rights violations. It was the tough U.S. and international sanctions that brought Iran to the table in the first place, and it was we in this Congress who enacted many of those economic sanctions.

To sum up, we need to put more pressure on Iran with additional economic sanctions to stop it from developing its ICBM missiles, and pulling out of the Iran nuclear agreement now is a tragic mistake. It will divide us from our European allies, and it will cause Iran to build a nuclear bomb within a year instead of preventing it from building one for at least 7 to 12 years. That seems, to me, to be a choice that we made at the time we entered this agreement. It seems to be all the more clear today that we ought to continue the agreement.

I yield the floor.

I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The senior assistant legislative clerk proceeded to call the roll.

Mr. WHITEHOUSE. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. DAINES). Without objection, it is so ordered.

Mr. WHITEHOUSE. Mr. President, I ask unanimous consent to speak for up to 15 minutes as in morning business.

The PRESIDING OFFICER. Without objection, it is so ordered.

CLIMATE CHANGE

Mr. WHITEHOUSE. Mr. President, situated off the northeast corner of Australia lies one of the seven natural wonders of the world, a wonder that is visible from space—the Great Barrier Reef. Each year, around 2 million visitors come from around the globe to experience the Great Barrier Reef. They come to see hundreds of species of sharks, dolphins, fish, mollusks, whales, seabirds, and other marine life thriving in nearly 133,000 square miles of coral reef. Some of these coral structures are thought to date back as long as 25 million years. When Pope Francis spoke of the ''wonderworld of the seas,'' this is the kind of beauty and bounty he had in mind.

It is difficult to imagine something so expansive and ancient threatened so profoundly by one of Earth's more recent inhabitants—humans—but it is. The oceans are taking the brunt of our modern carelessness. They are warming, acidifying, and literally suffocating under our carbon dioxide emissions. They are fouled with our plastic garbage, and they are polluted with runoff from farming and storm water wash into the sea.

I have come to the floor before to plead that my Senate colleagues heed the warnings of our oceans. Those warnings are loud and clear and measurable. They are measurable with thermometers, tide gauges, and simple pH tests, and they are chronicled by the testimony of fishermen and sailors.

Today I wish to focus on that Great Barrier Reef. A healthy coral reef is one of the most productive engines of life on Earth. It is home to 25 percent of the world's fish biodiversity. The corals use calcium carbonate—a compound usually readily available in ocean water—to build their hard skeletons. These hard structures shelter the living coral polyps and undergird the entire ecosystem that depends on the reef. Without the corals, the whole thing collapses.

The living corals have evolved a symbiotic relationship with tiny photosynthetic algae called zooxanthellae. The algae live in the surface tissue of the corals. It is the algae that provide the color that you see healthy corals display. The corals' metabolic waste is converted by the algae back into food and oxygen for the corals, and, in turn, corals shelter the algae.

However, the range of pH, temperature, salinity, and water clarity within which this symbiotic magic takes place is fairly narrow. Get outside that comfort range, and the corals get stressed. When they are stressed enough, they begin to evict their algae. This is what is called ''coral bleaching.'' The corals whiten as they shed their colorful algae.

Of course, without the algae, corals can't live for long. The algae can resettle, and the corals can recover, but if the algae don't resettle, the corals soon die. That is what is happening in huge swaths of the Great Barrier Reef, and here is why.

As we have pumped massive quantities of waste $CO_2$ into the atmosphere, dramatically raising the concentration of carbon dioxide in the Earth's atmosphere, the oceans have absorbed approximately 30 percent of all of that excess carbon dioxide.

We recently broke a dangerous new atmospheric record, exceeding a monthly average of 410 parts per million of carbon dioxide in the atmosphere for the first time in human history.

For comparison, at the start of the Industrial Revolution, atmospheric carbon dioxide was around 280 parts per million. That is 280 not so long ago and 410 now, and 300 had been about the upper limit of carbon dioxide in the atmosphere for as long as human beings have been on this planet.

About a third of all of that added $CO_2$ gets absorbed by the ocean, and it is absorbed with a chemical reaction that makes the ocean more acidic. That is why we talk about ocean acidification.

At the same time that the oceans have been soaking up all of that excess $CO_2$, they have also been soaking up heat—lots of heat—roughly 90 percent of the excess heat trapped in the atmosphere by these greenhouse gases. As a result of all of that heat, the oceans are warming as they get more acidic, more often knocking the corals out of the conditions they need for that symbiosis to thrive.

