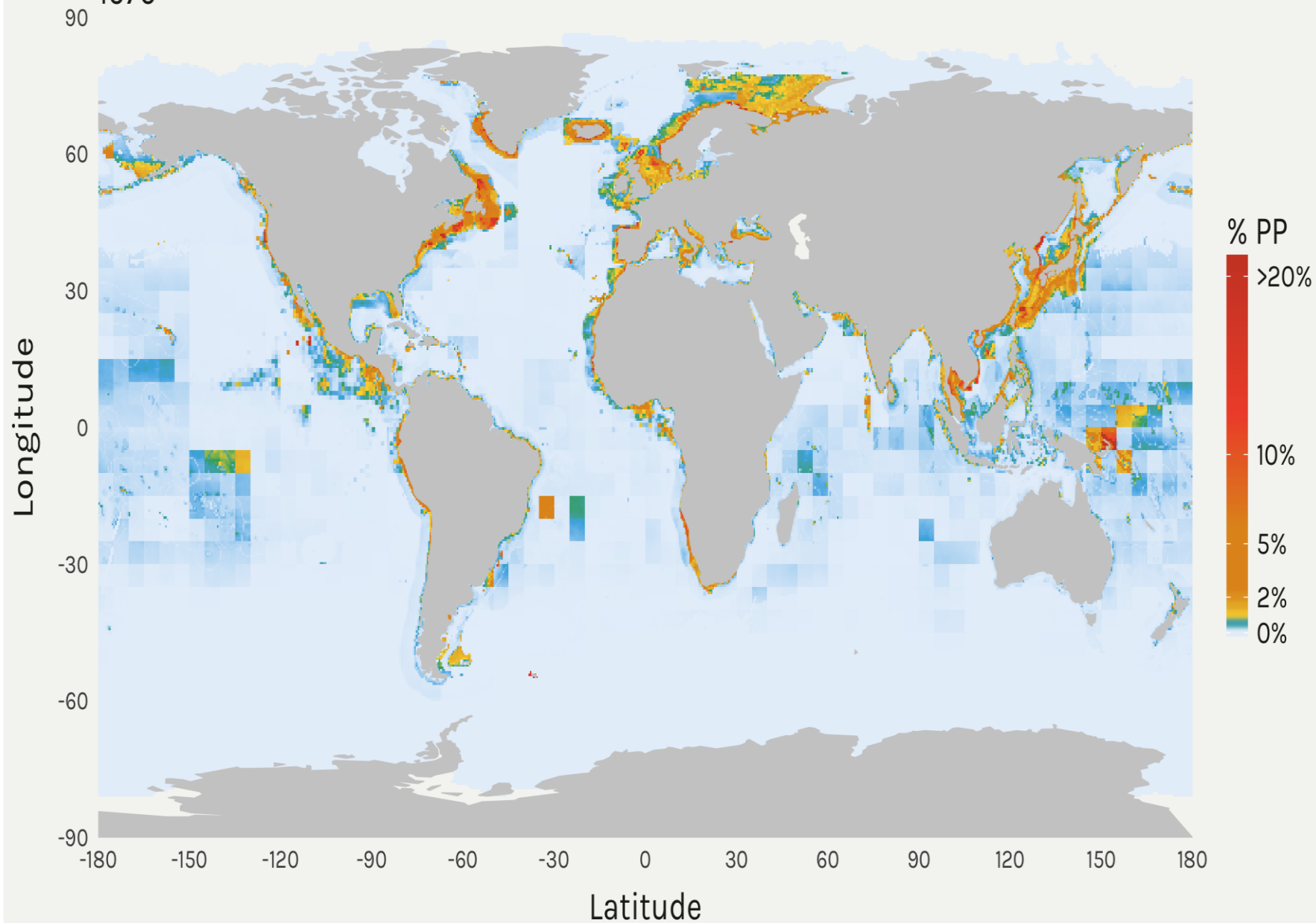
1960



Data: Sea Around Us, 2018

Primary production required

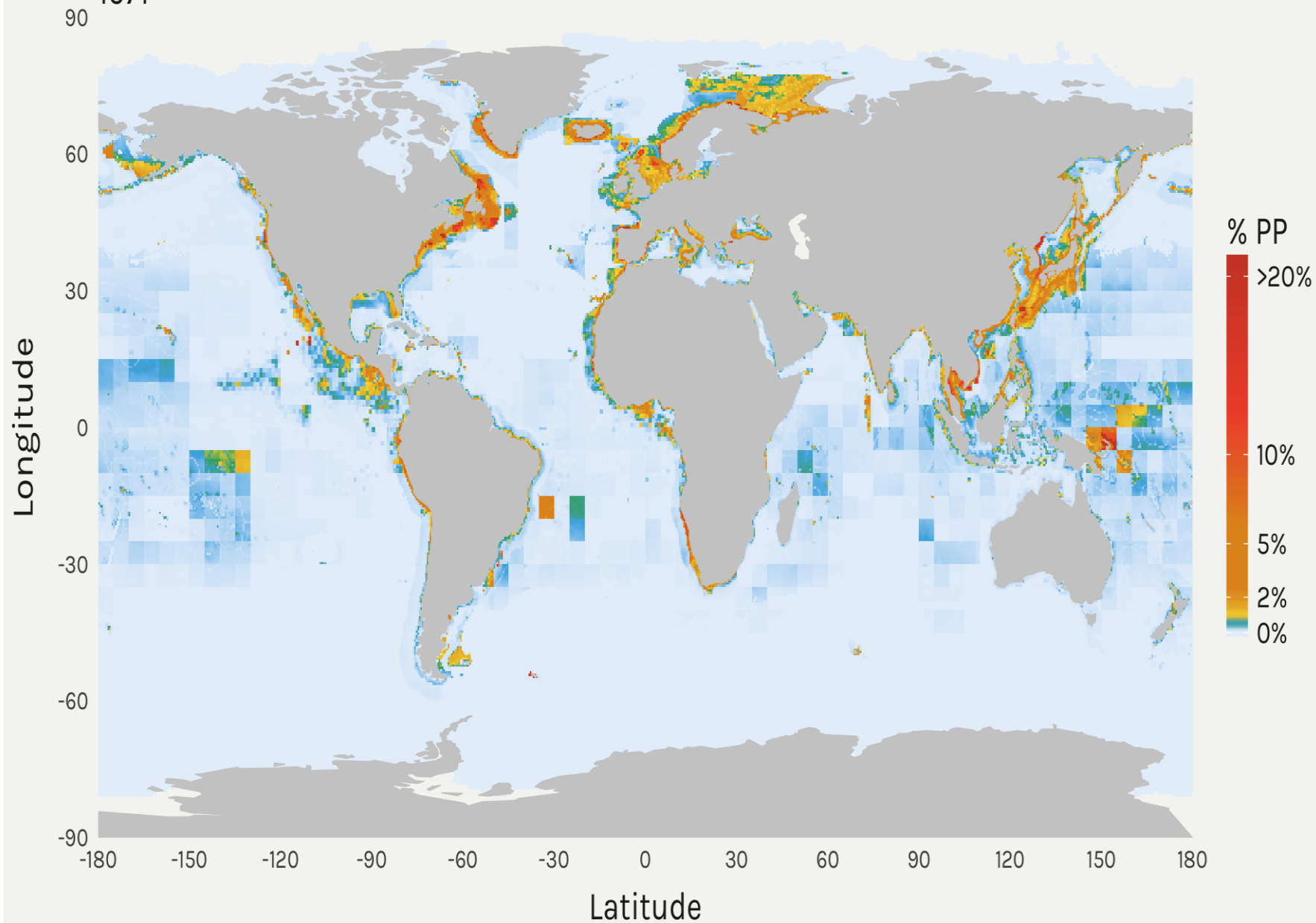
1970



Data: Sea Around Us, 2018

Primary production required

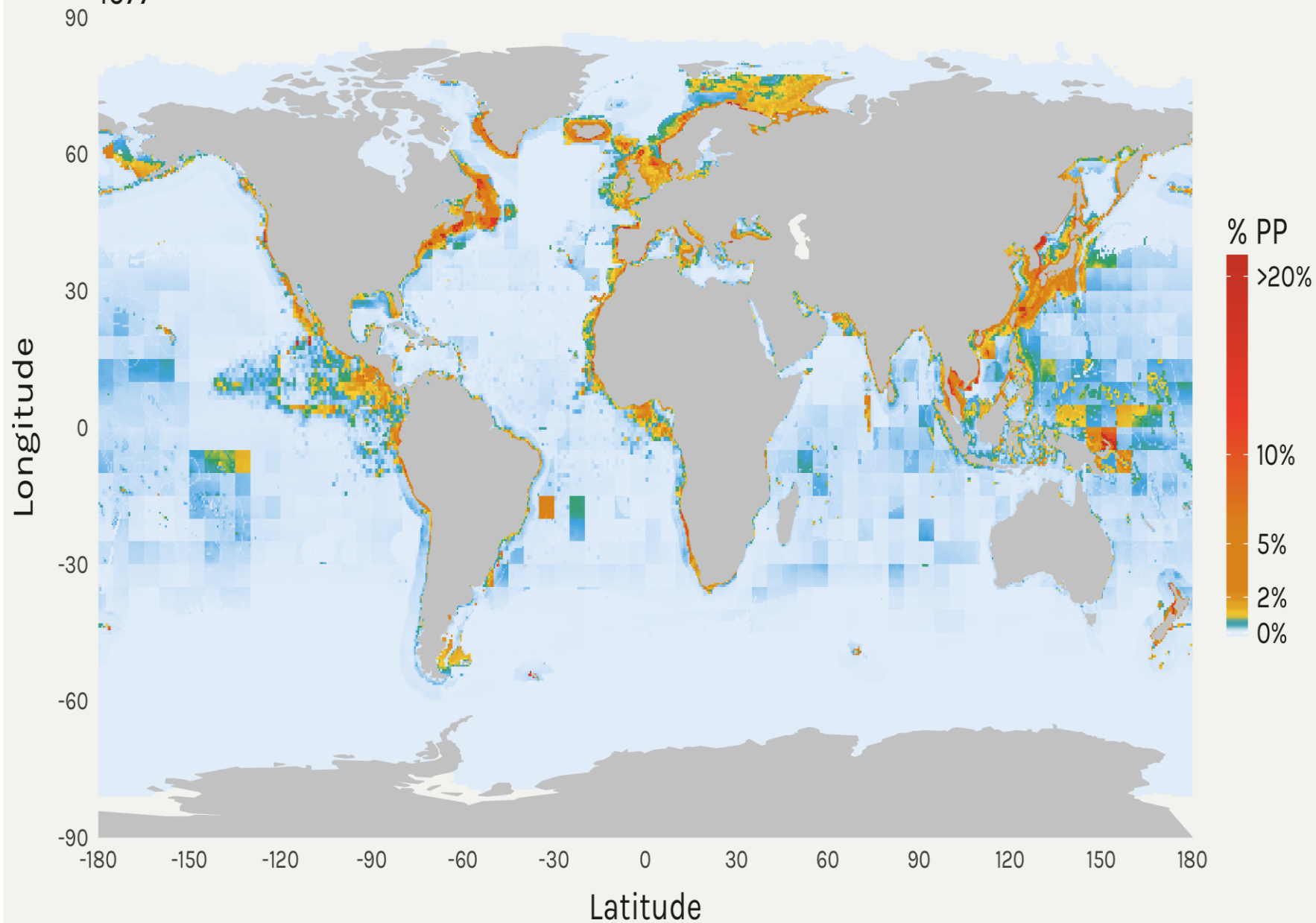
