

flow from farms in the heartland, down the Mississippi River, and into the gulf. Last year's gulf dead zone reached record levels. NOAA, which measures these things, estimated the dead zone to be the size of New Jersey—the largest ever recorded in the Gulf of Mexico. NOAA assessed that the cause was unusually heavy rains in the Midwest associated with climate change that washed large amounts of fertilizer into the river and down to the gulf.

NOAA is not alone. Last year's Climate Science Special Report, the scientific backbone for the Federal Government's Fourth National Climate Assessment, discussed the growing issue of climate change-driven ocean deoxygenation. The report did not mince words. "Global ocean deoxygenation is a direct effect of warming." As water warms, it loses its capacity to absorb gases like oxygen, and warmer water circulates less, meaning there is less mixing of water and oxygen between the surface and deeper waters. The report attributes 85 percent of global oxygen loss to this stratification, as it is known, of the water.

Worldwide, ocean oxygen levels have declined. According to the Climate Science Special Report, the North Pacific, North Atlantic, Southern Ocean, subtropical South Pacific, and South Indian Oceans are all expected to experience further deoxygenation. Oxygen may drop off as much as 17 percent in the North Pacific by 2100 if we don't rein in carbon emissions.

Not surprisingly, fish and other marine wildlife try to steer clear of dead zones. If they are not able to breathe in these low-oxygen waters, they can die. Dr. Callum Roberts, a researcher at the University of York, has also warned that large and fast-moving fish that use more oxygen, like tunas, billfish, sharks, and fish like this unbelievably beautiful marlin, are being relegated to shrinking high-oxygen areas causing them to change how they hunt. A 2010 paper in *Deep-Sea Research* estimated that from 1960 to 2008, the areas in the ocean where oxygen levels are too low to support fish and other big ocean organisms have grown by over 1.7 million square miles—an added 1.7 million square miles with oxygen levels too low for God's beautiful creatures like this one.

One example of this phenomenon comes to us from former NOAA researcher Dr. Eric Prince, who noticed that blue marlin, a fish which is actually well known for its diving capabilities, would not leave the top hundred feet of ocean off of Costa Rica and Guatemala. Elsewhere, in the ocean, marlin regularly go half a mile down to hunt. The reason for constraining themselves to that top 100 feet of ocean? "A deep, gigantic and expanding swath of water that contained too little oxygen." A 2011 study in *Nature Climate Change* estimated that over 50 years the surface ocean habitat in the tropical Northeast Atlantic used by

tunas and billfish, like the blue marlin, has shrunk by 15 percent due to deoxygenation.

A study published earlier this month in the prestigious journal *Science* warned that though there may be a short-term fishing surge due to the crowding of fishing species into surface waters—they are easier to find because there is less oxygenated water that they are in—"in the longer term, these conditions are unsustainable and may result in ecosystem collapses, which ultimately will cause societal and economic harm."

This portends devastating effects. The World Health Organization says around 1 billion people rely on fish as their main source of protein. The U.N. Food and Agriculture Organization estimates 10 to 12 percent of the world's population base their livelihoods on fisheries or aquaculture. Bringing it closer to home, commercial fish landings for Rhode Island for 2016 totaled 82.5 million pounds and were valued at nearly \$94 million. In 2014, the New England ocean economy was valued at over \$17 billion and employed nearly a quarter of a million people. All of that is at risk as we pull out the cornerstones of our ocean ecosystem.

Here is where it actually gets a little weird. Oxygen depletion could actually spur a boom in nitrogen-breathing microorganisms—tiny microbes that breathe nitrogen instead of oxygen. They might then demand enough valuable nitrogen that they crowd out other ocean species that also need nitrogen, and these nitrogen species exhale nitrous oxide, which is a greenhouse gas which creates another possible climate change feedback loop.

As a recent Washington Post story put it, our growing understanding of ocean deoxygenation "underscores once again that some of the most profound consequences of climate change are occurring in the oceans, rather than on land."

As Dr. Denise Breitburg, the lead author of the recent *Science* paper said, "Of course, declining oxygen isn't happening in isolation. . . . Warming itself threatens marine food webs, as does acidification caused by increased carbon dioxide in the water. But the threats are worse when combined."

That is what we are seeing—deoxygenation, warming, acidification combined.