We are only 1 year out from the massive bleaching that tore across the globe from 2014 to 2017. NOAA branded it ''the longest, most widespread, and possibly the most damaging coral bleaching event on record.''

This graphic shows how severe and pervasive the bleaching was. The light blue areas on the map, which you really don't see any of, represent the parts of the ocean that are under no stress. These are the continents. There is North America and South America. Over here is Australia. There is Asia. And the red parts are the oceans.

The lighter red is ''Alert Level 1'' areas, where heat stress led to significant coral bleaching. The deeper red is ''Alert Level 2'' areas, which experienced not only widespread coral bleaching but also significant coral die-off. This white box right here marks the Great Barrier Reef. You can see that severe coral bleaching in the northern edges of the Great Barrier Reef, and this was new. According to NOAA, these are areas where bleaching had never occurred before.

In 2016 scientists with the Australian Research Council's Centre of Excellence for Coral Reef Studies undertook extensive aerial and in-water surveys of the Great Barrier Reef to estimate the extent of the damage. Out of the over 900 individual reefs that were surveyed, only 7 percent of those reefs escaped bleaching, and 93 percent were hit. In the northern portion of the Great Barrier Reef, upwards of 80 percent of the corals were severely bleached.

When the researchers returned, they found that up to two-thirds of those corals in the northern section had died. The central and southern sections fared better but still saw corals dying.

A recent paper in Nature by Australian and NOAA researchers totaled the damage. The paper's lead author, Dr. Terry Hughes, told The Atlantic: ''On average, across the Great Barrier Reef, one in three corals died in nine months.''

In the northern section of the reef, researchers found that some species, such as staghorn and table corals, suffered what they called a ''catastrophic die-off.'' In total, about one-half of the northern range's corals died.

Dr. Hughes went on to say the Great Barrier Reef ''has transformed into a completely new system that looks differently, and behaves differently, and functions differently.'' That is climate change.

In an interview with Huffington Post, Dr. Hughes said the heat wave that caused the bleaching was so intense that some of the corals basically ''cooked'' and died quickly. Usually, if corals can't recover their algae after a bleaching event, they slowly starve to death. Some of the less resilient species crashed by up to 90 percent in the recent bleaching.

Dr. Hughes made clear to the Atlantic that human-caused climate change was the driving force behind this coral bleaching. Indeed, the title of his nature article is, ''Global warming transforms coral reef assemblages.''

Dr. John Bruno from the University of North Carolina said that the loss of the Great Barrier Reef's corals is ''like clear-cutting a redwood forest.'' He went on:

In 10 years, you're going to have a lot of stuff on the ground, but you're not going to have the old-growth forest back. Some of these corals were 10, 30 years old, but a lot of them were centuries old. In 100 years—if there is no more warming—they could return.

In 100 years, they could return.

Dr. Hughes and his colleagues, however, were less optimistic in their nature paper. They wrote: ''The most likely scenario, therefore, is that coral reefs throughout the tropics will continue to degrade over the current century until climate change stabilizes, allowing remnant populations to reorganize into novel, heat-tolerant reef assemblages.'' Remnant populations are all they expect to survive.

Researchers are trying to understand the consequences of losing so much coral in our seas. Obviously, if you harm the corals, you harm the reef; if you harm the reef, you destabilize life throughout the reef, and that is bad for oceans.

A recent paper in Global Change Biology found severe declines in the populations of the fish most connected with the corals hit hardest by the bleaching. So the cascade effect is already observed.

The Great Barrier Reef even sounds different. A study published last week in the Proceedings of the National Academy of Sciences compared the lively underwater cacophony of a vibrant Great Barrier Reef in 2012 with the quiet of bleached locations in 2016. The life that teems around a healthy reef decreased with the loss of the corals.

There are actually some open-ocean species, like juvenile clownfish—or the Nemos—that actually rely on sound coming off these reefs from all the life and all the feeding and all the activity and that actually use that sound to find reefs to go settle on. So this quiet of dying reefs makes their job of finding new homes harder.

Climate change makes the heat waves that spur coral bleaching more intense and also more frequent, leaving corals less time to recover before the next heat wave hits, and we may see the more vulnerable corals fail to recover at all as the waters warm too much for them to survive.

A study published earlier this year in Science looked at 100 tropical reefs and found that only 6 had avoided bleaching. Bleaching events that occurred in the past, once in a generation, now occur around every 6 years. As the Guardian summarized it, ''Repeated large-scale coral bleaching events are the new normal thanks to global warming.''