1971



Data: Sea Around Us, 2018

Primary production required

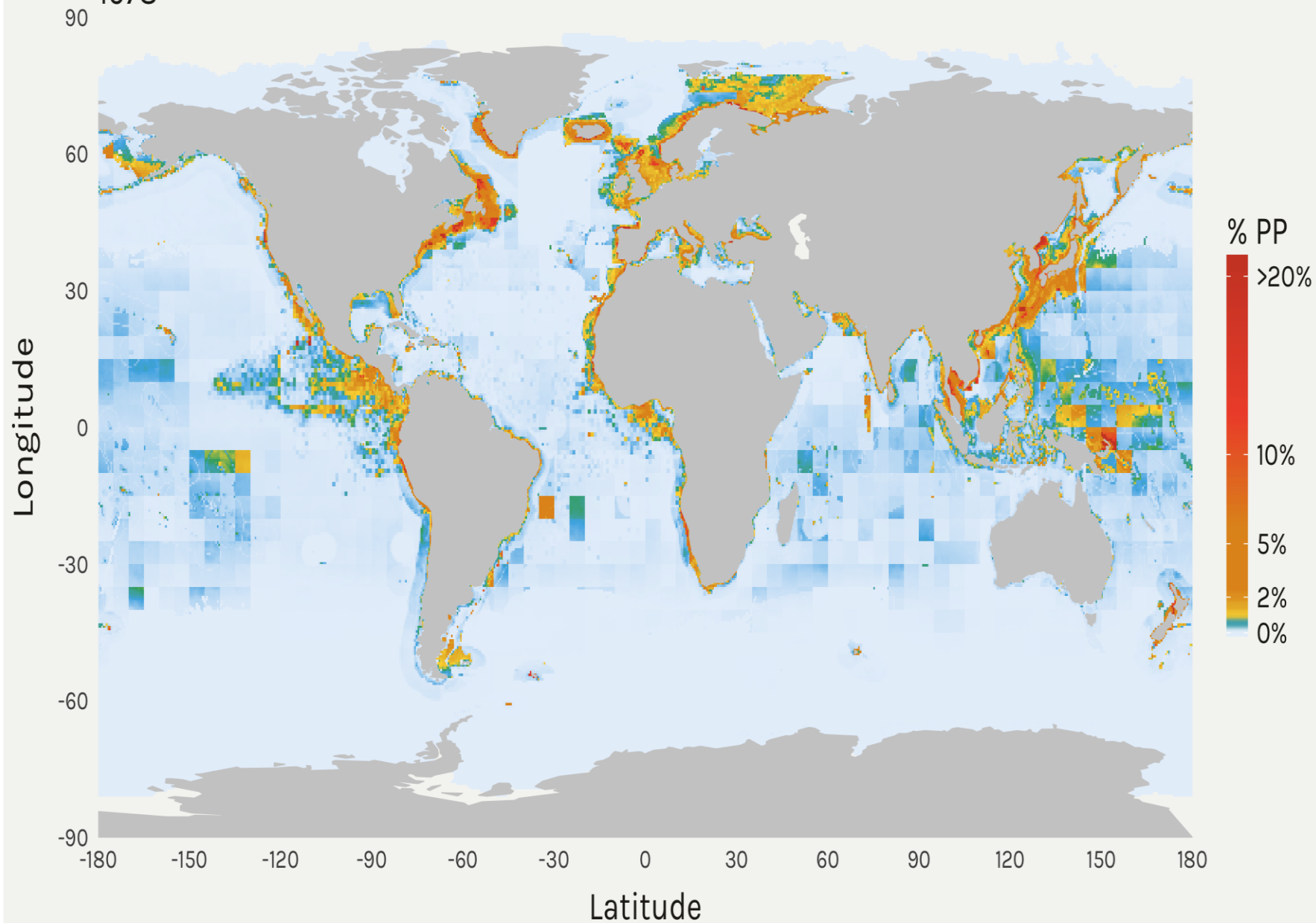
1977



Data: Sea Around Us, 2018

Primary production required

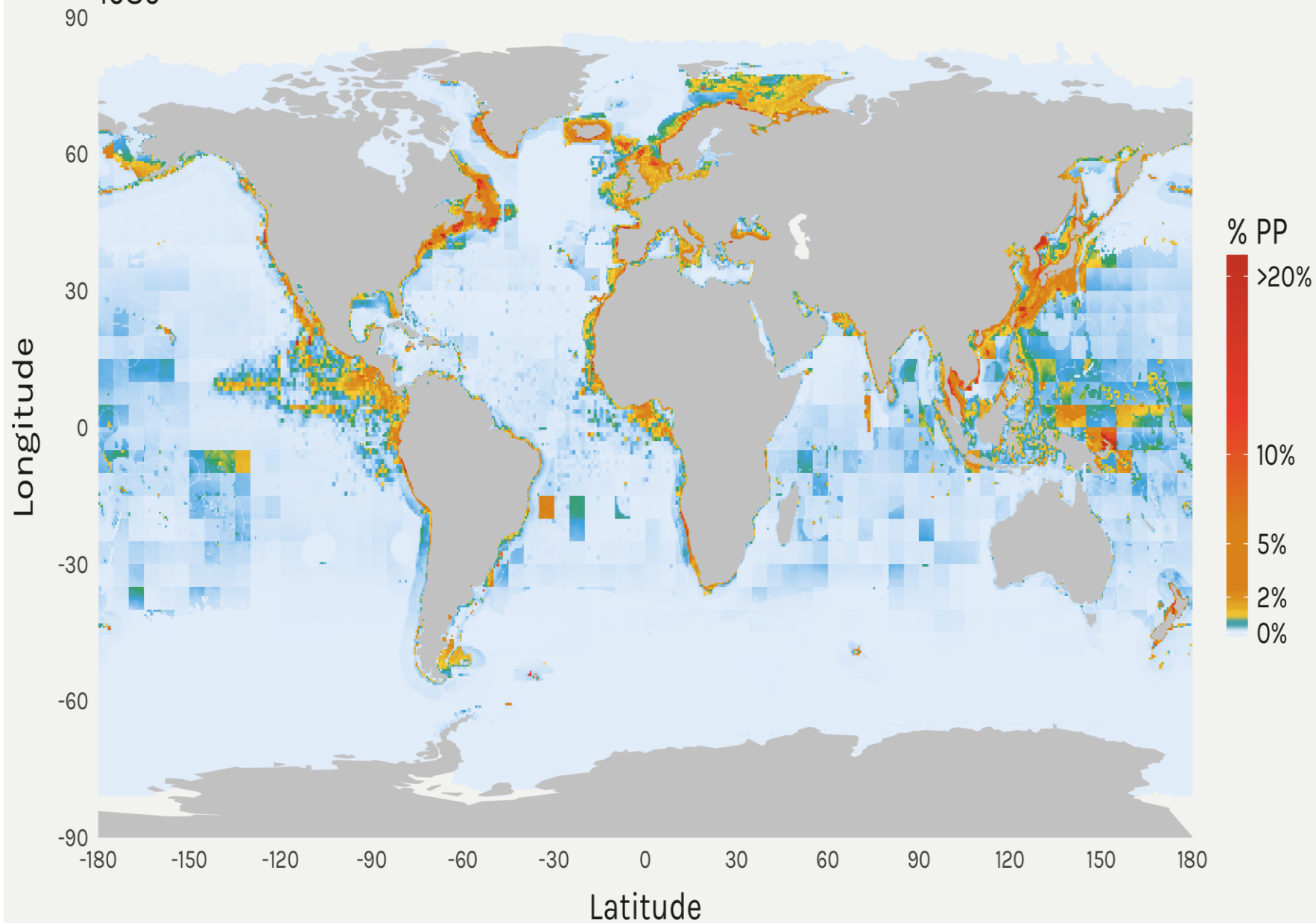
1978



Data: Sea Around Us, 2018

