

they don't have the same level of education and skills of people already in the workforce. So they are starting at a lower-than-average wage. So all else being equal, that would tend to bring the average down. So despite that, when you have growth, that tells us that people who have been continuously employed are getting an even bigger growth in their wages.

So this is very, very encouraging. I think it is likely to continue. It is exactly what we were hoping would happen as a result of our tax reform.

But there is another whole development that is not directly about wages, but when you think about it, it makes a lot of sense. With all of these people finding work, with all of these opportunities for work and people coming back into the workforce, guess what. There is a reduction in dependency on government programs because people are able to earn the income to support their families.

So, for instance, in the 4-week average of unemployment benefits claims, one of the things we monitor closely, the number of people who are collecting unemployment hit a 45-year low of 213,000 in May—45 years. You have to go back 45 years to find so few people who required unemployment for an extended period of time. It is really amazing, when we consider how much bigger a country we are today, that we have gotten down to a number that was matched only 45 years ago—amazing.

We can look at the disability benefits. According to the Social Security Administration, fewer Americans applied for disability benefits last year than at any time since 2002, 16 years since we have had a number this low.

We can also look at the food stamp program. Two million people have come off of food stamps because they are working and they are earning enough that they either don't need it or they don't qualify anymore.

So these are very, very encouraging trends. As I say, because the driver is a new set of incentives that is encouraging capital expenditure and, therefore, productivity growth, I think this is really likely to continue.

The macro GDP numbers reflect this as well. The Congressional Budget Office last year estimated that growth for 2018 would be about 2 percent. As a result of tax reform, they revised that up to 3.3 percent.

As for estimates for the second quarter—the quarter that just ended—we don't have the numbers yet. It is still a couple of weeks away, but the estimates are that growth was probably equal, maybe even more than 4 percent.

So we have had tremendous growth. We already had a great first quarter relative to other first quarters, and the second quarter is probably very, very big.

All of this, of course, means that if this growth is sustained, which I think it is likely to be, not only will we continue to have good employment numbers like we have had, but we are also going to have good budget numbers.

The Federal Government budget is driven more than anything else by how strong our economy is and how many people are working. Everybody working is paying taxes. Every company that is making money is paying taxes. So revenue coming into the Federal Government is likely to be very strong.

So I am very optimistic. I think it is very clear that the combination of pushing back on excessive regulation and a tremendously pro-growth tax reform has led to this growth.

I should warn that I think there is a bit of a cloud on the horizon. I hope it doesn't develop into a big storm. Right now it is just a cloud, but that cloud is trade policy that could really start to hinder economic growth.

It is interesting. We had testimony at the Banking Committee just yesterday from Fed Chairman Powell. I pointed out that the minutes for the June meeting of the Federal Reserve's Open Market Committee had a disturbing reference. I will quote briefly: The FOMC minutes for June stated: "Some Districts indicated"—they refer to the various districts around the country—"that plans for capital spending had been scaled back or postponed as a result of uncertainty over trade policy."

That is a warning. That is a warning to us. If we spiral down into a full-blown trade war—and we certainly have a lot of skirmishes going on—and if this spirals out of control, business will start to pull back. They will lose the confidence they have had, and that could lead to diminished capital expenditures, which will start to really diminish the tremendous growth that we have seen.

So far for this year the economic picture has been extremely encouraging. Benefits are very broad-based. Economic growth is broad and strong. There are employment numbers that we haven't seen in decades. I believe this can continue. It is much more likely to continue if we avoid a damaging trade war.

With that, I yield the floor.

The PRESIDING OFFICER. The Senator from Rhode Island.

#### CLIMATE CHANGE

Mr. WHITEHOUSE. Mr. President, I am grateful today to be joined by Senator KING, from the great State of Maine, to speak about the troubling changes that we are seeing in the oceans and how climate change is reshaping our States' fisheries.

The Food and Agriculture Organization of the United Nations recognizes that "climate change imperils the structure and function of already stressed coastal aquatic ecosystems." For the record, Maine and Rhode Island are indeed aquatic.

The oceans have absorbed approximately 30 percent of the excess carbon dioxide that we have pumped into the atmosphere since the Industrial Revolution began. That is changing the ocean's chemistry. The oceans have also absorbed roughly 90 percent of the

excess heat trapped in the atmosphere by those greenhouse gases. As a result of that excess carbon dioxide and that excess heat, our oceans are warming, and they are rising. They are losing oxygen, and they are growing more acidic. This puts marine life, coastal communities, and the global ocean economy all in jeopardy.