We recklessly ignore the warnings that the oceans are screaming at us. Scientists are seeing numbers and conditions in the oceans they have never seen before. We ignore also the high tides that now regularly flood downtowns of major cities as sea levels rise. We ignore fish species moving northward and offshore in search of cooler waters away from traditional fisheries. We ignore the oyster spat dissolving in acidic seawater before they can grow to maturity. We ignore coral reefs turning white and dying in warm, acidic seas. We ignore the record strength of warm-water-fueled 2017 hurricanes that killed

people, destroyed homes, and caused billions of dollars in damage.

I wonder how long can we ignore the cries from our oceans? Truly, it is time to wake up.

I yield the floor.

The PRESIDING OFFICER. The Senator from Kansas.

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

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

#### ORDER OF PROCEDURE

Mr. MCCONNELL. Mr. President, I ask unanimous consent that at 5 p.m. today, all postcloture time on the Brownback nomination be considered expired and that, if confirmed, the motion to reconsider be considered made and laid upon the table and the President be immediately notified of the Senate's action.

I further ask unanimous consent that the vote on the James nomination occur at 1:45 p.m. on Thursday, January 25, with all other provisions of the previous order in effect.

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

The Senator from Maryland.

#### BRINK ACT

Mr. VAN HOLLEN. Mr. President, I want to start my remarks today by focusing on a serious threat to our national security, and that is North Korea's nuclear program—both its nuclear weapons program as well as its missile program.

At this moment the United States must exert maximum economic pressure to get North Korea to engage in meaningful discussions with the goal of denuclearizing the Korean Peninsula.

That is why Senator TOOMEY and I introduced the BRINK Act. I was pleased to see the changing of the guard here at the desk, with the Senator from Pennsylvania having just been the Presiding Officer and the Senator from Colorado taking over, because I know the Senator from Colorado has also been very deeply involved in this issue to try to make sure that we address the threat of the North Korea program.

The BRINK Act is bipartisan legislation passed unanimously out of the Banking Committee back on November 7. It imposes very tough sanctions on North Korea, and, just as importantly, it has enforcement mechanisms to make sure financial institutions anywhere in the world that are not cooperating with the United States and our allies to impose those sanctions on North Korea are penalized. It is a very simple message: You can do business with North Korea or you can do business with the United States. You cannot do business with both.

Given that this passed unanimously out of the Banking Committee on November 7, and that since then North

Korea has tested an ICBM that analysts believe is capable of reaching all of the United States, we should move forward on this legislation now. In fact, just yesterday CIA Director Pompeo said that “North Korea is ever closer to being able to hold America at risk” and that its nuclear weapons program had developed at a “very rapid clip.”

We have no time to waste. We should move forward immediately on the BRINK Act and move forward on other legislation that came out of the Foreign Relations Committee on this issue. I think we owe it to the American people to do this right away, without further delay.

#### DETER ACT

Mr. President, I would like to turn now to another security threat to our country—a threat, really, to the core of our democracy—and that is foreign interference in our elections.

We all know we have great divisions and differences on lots of issues around our country and in this body, but one thing that should unite us all and one principle that should bring us all together, Democrats and Republicans alike—in fact, Americans, regardless of political party or political stripe—is that we should protect our democratic process. We should protect the integrity of our elections and our democratic institutions.

We know that our democracy has been under threat by foreign powers that want to interfere in our democratic process. In a declassified report released in January of last year, the intelligence community unanimously assessed that “Russian President Vladimir Putin ordered an influence campaign in 2016 aimed at the U.S. Presidential election.” As part of that campaign, the Kremlin hacked and released emails of the DNC. It could be the DNC yesterday, and it could be the RNC tomorrow. It could be any entity that they would seek to disrupt.

In 2016 they also breached voter registration databases of State and local election boards. They hacked a major voting software supplier and launched an extensive disinformation campaign targeting American voters during the 2016 election cycle. Their goal was not just to disrupt the candidacy of Secretary Clinton. Our intelligence community has assessed that Russia sought “to undermine public faith in the U.S. democratic process.” Even more importantly, the unanimous consensus of the intelligence community was that Moscow will apply its “lessons learned” to future elections in the United States and around the world.

We know that cyber attacks on our electoral system are only going to get more aggressive and more sophisticated over time, and Russia is not the only foreign power capable of waging a cyber war on our democracy. We should expect that other hostile actors will seek to undermine our democratic system, as well.