Primary production required

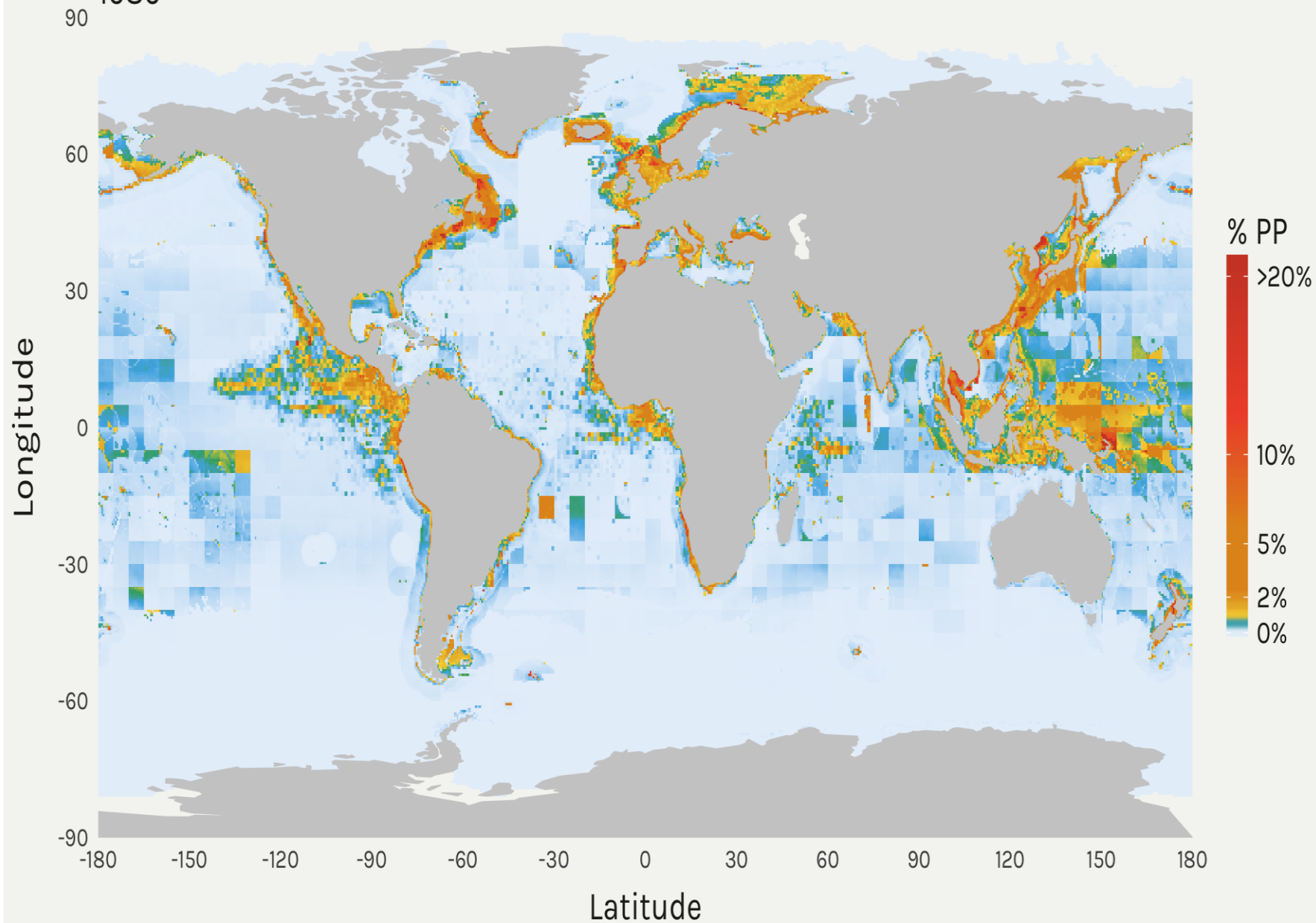
1980



Data: Sea Around Us, 2018

Primary production required

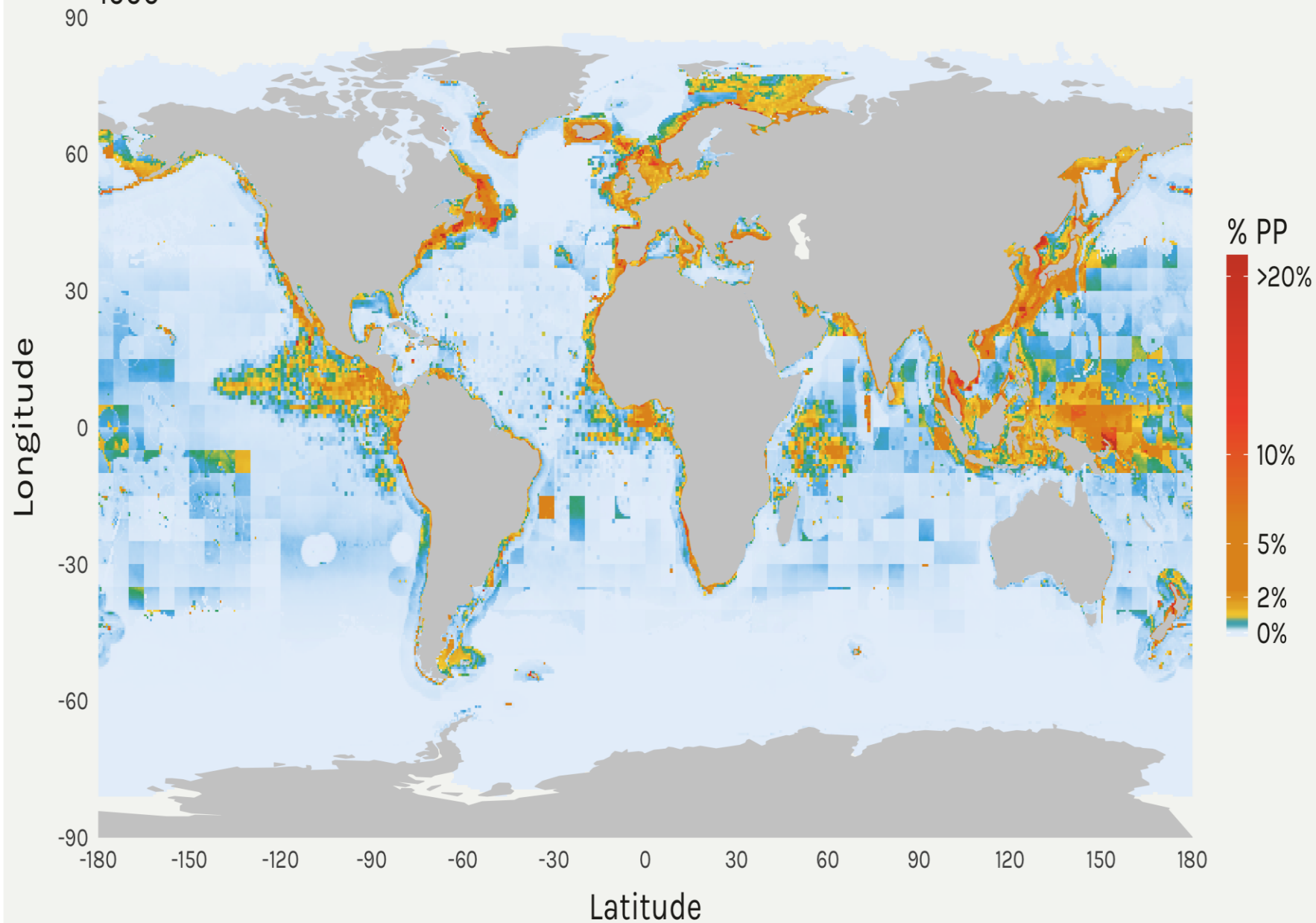
1986



Data: Sea Around Us, 2018

Primary production required

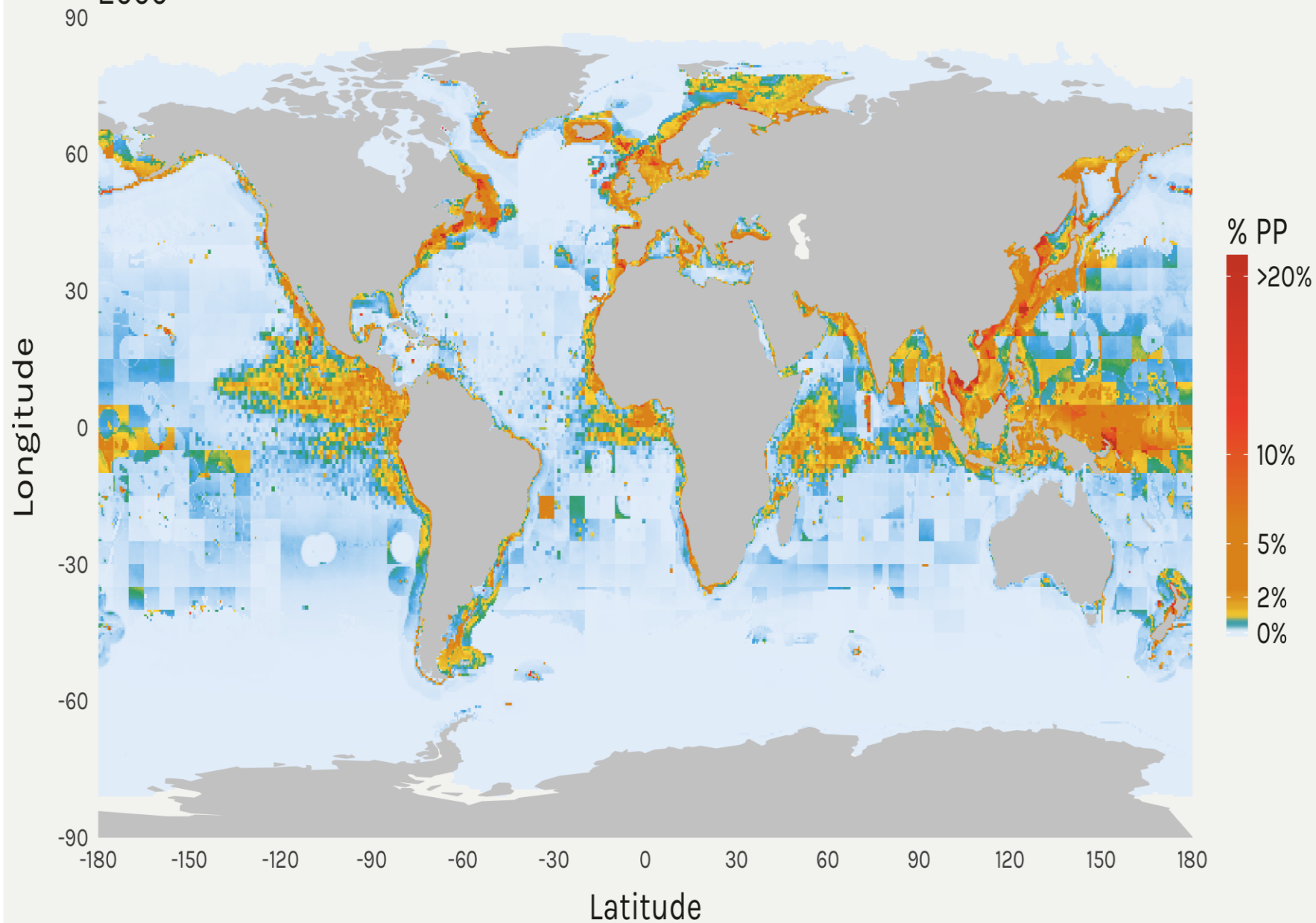
