

Climate on Tap

IPCC Report #6

Facilitator:
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What do you think we should focus on as a planet to solve the climate crisis?



Take a few minutes to ponder this, then share your thoughts with those at your table or with the person next to you.

We have seen the headlines:



from around the globe ...





The IPCC's volunteer scientists build consensus with all UN governments before releasing these reports. There are heated scientific arguments over the data, but in this unusual system, there must be an unanimous agreement by the scientists and their governments that the report accurately represents the data. This is what makes the IPCC the most authoritative and respected body on climate change.

4 KEY FINDINGS

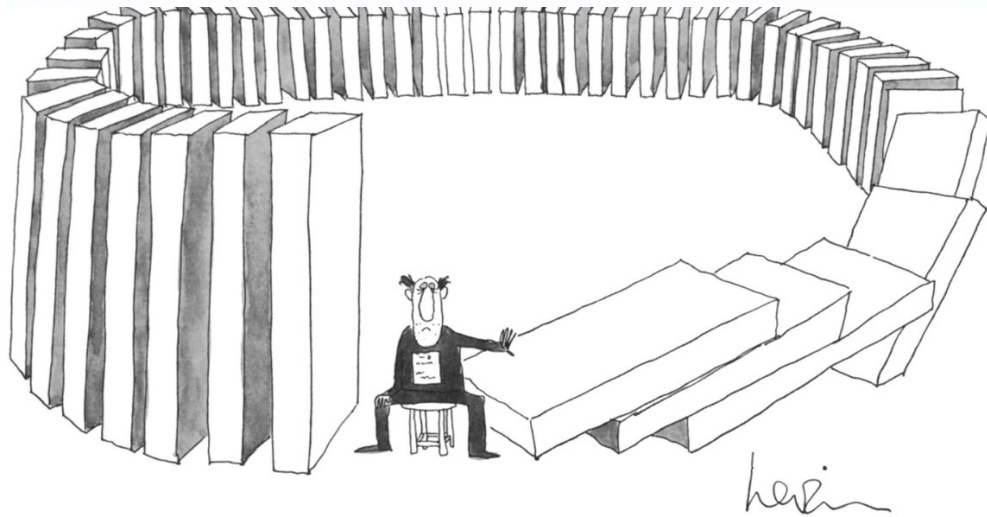
of the Intergovernmental Panel on Climate Change*

- 1 There is 95 percent certainty that human activities are responsible for global warming
- 2 Carbon dioxide is at an "unprecedented" level not seen for at least the last 800,000 years
- 3 Sea level is set to continue to rise at a faster rate than over the past 40 years
- 4 Over the last two decades, the Greenland and Antarctic ice sheets have been melting and glaciers have receded in most parts of the world

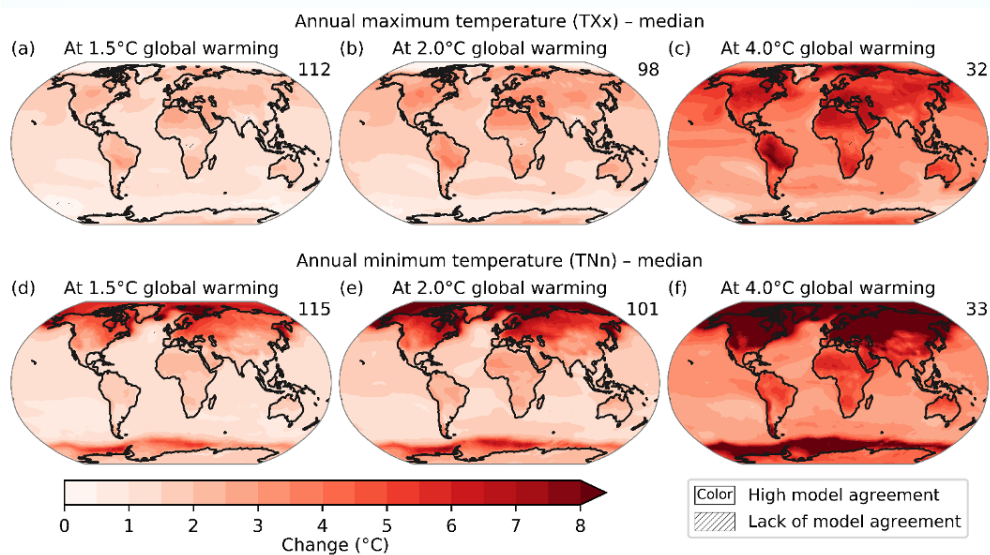
* IPCC Assessment Report Summary for Policy Makers, released Sept. 27, 2013
<http://www.ipcc.ch/>