With this in mind—even as we assess what happened in 2016—it is really im-

portant that we come together to focus on what could happen in 2018 and beyond. We need to work together urgently to prevent these attacks on our democracy. The question is, How do we do that? There are lots of things we can be doing, but one way is to make very clear to any foreign adversary that the costs of interfering in our elections far outweigh the benefits.

In order to effect that calculation, Senator RUBIO and I recently introduced the Defending Elections from Threats by Establishing Redlines, or the DETER, Act. The DETER Act is a bipartisan bill, and it is designed to be forward looking and to prevent foreign interference in our elections. It sends an unequivocal message to any foreign power: If you attack American candidates, campaigns, or voting infrastructure, you will automatically face severe consequences, and we will use the full range of the tools at our disposal to impose those punishments.

To start, the DETER Act mandates regular reporting from the executive branch to the Congress on foreign threats to our elections. Specifically, it requires the Director of National Intelligence to issue a determination to Congress, not more than one month after every Federal election, on whether or not a foreign government or an agent acting on behalf of a foreign government has interfered in that election.

The Director of National Intelligence will talk to all of their colleagues in the intelligence community, make a determination about whether or not there has been interference in an election, and report to Congress as to whether that answer is yes or no.

The DETER Act lays out four redlines—four criteria—that actors cannot cross without retaliation from the United States. If you go over this tripwire, you will face severe penalties.

What are the tripwires?

First, a foreign government cannot hack the infrastructure of elections and campaigns and leak or alter that information. This ensures that a foreign power would pay a stiff price for leaking campaign emails or breaching voter registration databases—all actions Russia undertook in 2016.

Second, a foreign government could not block or disrupt access to the infrastructure of campaigns and emails without tripping the penalty provisions. This means, for instance, that a foreign adversary could not launch distributed denial-of-service attacks on websites providing voters with information on their polling locations. We have seen Russia employ these attacks to undermine elections in parts of Europe, and they could do the same here in the United States in the future.

Third, a foreign government cannot purchase advertising intended to influence an election, including online ads. This is already prohibited by our law. So it makes sense to make this one of the redlines that cannot be crossed without suffering the penalties laid out

in the bill. We know that Russia purchased more than 3,000 Facebook ads during the 2016 cycle to sow divisions among Americans on issues like immigration, gun rights, the Black Lives Matter movement, and Muslim Americans. They targeted these ads to maximize turmoil and polarization.

Finally, the bill sets up another redline—another tripwire—where a foreign government cannot use social or traditional media to spread significant amounts of false information to Americans. We know that Russia mobilized an army of bots and trolls to promote false information to Americans during the 2016 cycle. In fact, the Kremlin even established a troll farm in St. Petersburg with staff dedicated to spreading this false and divisive content in the United States. Under the bill I introduced with Senator RUBIO, those actions would not go unpunished.

So those are the tripwires. Those are the redlines that are established in the bill, and the Director of National Intelligence has to report after an election whether or not Russia or any other foreign power tripped over those redlines. The bill is very clear. It says that if Russia crosses any of those redlines in a future election, a series of sweeping sanctions would be triggered within 10 days of the determination by the Director of National Intelligence. The bill lays out those sanctions very clearly.

Major sectors of Russia's economy, including finance, energy, metals, and mining, would be subject to automatic, mandatory sanctions. Every senior Russian political official or oligarch would be barred from entering the United States and would have their assets blocked. These sanctions are far, far stronger than any action taken to date with respect to Russia. The DETER Act conveys to Putin and others in Moscow, in unequivocal terms, that the United States will not tolerate attacks on our democracy. If it does, and the Director of National Intelligence reports that to Congress, then these automatic sanctions will be imposed.

So if you are Vladimir Putin and you are trying to decide whether you want to mess around in the U.S. election, you have to recognize that if you get caught—and they got caught in 2016; it is just that when they got caught, there were no automatic penalties. But if this legislation passes the House and the Senate and is signed by the President, this time, they have to consider that if they get caught, they will face very severe penalties. So, in my view, the costs of getting caught are huge and are something that would greatly deter Russia or any other foreign power from tripping over those redlines.

To the extent we can, we should impose these costs in partnership with like-minded nations, especially our European allies, which have long been subject to Russia's cyber attacks on their democratic processes. That is