1990



Data: Sea Around Us, 2018

Primary production required

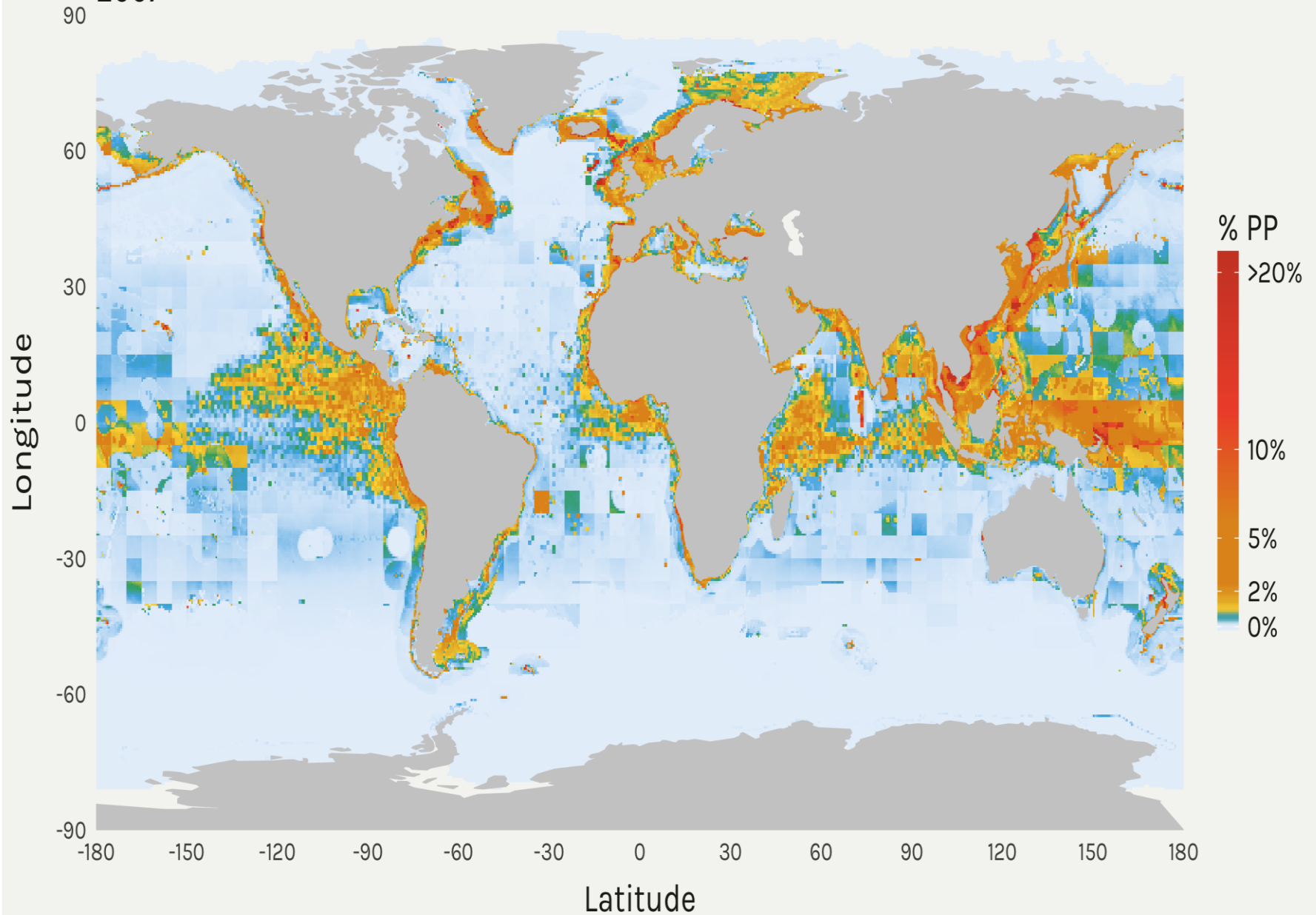
2000



Data: Sea Around Us, 2018

Primary production required

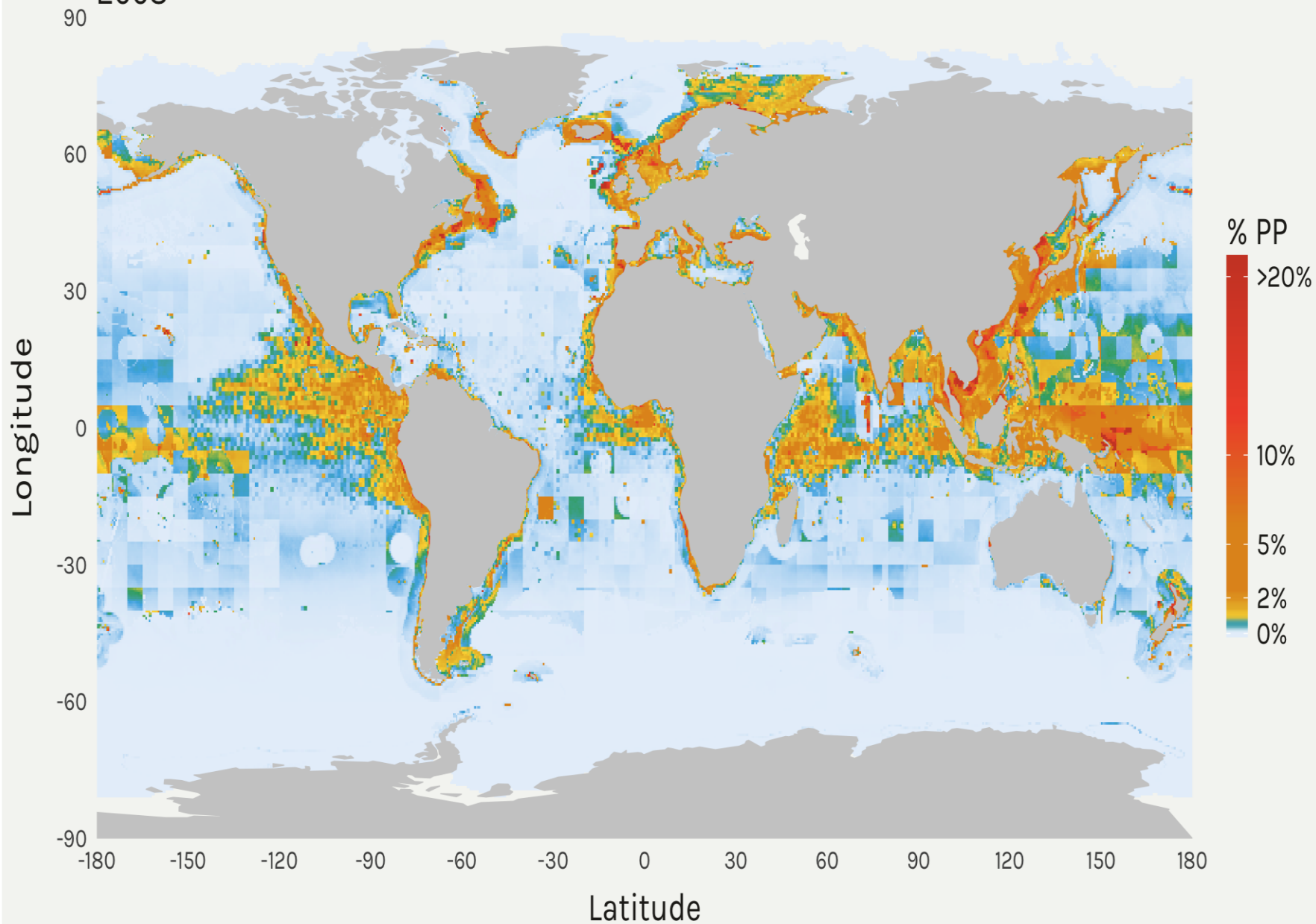
2007



Data: Sea Around Us, 2018