NASA GLOBAL CLIMATE CHANGE
climate.nasa.gov

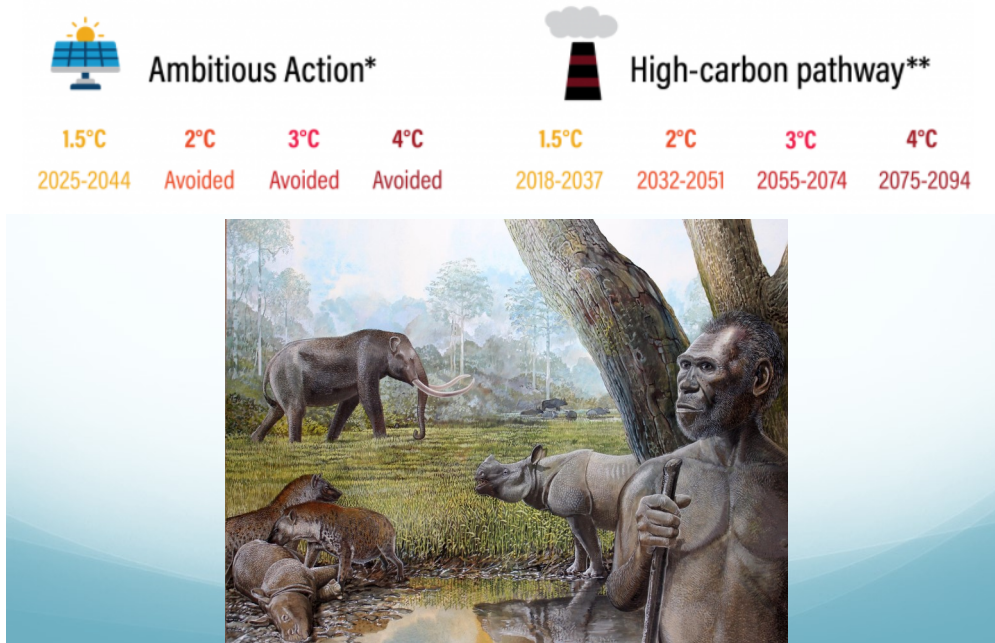
IPCC Report #6 – Information and Implications



The last decade was hotter than any period in the last 125,000 years

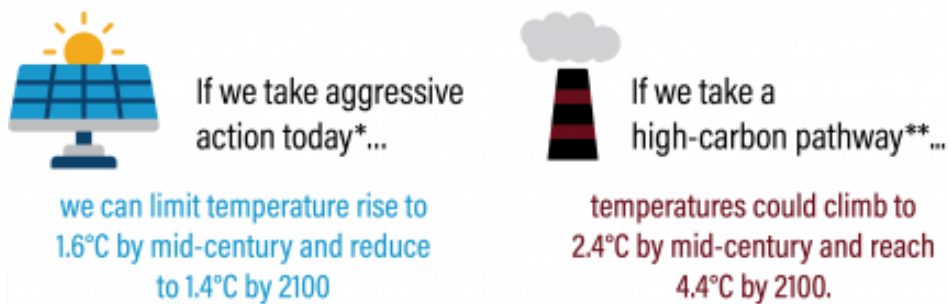


When Might Temperature Thresholds Be Reached?

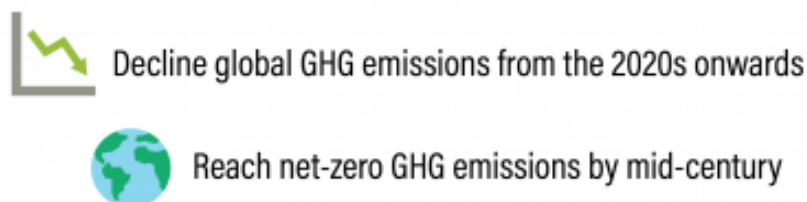


If the world takes a carbon-intensive pathway (SSP5-8.5), global warming could climb to 3.3-5.7 degrees C (5.9-10.3 degrees F) higher than pre-industrial levels by the end of the century. To put that in perspective, the world has not experienced global warming of more than 2.5 degrees C (4.5 degrees F) for more than 3 million years, a period with a very different climate system.

