

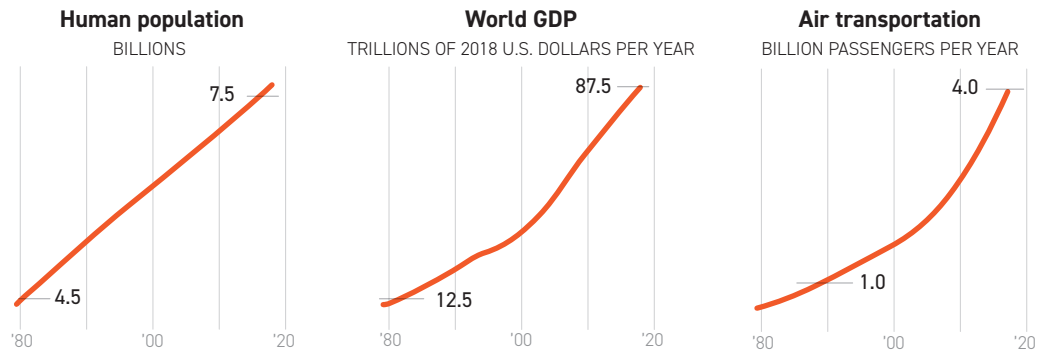
Dec. 9, 2019

Profiles of a climate emergency

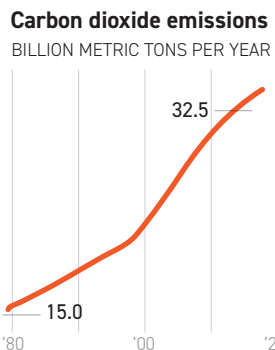
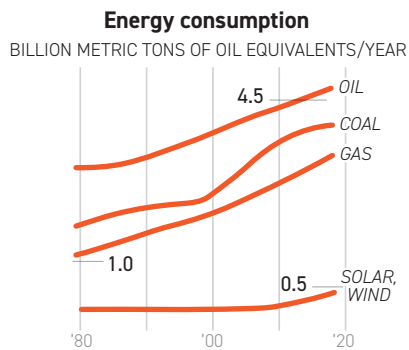
At the first world climate conference 40 years ago, scientists from 50 countries warned of global warming and urged prompt action to reduce anthropogenic carbon emissions. A broad spectrum of data has repeatedly confirmed their alarm as emissions continue to rapidly rise. More than 11,000 scientists from 153 countries recently signed a declaration published in the journal *BioScience*, stating that Earth is “clearly and unequivocally” facing a climate emergency.

The article’s authors assembled a collection of trend lines monitoring global change, which are presented here:

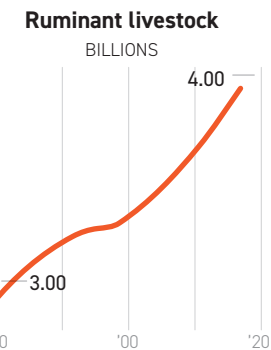
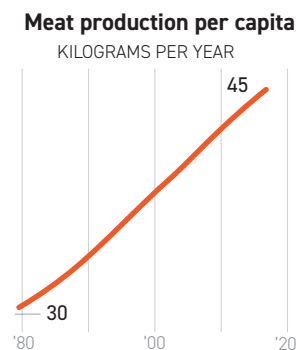
A steadily expanding, more affluent world population ...



... maintains a growing appetite for fossil fuels ...



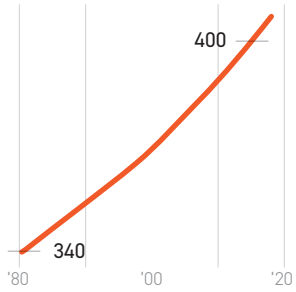
... and for meat ...



... which boosts the concentration of greenhouse gases in the atmosphere ...

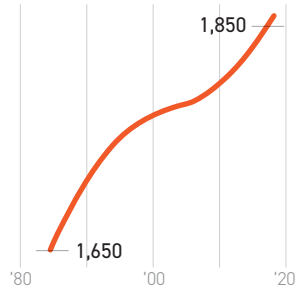
Atmospheric carbon dioxide

PARTS PER MILLION



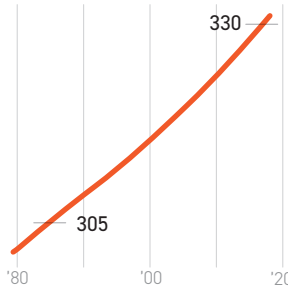
Atmospheric methane

PARTS PER BILLION



Atmospheric nitrous oxide

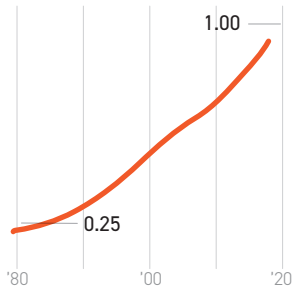
PARTS PER BILLION



... that fuel global warming ...

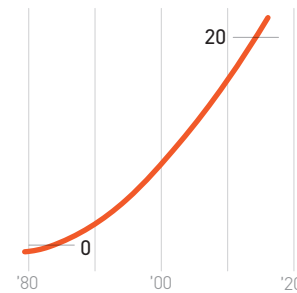
Surface temperature

CHANGE IN °C



Ocean heat content

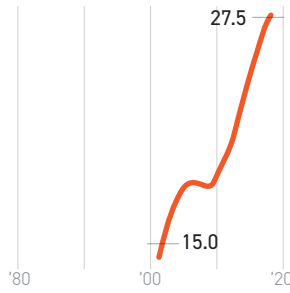
CHANGE IN 10²² JOULES



... and also leads to destruction of forests ...