Primary production required

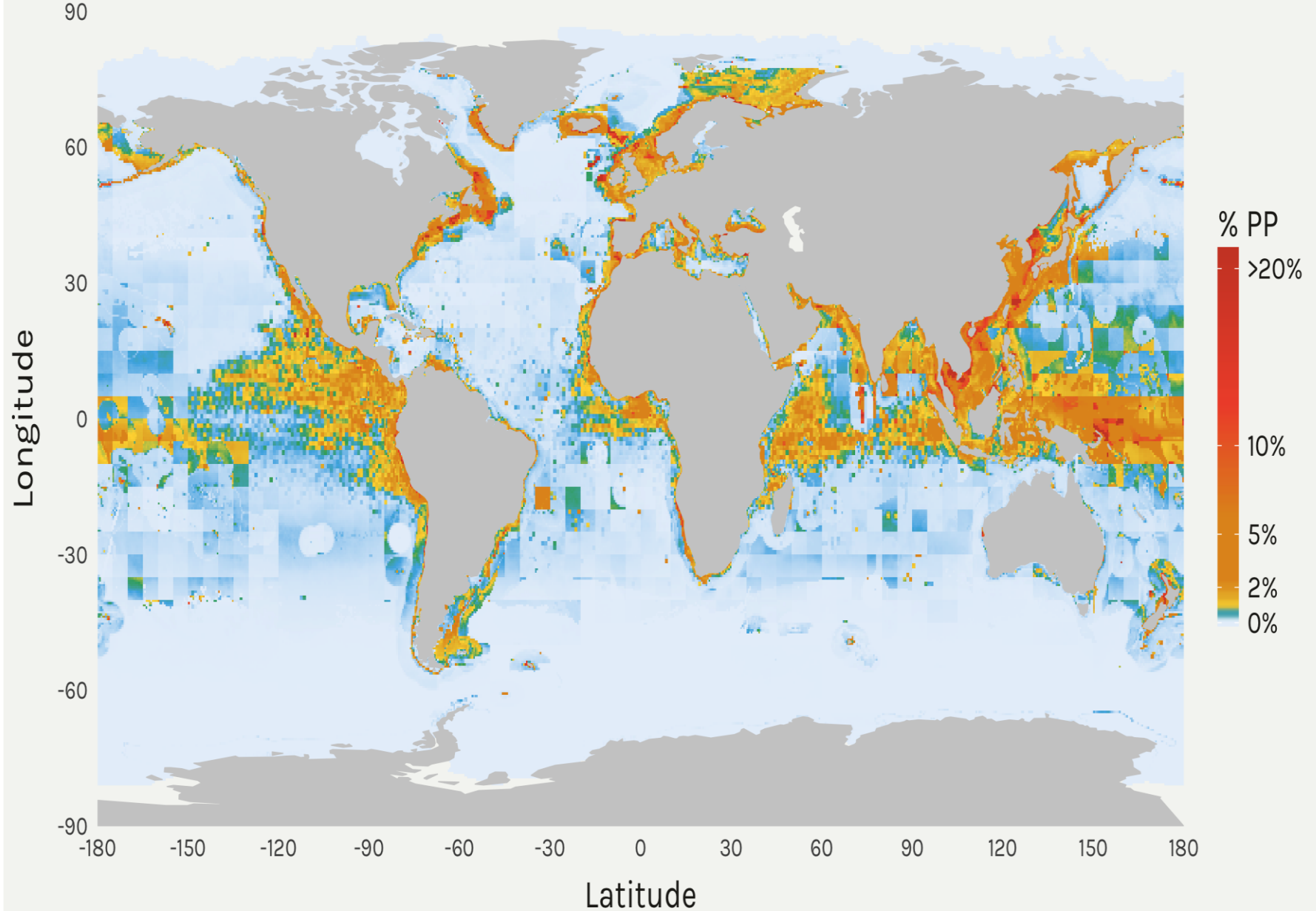
2008



Data: Sea Around Us, 2018

Primary production required

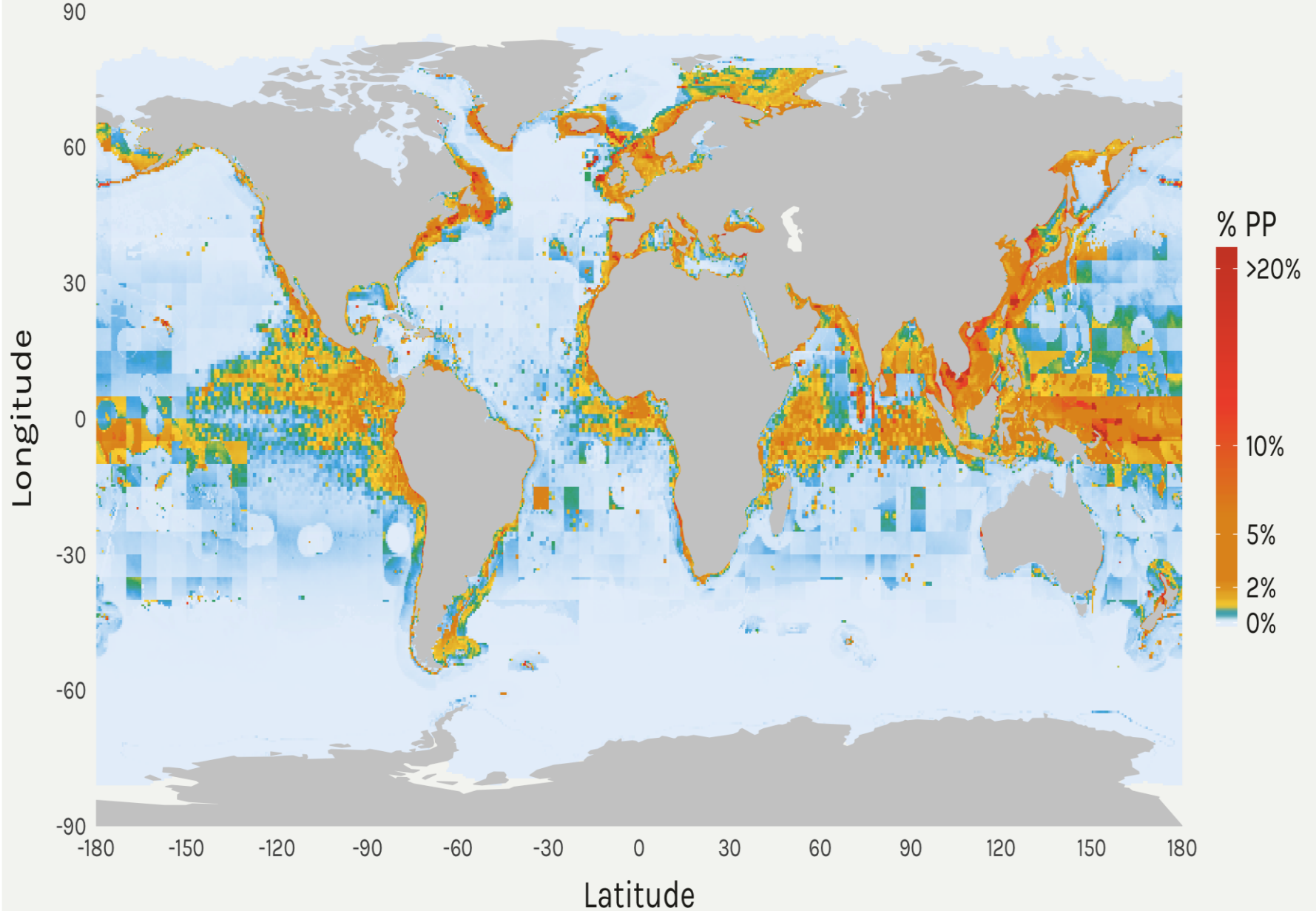
2010



Data: Sea Around Us, 2018

Primary production required

