

SECTIONS



**Common
Dreams**

SUBSCRIBE

DONATE

Published on Saturday, November 16, 2019 by Common Dreams

Venice Is Flooded— A Look at Our Coastal Future

It might look like the city—world famous for its canal streets—is sinking. But that is not what's happening.

by Arshad M Khan, Meena Miriam Yust

4 Comments



AC Milan's goalkeeper Gianluigi Donnarumma walks in St. Mark square on November 16, 2019 in Venice, three days after the city suffered the highest tide in 50 years. - Flood-hit Venice was bracing for another exceptional high tide on November 15, as Italy declared a state of emergency for the UNESCO city where perilous deluges have caused millions of euros worth of damage. (Photo: Filippo Monteforte/AFP/Getty Images)

If humans have been lucky, basking in the comforting warmth of an inter-glacial period for the last 10,000 years, that luck may be about to turn. Rest assured we are not entering a glacial period. No, our quest for greater comfort has us pumping fossil fuel residues in the air—particularly CO2—warming the earth beyond its natural

NEVER MISS A BEAT

Get our best delivered to your inbox.

SIGN UP

Today's Views



Peter Certo
[End the Wars, Win the Antiwar Vote](#)



Tom Engelhardt
[Which Witch Are We Witch Hunting?](#)



Alison Bodine
[Chile Despertó! Chile Has Woken Up! The Rising Fight Against Neo-Liberalism in Chile](#)

trajectory. One consequence is melting Arctic (especially Greenland) ice and coastal flooding.

Problematic as that might be, new research holds worse in store... much worse, for the Antarctic has not been a passive bystander. It melted when the north was taking a rest allowing no let up.

The previous glacial age lasted from 125,000 to 118,000 years ago. A paper published November 6, 2019 in *Nature Communications* (Vol. 10, Article # 5040) has found the Greenland ice sheet melt insufficient to explain the highs of the rise then. In fact, it was the Antarctic ice sheet, previously thought to be inconsequential, that was key. It turns out the Southern Ocean warmed first at the start of the inter-glacial, leading to a change in the circulation pattern of the oceans and to a warming of the northern polar areas to start the ice melt in Greenland.

Temperatures then were up to 1°C higher than now but the same has been estimated for us in the future. However, this time climate changes on earth have been accelerated by greenhouse gas emissions over the industrial period, resulting in more extreme climate changes than in the last inter-glacial.

The research has also revealed that ice melt caused a 10 meter sea level rise above the present level at a rate of 3 meters (about 10 feet) per century, a rate that is 10 times higher than the rise observed in the last 150 years. If 10 ft. per century has a remote feel, try a foot every 10 years!

This is far greater than current projections of sea level rise that anticipate an increase at the



Jim Page
WTO Shutdown:
"Shut It Down.
Didn't We. Don't

Let Them Tell You That It Can't Be Done."...



Ady Barkan,
Bonnie Castillo
Medicare for All
Will Take a

Movement, Not a Politician



Ari Paul
Bloomberg
Scandals Don't
Bother the

Billionaire's Punditry Class
Cheerleaders...



Leland Nally
Obama Is Wrong
to Push
Democratic Party

Centrism



Simon Whalley
The Choice Is
Ours: Extinction
or Rebellion?



Rupert Read,
Frank Scavelli
Sanders' Green
New Deal: A

Realistic Response to the Emergency
That Will Define Our Lifetimes...



Bama Athreya
Twenty Years After
Seattle, Is There a
New Race to the

Bottom?

James Zogby

most to about 3 feet above 2000 levels by 2100. The predictions, however, do not account for an important natural outcome of ice sheet melt, that of ice cliff instability. The ice cliffs form as the warm water melts their ice under the water, eating away until the cliff shears off and collapses into the sea.

The collapse is a sudden and unpredictable addition to the gradual melt in the ocean. It also means that polar ice sheet melt can affect sea levels far more intensely than has been projected so far, and it could account at least in part for the much higher rise found by the researchers in the prior inter-glacial. Are we in for a surprise!

If incoming solar radiation was greater in the last inter-glacial because of the earth's position relative to the sun, the CO2 levels were lower, at 280 parts per million as opposed to 410 plus today. Worse, in the former inter-glacial the two polar areas did not warm up simultaneously. Today's intensive climate change is propelled by greenhouse gases, and the warming is bipolar with the ice melting in both polar regions at the same time.

Another paper also [published](#) in *Nature Communications* a week earlier (Vol. 10, Article # 4844 October 29, 2019) examines global vulnerability to coastal flooding from rising sea levels given new metrics for measuring land elevation. The model currently in use for this measurement, developed by NASA, has a 2 meter vertical bias. Using a new Coastal DEM (Digital Elevation Model) and a mean estimate of sea level rise this century, the authors estimate 190 million people live below projected high tide lines at present. This rises to 630 million by century's end in the extreme



Netanyahu's Real Crimes...