So what can we do about it? Scientists are working to better understand what makes certain corals more resilient and to try to use these lessons to protect more vulnerable species. But that research nibbles at the fringes of this global die-off. There is some localized work on things like sun shields to help protect shallow corals during peak heat. Senator MCCAIN and I visited efforts to rebuild shattered coral reefs in Indonesia, but these tiny efforts can't offset the global onslaught of climate change unless we move fast to address the real problem.

Australia announced last week that it would invest around $400 million in a patchwork of efforts to protect the Great Barrier Reef: increasing monitoring and enforcement, for instance; limiting pollution runoff from shore; trying to keep out certain invasive starfish; and trying to help restore lost corals. But the plan does not address the main culprit behind coral bleaching, and that culprit is climate change. Scientists noticed that omission, including the Australian Academy of Science, which pointed out the problem that the reef is ''highly vulnerable to climate change,'' and ''urge[d] the government to address the cause of the problem.''

The call of those scientists is a call that we, too, ought to heed. One of the great wonders of God's Earth is on its way to turning into a sandy relic because we are unwilling to say no to the fossil fuel industry. It is that simple.

This coral die-off is one of innumerable consequences that our Earth is already warning us with. It is not the only signal; it is one of many. But nothing that can't be monetized for an industry seems to get our attention around here. Instead, it appears we will have to look future generations in the eye and tell them that there was once a Great Barrier Reef, that it was one of the wonders of the world, and that we let it die to keep the fossil fuel industry happy.

It is time we woke up.

I yield the floor.

The PRESIDING OFFICER. The Senator from Tennessee.

## HEALTHCARE

Mr. ALEXANDER. Mr. President, for the sixth consecutive year, ObamaCare insurance rates are going up, and Democrats are already running around pointing fingers, trying to find someone else to blame.

About 10 days ago, the distinguished Democratic leader came to the floor and warned that, very soon, health insurance companies will be announcing rates for 2019 in each State across the country. He said that many health insurance companies will propose rate increases.

Today, several Democratic Senators held a press conference saying that insurance rates are going to go up in 2019. Well, they are exactly right. Insurance premiums are going to go up in 2019, just as they have for the 5 previous years of ObamaCare. But they are exactly wrong about who to blame.

The Democrats wrote the bill. They wrote ObamaCare, and they voted for ObamaCare—every single one of them. Not a single one of us voted for ObamaCare. They wrote the bill. If they are looking for someone to blame, they should look in the mirror.

Running around, pointing fingers, and trying to find someone else to blame is a little like selling somebody a house with a leaky roof and then blaming the new owner for the leaky roof. Democrats built the house with the leaky roof. They built these insurance markets—the individual markets, where no one can find insurance. They wrote the sloppy law. They failed to make the markets competitive, and they erased the ability of consumers to have choices. They didn't follow the law when they paid out cost-sharing payments that were designed to help low-income Americans pay for their out-of-pocket expenses, and—this is the very worst—when Republicans were prepared 1 month ago to stabilize these markets and, according to the Oliver Wyman healthcare experts, to lower rates by up to 40 percent over 3 years, the Democrats said no.

President Trump asked Speaker RYAN and he asked Senator MCCONNELL to put that bipartisan proposal in the omnibus spending bill that passed. The Republicans said yes, and the Democrats said no. So the rates are going up because Democrats wrote the law, and they said no to lowering the rates.

What Democrats don't say—but every American should know very well—is that health insurance rates didn't start increasing when President Trump took office 15 or 16 months ago. Insurance rates have been increasing since ObamaCare took effect more than 5 years ago.

In 2010, there was a big discussion at the Blair House. I was invited to make the Republican case for President Obama, who stayed there all day and listened.

I said: Respectfully, Mr. President, the Affordable Care Act will not work. I said directly to him that ObamaCare would send an unfunded Medicaid mandate to States. It did.

I said: It will cut Medicare by one-half trillion dollars. It did.

I said: There will be new taxes in it. There were.

I said: It will mean that for millions of Americans, premiums will go up because when people pay those new taxes, premiums go up, and they will also go up because of the government mandates—and they have, for 5 years. Now the Democrats are pointing out that their law, which they passed, will cause rates to go up for the sixth consecutive year.

Back in 2010, I said: Our country is too big, too complicated, too decentralized for Washington, DC—just a few of us here—to write a few rules about remaking 17 percent of the economy all at once. That is the size of the healthcare economy. That sort of thinking works in the classroom, but it doesn't work very well in the big, complicated country which is the United States of America. Since the