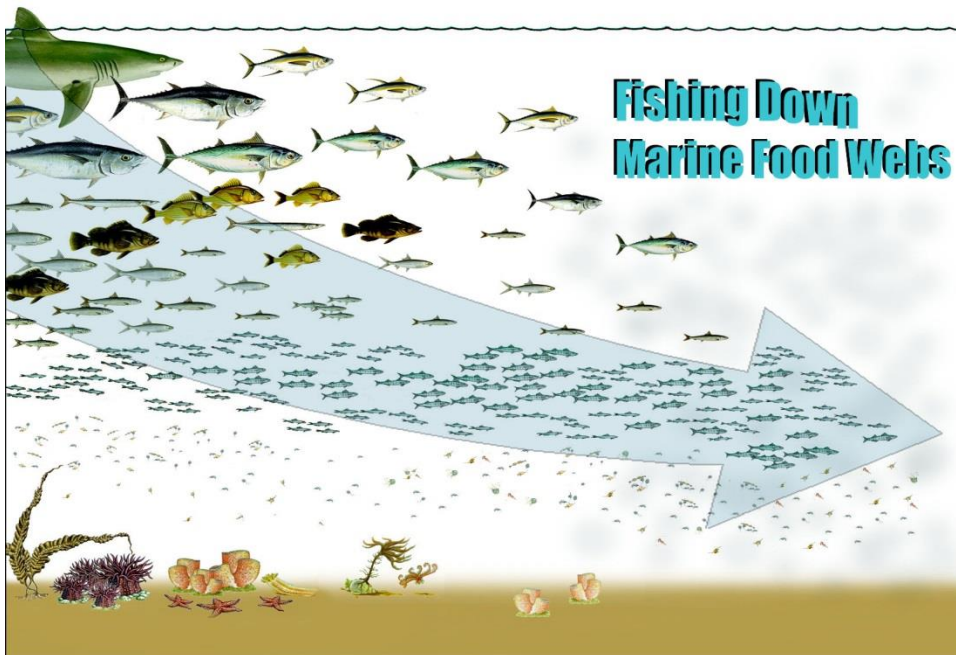
2014



Data: Sea Around Us, 2018

The results of all this: fishing down marine food webs

- 'Fishing down' occurs throughout the world.
- Catch data can be used to demonstrate the existence of this phenomenon, though