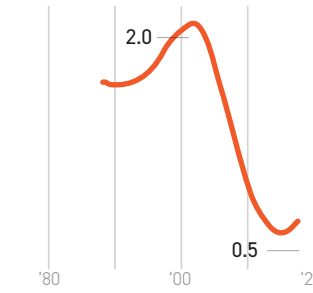
Global tree cover loss

MILLIONS OF HECTARES PER YEAR



Brazil Amazon forest loss

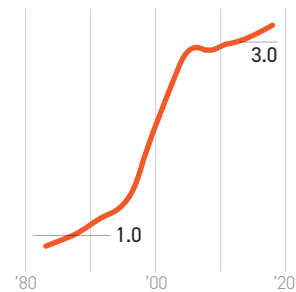
MILLION HECTARES PER YEAR



... and other changes in the Earth's biosphere ...

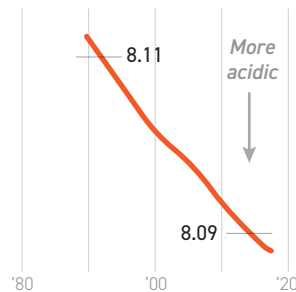
U.S. wildfires

MILLION HECTARES BURNED PER YEAR



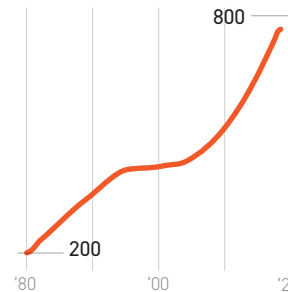
Ocean acidity

pH



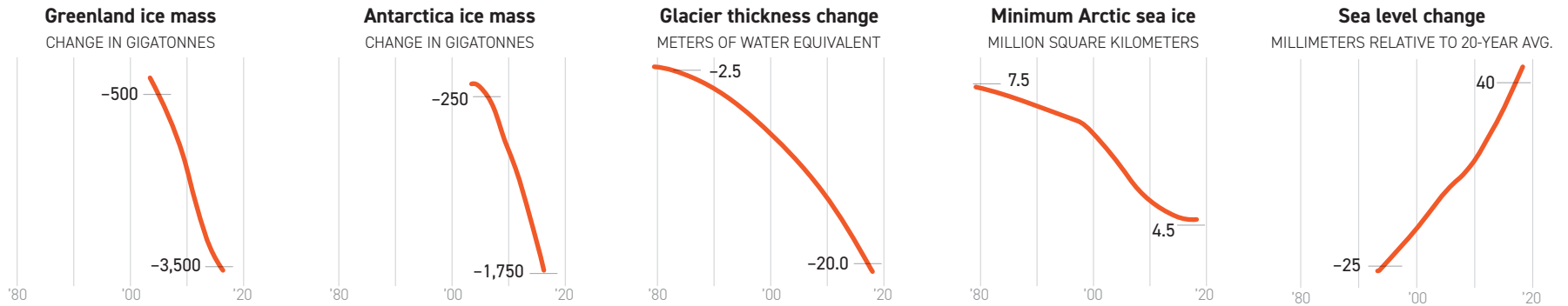
Extreme weather

EVENTS PER YEAR

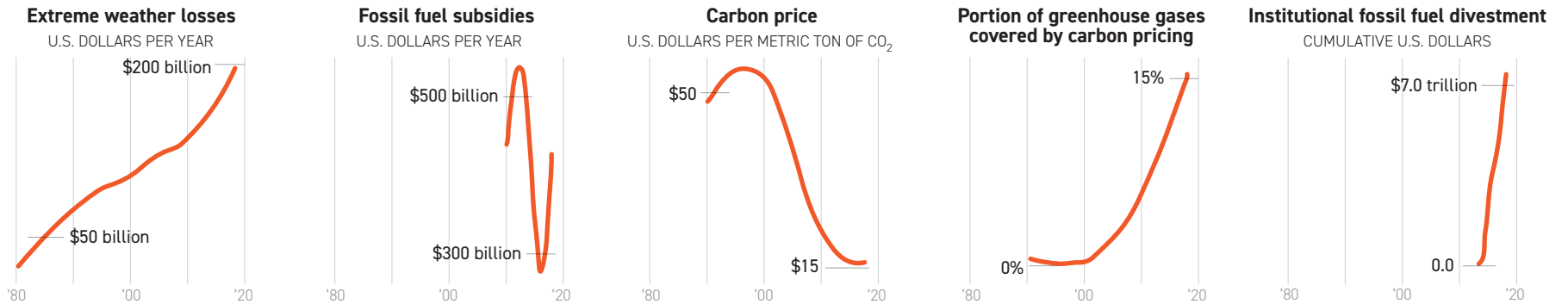


... including a massive loss of ice ...

... which is raising sea levels.



Efforts to control the problem have been inadequate — but are improving as the population demands action.



Source: "World Scientists' Warning of a Climate Emergency," William J. Ripple, Christopher Wolf, Thomas M. Newsome, Phoebe Barnard, William R. Moomaw, BioScience, 2019; <https://doi.org/10.1093/biosci/biz088>

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