Can We Limit Global Warming to 1.5°C By 2100?



What Actions Are Necessary to Limit Warming to 1.5°C?

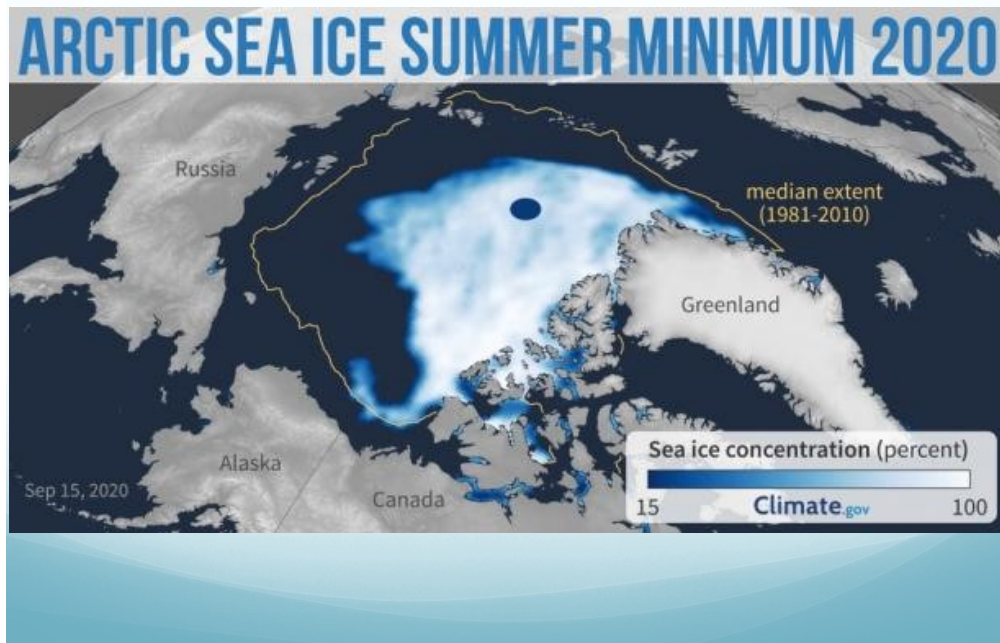


**Why should we care about
a half degree of warming?**



**Arctic Sea Ice –
lowest level in at least 1,000 years**



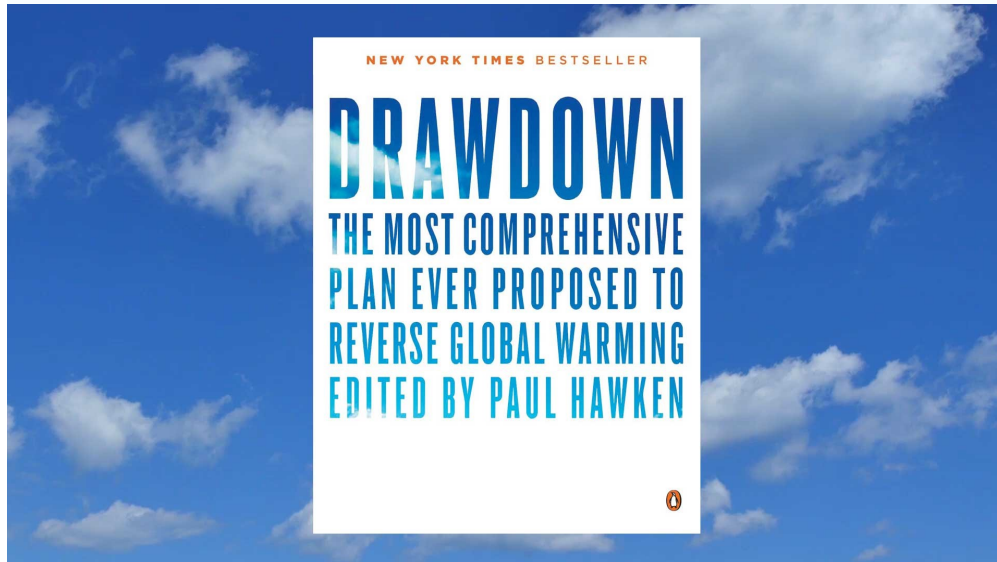


At the end of July, 40% of the 4,000-year-old Milne Ice Shelf, located on the north-western edge of Ellesmere Island, calved into the sea. Canada's last fully intact ice shelf was no more. The Arctic is unravelling. And it's happening faster than anyone could have imagined just a few decades ago. Northern Siberia and the Canadian Arctic are now warming three times faster than the rest of the world. In the past decade, Arctic temperatures have increased by nearly 1C. If greenhouse gas emissions stay on the same trajectory, we can expect the north to have warmed by 4C year-round by the middle of the century.

Limiting global warming to 1.5 degrees C by the end of the century is still within reach, but requires transformational change.

- ❖ Accelerate the increased share of renewables in electricity generation five times faster
- ❖ Phase out coal in electricity generation five times faster
- ❖ Reduce the carbon intensity of electricity generation three times faster
- ❖ Accelerate the uptake of electric vehicles 22 times faster than the significant rates of adoption in recent years
- ❖ Accelerate the increase in the share of low-carbon fuels by eight times faster