it occurs at the level of ecosystems.



Pauly *et al.* (1998, *Science*)



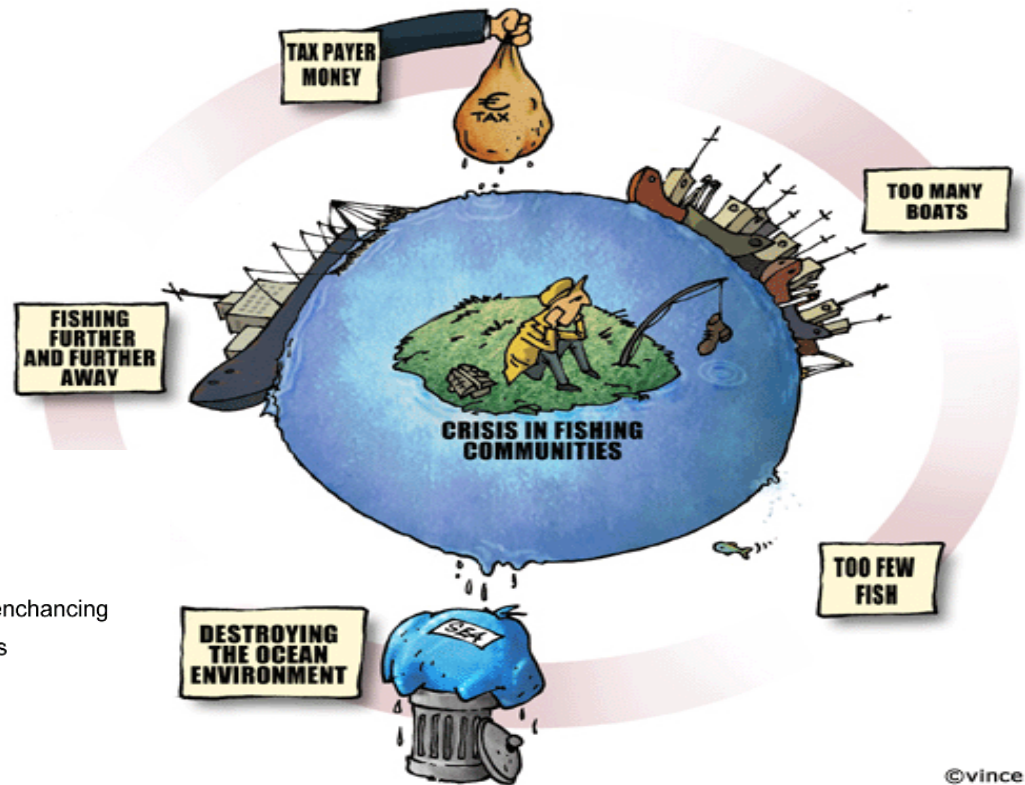
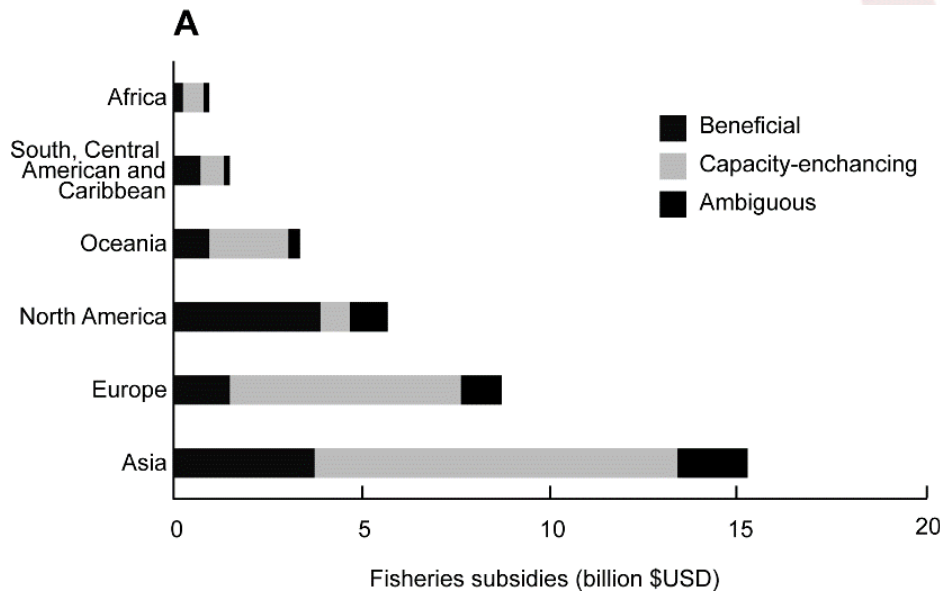
The Chinese coastal fisheries provide a good example of what 'Fishing down' leads to...