Naomi Klein, Sivan Kartha
The Realism of Bernie Sanders'

Climate Policy...

[➤ More Views](#)

Connect With Us



News That Matters



Nadler Invites Trump to Either Participate in Impeachment Hearing Next Week or 'Stop Complaining'



Expert Says Senate Democrats' Sweeping Online Privacy Bill Answers Public Demand for 'Transformative Shift'



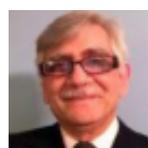
Obama Privately Considered Leading 'Stop-Bernie Campaign' to Combat Sanders 2020 Surge: Report

Climate Expert Says UN Emissions

case of high emissions. Increase the sea level rise to 3 meters (10 feet) projected in the other paper above and a billion people could be in jeopardy.

What can one expect? Well, the first signs of trouble will be when coastal flooding that used to happen once a decade becomes an annual event, or when unprecedented events occur. Venice is a current example. In a rare historic flood its iconic St. Mark's Square is hip-deep in water. The church itself and its priceless frescoes could be in danger if the water rises further.

The increased coastal flooding will be gradual of course. Our children, their children, and so on down the line will be the real innocent victims of our legacy/profligacy.



Arshad M Khan is a retired professor and occasional commentator.



Meena Miriam Yust is an attorney based in Chicago, Illinois. Educated at Vassar College and Case Western Reserve University School of Law, she published a draft Migratory Insect Treaty with commentary in the Case Western Reserve Journal of International Law.

Our work is licensed under a Creative Commons Attribution-Share Alike 3.0 License. Feel free to republish and share widely.

This is the world we live in. This is the world we cover.



Report Makes Clear Only Solution Is to 'Cut Off Supply of Fossil Fuels at Their Source'



'Ten Year Challenge' for 400 Wealthiest Americans Shows Fortunes Doubled Since 2009 While Tax Rates Dropped



So-Called 'Army Built to Fight Medicare for All,' Says Healthcare Expert, Really 'Just Hired Guns Hired by Corporate Stooges'



WATCH: First Lady Melania Trump Loudly Booed by Students During Baltimore Opioid Summit



Athena vs. Amazon: New Coalition Debuts on Eve of Holiday Shopping Season to Call Out Company's "Long Line of Abuses"



'This Is Meant to Scare Workers': Vows to Fight Back After Google Fires Four Employees Who Led Organizing



If Not for Damage to Future Presidents, Trump

Because of people like you, another world is possible. There are many battles to be won, but we will battle them together—all of us. **Common Dreams is not your normal news site. We don't survive on clicks. We don't want advertising dollars. We want the world to be a better place.** But we can't do it alone. It doesn't work that way. We need you. If you can help today—because every gift of every size matters—please do. **Without Your Support We Won't Exist.**

Please select a donation method:

Claims He Would 'Love' to Have Pompeo, Mulvaney, Perry, Bolton, and Others Testify

[➤ More News](#)

Further

Bringing Shame To Our People and Our Country: Miller (Still) Must Go



Democrats, civil rights groups and other sentient humans have demanded the removal of Nazi-fan-boy, xenophobe and, yes, Jew Stephen Miller after emails leaked of him peddling white nationalist conspiracies and ranting about white genocide. Now, after more damning leaks, multiple Jewish groups say he must go; they include a broad progressive coalition and three branches of Judaism that say his presence in the White House "sends chills down rabbis' spines."

[Read More...](#)

[➤ More Further](#)

Share This Article

Related Articles



Declaring State of Emergency, Venice Mayor Blames Climate Crisis for Historic Flooding



Welcome to a World in Which All Hell Is Breaking Loose



'Mother Nature Does a Mic Drop': Venice City Council Chamber Floods Minutes After Members Vote Down Climate Crisis Amendment



Mind the Gap: On the Glaring Hole Between Global Fossil Fuel Expansion and Paris Climate Goals

More in: [World](#), [Climate](#) ,

Italy, Extreme Weather

Top Comments

(Click to see more comments or to join the conversation)

About Common Dreams

Our Mission:
To inform. To inspire.
To ignite change for the common good.

Common Dreams has been providing breaking news & views for the progressive community since 1997. We are independent, non-profit, advertising-free and 100% reader supported.

- [About Common Dreams](#)
- [Testimonials](#)
- [Key Staff](#)
- [Writers' Guidelines](#)
- [The Commons - Community Guidelines](#)
- [Privacy Policy](#)
- [Jobs](#)

Contact Us

📍 Common Dreams
P.O. Box 443
Portland, ME 04112-0443
USA

✉ via Email:

- [Editor](#)
- [News Tips?](#)
- [Corrections?](#)
- [Views Submissions](#)
- [News Release Submissions](#)
- [Webmaster / General Info](#)

☎ 207.775.0488

Common Dreams brings you the news that matters.

SUPPORT Common Dreams

Sign up for Newsletter

[Click to Sign Up](#)

Connect With Us