- ❖ Accelerate the increase in annual tree cover gain five times faster

100 proven solutions to solve the climate crisis



Next Climate on Tap on November 3rd!

ELECTRICITY GENERATION

Biomass
Cogeneration
Concentrated Solar
Energy Storage (Distributed)
Energy Storage (Utilities)
Geothermal
Grid Flexibility
In-Stream Hydro
Methane Digesters (Large)
Methane Digesters (Small)
Micro Wind
Microgrids
Nuclear
Rooftop Solar
Solar Farms
Solar Water
Waste-to-Energy
Wave and Tidal
Wind Turbines (Offshore)
Wind Turbines (Onshore)

FOOD

Biochar
Clean Cookstoves
Composting
Conservation Agriculture
Farmland Irrigation
Farmland Restoration
Improved Rice Cultivation
Managed Grazing
Multistrata Agroforestry
Nutrient Management
Plant-Rich Diet
Reduced Food Waste
Regenerative Agriculture
Silvopasture
System of Rice Intensification
Tree Intercropping
Tropical Staple Trees

WOMEN AND GIRLS

Educating Girls
Family Planning
Women Smallholders

BUILDINGS AND CITIES

Bike Infrastructure
Building Automation
District Heating
Green Roofs
[Heat Pumps](#)
Insulation
Landfill Methane
LED Lighting (Commercial)
LED Lighting (Household)
Net Zero Buildings
Retrofitting
Smart Glass
Smart Thermostats
Walkable Cities
Water Distribution

LAND USE

Afforestation
Bamboo
Coastal Wetlands
Forest Protection
Indigenous Peoples' Land Management
Peatlands
Perennial Biomass
Temperate Forests
Tropical Forests

TRANSPORT

Airplanes
Cars
Electric Bikes
Electric Vehicles
High-speed Rail
Mass Transit
Ridesharing
Ships
Telepresence
Trains
Trucks