Commercial fishing is an important economy in the United States, and both Maine and Rhode Island celebrate our longstanding fishing traditions. According to the National Marine Fisheries Service, over 9.6 billion pounds of wild seafood, valued at \$5.3 billion, was commercially landed in the United States in 2016.

Across New England, American lobster was our most valuable fishery. We had lobstermen bringing around \$663 million—two-thirds of \$1 billion—worth of lobster to shore. Sadly, Rhode Island's lobster fishery is badly knocked down by warming ocean waters. NOAA notes: "The lobster industry in New York and southern New England has nearly collapsed." Maine dominated the catch, bringing in nearly 85 percent of the lobster landed in the region.

According to NOAA, from "1994 to 2014, Maine's landings surged 219 percent to more than 124 million pounds." The lobster population is shifting north, away from Rhode Island, New York, and Connecticut, as waters warm, leaving Rhode Island and other southern New England lobster traps empty. But Mainers are taking notice, too, as warming waters are driving lobster even farther north along their rocky coast. A recent study of 700 North American marine species predicted that lobster populations could move 200 miles northward by the end of the century as waters continue to warm. Senator KING can report what 200 miles does to the coast of Maine.

Lobster is not the only fishery feeling the heat in New England. A 2017 study of global warming found that the greater Northeast region is anticipated to warm faster than other regions of the world. According to the "Climate Science Special Report," a Federal report that will form the scientific basis of the Fourth National Climate Assessment, "the Northeast has warmed faster than 99% of the global ocean since 2004." We have a global ocean hotspot off our coast. The Northeast is also expected to see higher than global average sea level rise, putting our ports, fishing docks, and coastal infrastructure all at risk.

Fishermen have noticed. They are keenly aware of the myriad ways climate change is altering the waters that generations of their families have fished, and they see the difference. Fishermen in Rhode Island have told me: "Sheldon, things are getting weird out there."

"Sheldon, it's not my grandfather's ocean."

They share anecdotes of catching increasing numbers of tropical fish early in the summer season and seeing fish

that rarely frequented Rhode Island waters until recent years. As new fish move in and traditional fish move out, fishermen are left with more questions than answers.

In Southern New England, black sea bass has become the poster fish for shifting stocks. As we can see in this graphic, the 1970s had a hub of black sea bass here, with this as the center and then a slight reach upward but basically off the mid-Atlantic coast. This is 2014. The center of activity has moved up closer to Rhode Island. We are right here. Of course, black sea bass populations in our region have increased concomitantly.

This commercially valuable fish, the black sea bass, can help Rhode Island fishermen replace traditional species that are growing more scarce, like winter flounder—the fish my wife studied for her graduate work—which has crashed as winters warm.

The current fisheries' management structure, however, forces Rhode Island fishermen to toss the increasingly abundant and valuable black sea bass overboard. NOAA scientists saw this northward transit of the sea bass coming years ago, but regulatory catch limits did not keep up. They are generally based on historical catches. And States are hesitant to give up quota even after the fish have moved northward and left their shores, so State-specific quotas badly lag the changing distribution of the fish.

A former Mid-Atlantic Fishery Management Council scientist acknowledged that fish like summer flounder are moving north and told NPR that "some of the Southern states are having trouble catching their quota, and states to the north have more availability of fish."

Dave Monti is a friend who is a charter boat captain out of Wickford Harbor in North Kingstown, RI. Dave said:

There's no doubt the waters have warmed and black sea bass have moved in. The quotas haven't done a good enough job at figuring in climate change yet.

Mr. President, I ask unanimous consent to have printed in the RECORD an article from the Providence Journal describing the changes that Captain Monti sees and our local efforts to deal with these changes.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

[From the Providence Journal]

FRONT LINE OF CLIMATE CHANGE: BLACK SEA BASS SURGE OFF R.I.

(By Alex Kuffner)

PROVIDENCE, R.I.—Scientists tell us that some fish will be winners and others losers as oceans warm.

In Rhode Island, count lobster, silver hake and winter flounder among the losers, their numbers plummeting as climate change drives water temperatures higher. On the list of winners so far are squid, summer flounder, butterfish.

And black sea bass. The population of the dusky-colored fish with striking blue accents has historically been strongest off the mid-Atlantic Coast, but over the past decade or

so its numbers have spiked off New England and it is becoming a more important catch for the region's fishermen.

In a telling sign of black sea bass's surge in Rhode Island, the state Department of Environmental Management last month loosened regulations governing the recreational fishery for the species, extending the season by 31 days and increasing the fall possession limit to seven fish per person per day, from five.

It may appear to be a small development, but the rules change resulted from a heated debate among state and federal regulators about how best to manage a species whose distribution and abundance has gone through a striking shift that few would have imagined a generation ago.