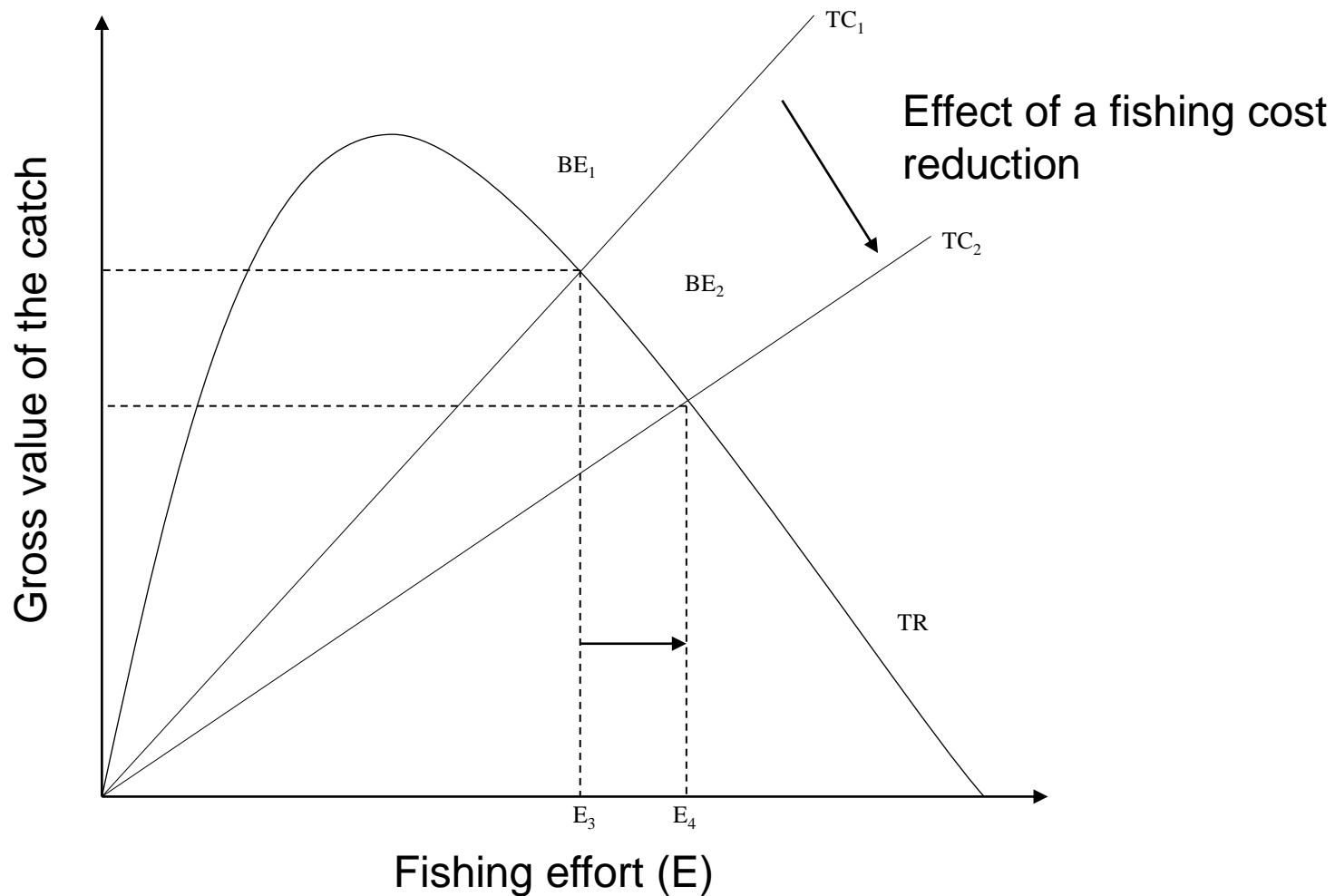
This is at the end of the
'Fishing down' arrow

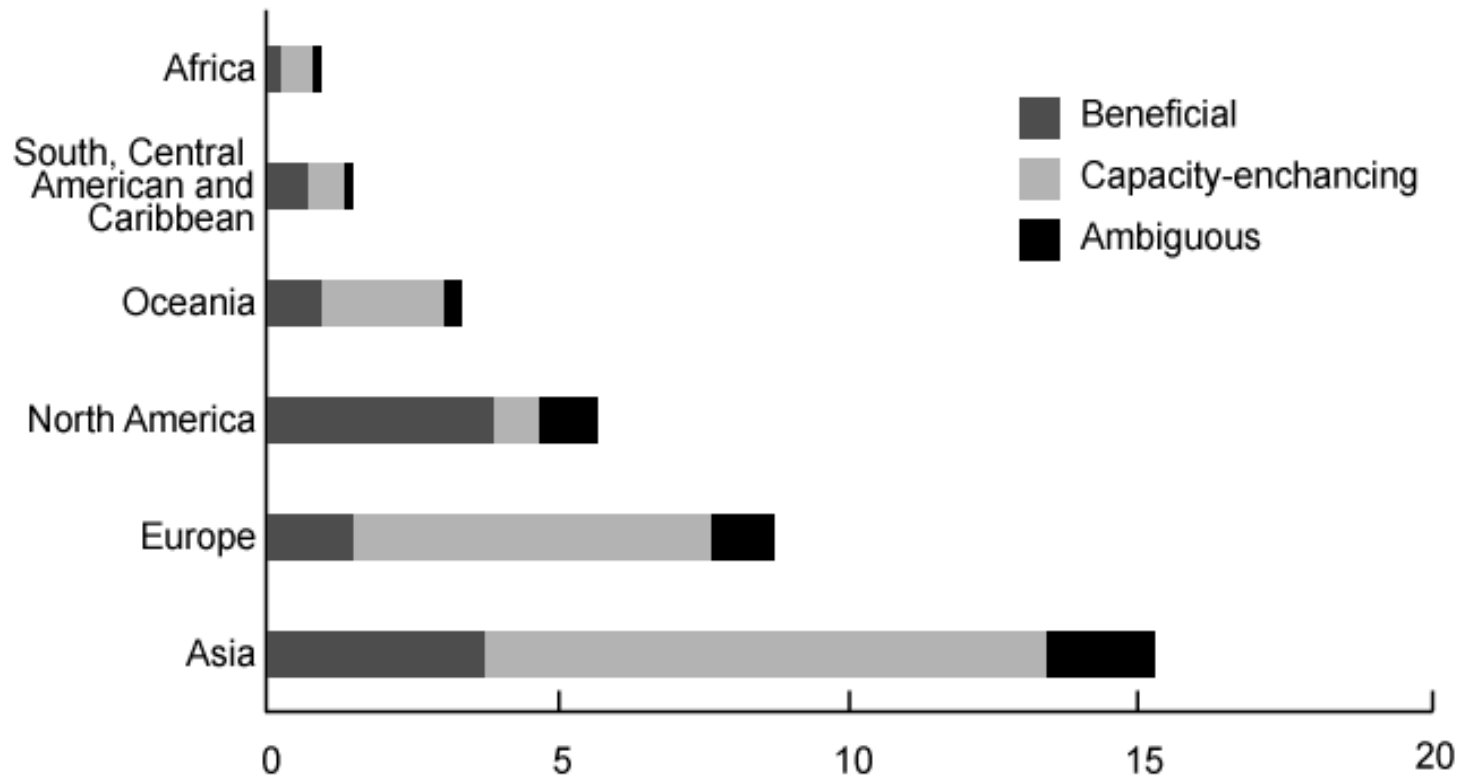


Subsidies are currently the major driver for fisheries expansion and overfishing...



There are good reason to try to reduce fishing costs





Asia is by far the greatest subsidizing region (43 % of total), followed by Europe (25 % of total) and North America (16 % of total). For all regions, the amount of capacity-enhancing subsidies is higher than other categories, except the Americas, which have higher beneficial subsidies.

How to deal to deal with fisheries issues:

- Do not subsidize the industrial fisheries sector: if it can't make money on its own, it is likely that the stocks it relies on are overexploited;
- Set conservative quotas which allows for rebuilding stock biomass;
- Set up large marine reserves to protect marine biodiversity.



Thank you!