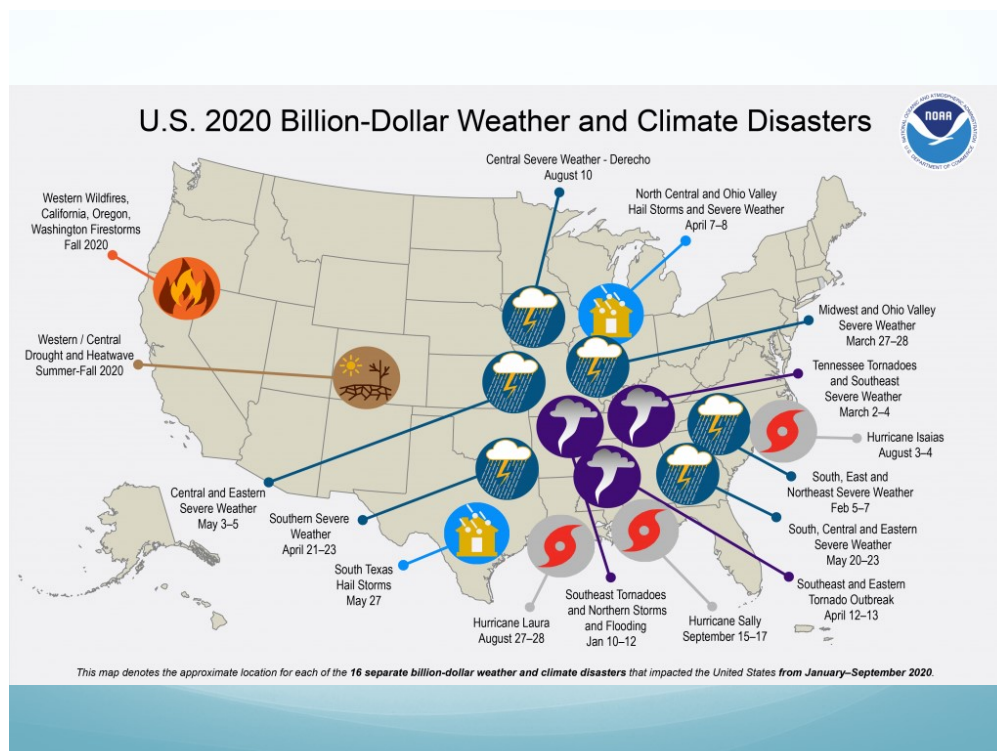
MATERIALS

Alternative Cement
Bioplastic
Household Recycling
Industrial Recycling
Recycled Paper
Refrigerant Management
Water Saving - Home

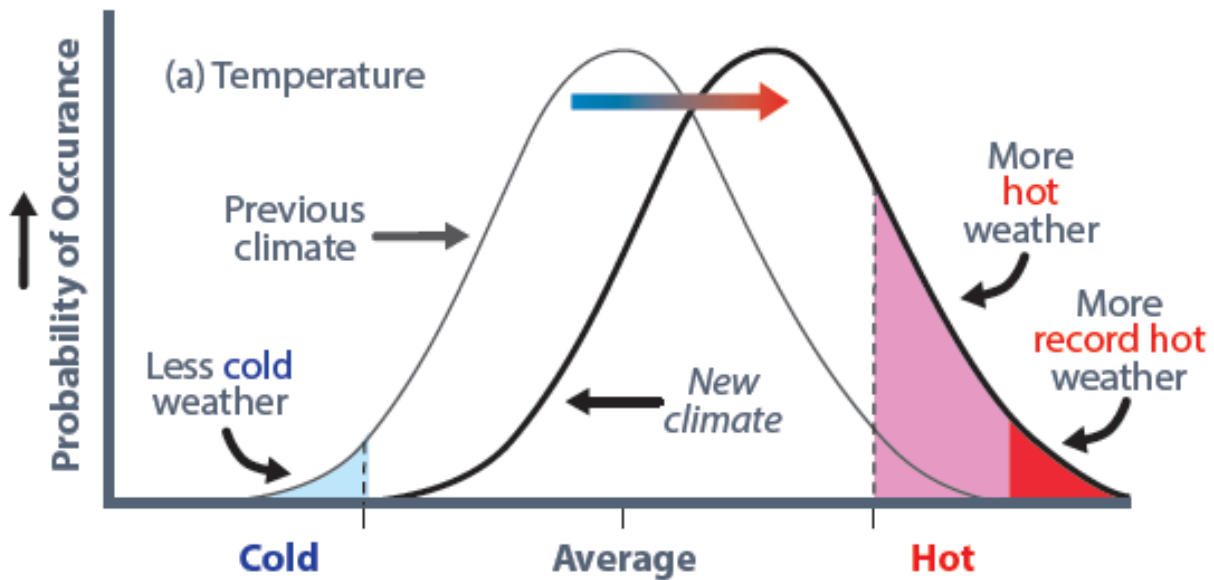
Our understanding of climate science — including the link to extreme weather — is stronger than ever.



Scientists can now link specific weather events to human-made climate change. This hasn't always been the case. As recently as 20 years ago, we couldn't say for certain that Hurricane Ida's intensity was a result of climate change, but the record number of intense storms we are seeing now statistically could not occur without the effects of a dramatically changing climate.



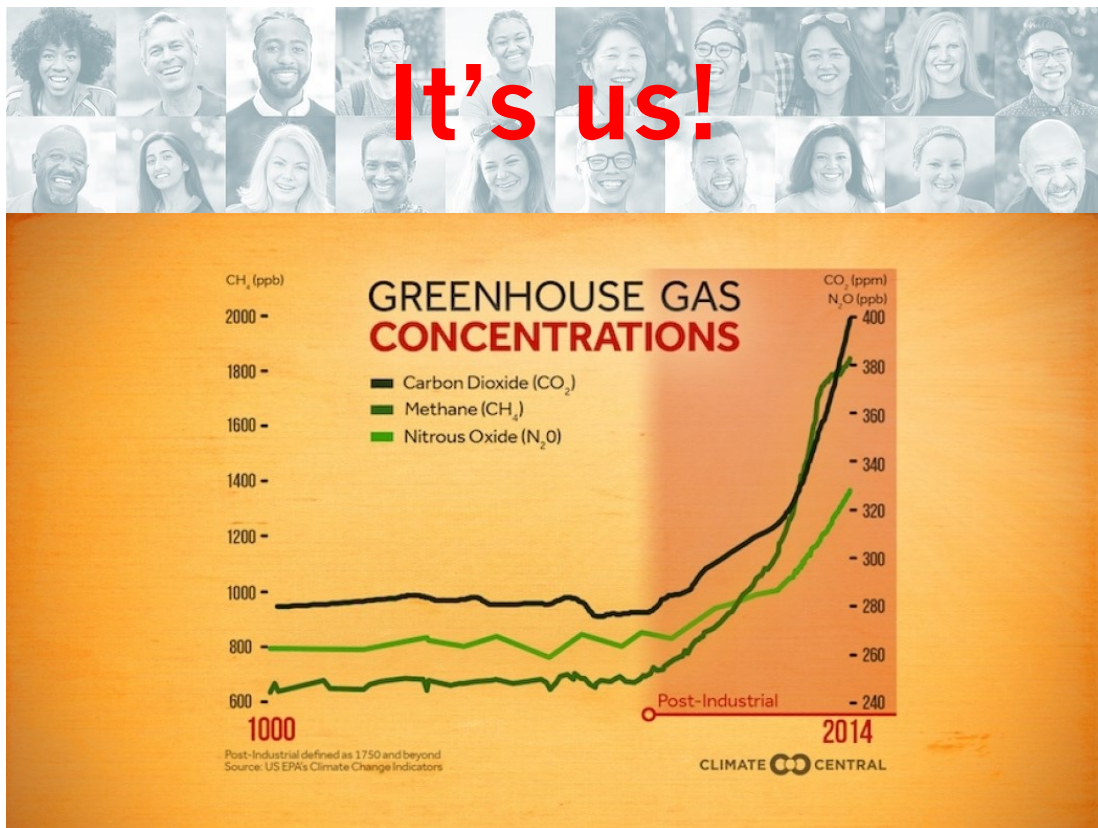
The new normal?



It's us!

It is now unequivocal that human-caused emissions, such as from burning fossil fuels and cutting down trees, are responsible for recent warming.





The changes we are already seeing are unprecedented in recent history and will affect every region of the globe.



Southern Africa, the Mediterranean, the Amazon, the western United States and Australia will see increased droughts and fires, which will continue to affect livelihoods, agriculture, water systems and ecosystems. Changes in snow, ice and river flooding are projected to impact infrastructure, transport, energy production and tourism in North America, the Arctic, Europe, the Andes and more. Storms will likely become more intense over most of North America, Europe and the Mediterranean.



Climate change has already impacted every region on Earth. We are not only smashing record after record for warming and other impacts, but the world in which we live today has no recent parallel.





Which path do we take?

The Earth rewards good behavior



If we can get to net zero with our CO₂ emissions (i.e. if we remove as much CO₂ as we generate, through planting trees, sustainable agriculture, etc.), heating will cease to increase and temperatures will stabilize in a couple of decades. We will still be dealing with the severe weather effects we see now, but we will limit even worse effects. Unfortunately, some effects like sea level rise will remain irreversible for centuries. But it is clear — reducing emissions and increasing removal of CO₂ in the short term will leave future generations with a better planet.

What is your vision of a livable future?



Climate on Tap

Thank you for coming!
Questions?

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