The back-and-forth over the fish also signals more difficulties to come as regulators struggle to respond to the impacts of climate change on the marine environment. Similar issues are already playing out with summer flounder, another warm-water fish that is becoming more common off the north Atlantic coast.

How they are managed will have important implications not only for those fish but for lobsters and other key species in the ocean ecosystem.

"We're in an adaptive mode right now," said Bob Ballou, assistant to the director of the Rhode Island Department of Environmental Management and chairman of the Atlantic States Marine Fisheries Commission's black sea bass and summer flounder boards. "It's occupying all our time to think through all the approaches to better manage these resources."

One of the key assumptions that the nation's fishery management system is built upon is that species don't move between general geographic regions.

That traditional regulatory framework held up for a long time, but rising water temperatures and the resulting shifts in species distribution and abundance are forcing the beginnings of change.

In the case of black sea bass, it's not that the population of the fish is simply relocating north. Numbers are still decent in the southern portion of the fish's range, but they are much stronger now off the coasts of New York, Connecticut, Rhode Island and Massachusetts—places where the waters used to be too cold to support large populations.

In Rhode Island, water temperatures in Narragansett Bay have risen about 3½-degrees Fahrenheit since 1959, according to weekly monitoring done by the Graduate School of Oceanography at the University of Rhode Island. Warmer winters, in particular, have allowed black sea bass to thrive this far north.

In the 1980s and 1990s, a fish trawl survey conducted by the DEM rarely caught a single black sea bass in Rhode Island waters, but incidence of the species has risen steadily, especially over the past decade, and now each trawl nets about two black sea bass on average.

Because black sea bass move between federal and state waters, the fish is managed jointly by the federal government, through the Mid-Atlantic Fishery Management Council, and states, including Rhode Island, through the Atlantic States Marine Fisheries Commission.

Although scientists have long known that concentrations of the fish have been shifting north toward the Gulf of Maine, it wasn't until 2016 that regulators started to factor in the change.

That year, a new stock assessment for black sea bass formally recognized for the first time two distinct populations of the fish, a northern group around New England and a southern group from New Jersey to the Carolinas.

The growth in the northern group more than made up for the southern group's mediocre numbers, and the assessment determined the total population of the fish to be nearly two and a half times higher than the minimum stock threshold set by regulators.

"That was a really big step forward," said Jason McNamee, chief of marine resource management for the DEM. "The science is now catching up to what's going on with the environment."

But despite the robust overall picture for the fish, the ASFMC's proposed quotas for this year called for a 12-percent reduction in the northern region's catch to allow the southern region, the historic center of the black sea bass fishery, to increase its share.

Rhode Island, New York, Massachusetts and Connecticut filed an appeal, and on May 3, the fisheries commission relented, allowing what amounts to a four-percent increase for the northern region.

The stakes are high for Rhode Island, which is experiencing deep changes to the composition of its marine species because of its location, at the junction of what ocean scientists call the Boreal Province—cold waters that include the Gulf of Maine to the north—and the Virginian Province—warmer waters of the mid-Atlantic to the south.

"We're right at the front lines of these changes," McNamee said. "These mid-Atlantic species are our most important species now."

Dave Monti reeled in another black sea bass.

Like the five others caught in Narragansett Bay on a recent morning, at less than 15 inches long, it was too small to keep. So Monti started working the hook out of its mouth.

"You've got to be careful of the dorsal fin," he warned. "It'll stick right into you."

As regulators have tightened catch limits for striped bass and other saltwater game fish that were historically abundant in Rhode Island waters, black sea bass has filled the void, said Monti, a charter boat captain who docks his boat in Wickford Harbor.

"They've saved my charters over the past couple years when other fish aren't around," he said.

Seas were too rough to visit his favorite place to fish for black sea bass, a patch of waters in the open ocean near Brenton Reef off Newport, so he steered his 44-foot boat the Virginia Joan to a few spots in the Bay between Jamestown and Narragansett.

Black sea bass is a reef fish that likes rocky bottoms and patrols the waters around jetties and pilings for prey. It's a hermaphrodite—some fish switch sexes as adults. The species can be found off Rhode Island year-round, typically coming inshore to the Bay in the spring to spawn and wintering farther off the coast.

Just south of the Jamestown Verrazzano Bridge, Monti reached for a rod from a holder overhead. He called it his "sea bass slayer." It was fitted with a shiny, red-tinted lure and he baited the hook with a slice of squid and a little fish called a silverside. A few minutes later, the first black sea bass was caught.

It doesn't take much work to find the fish these days, said Rick Bellavance, president of the Rhode Island Party and Charter Boat Association.

"Black sea bass are a charter boat operator's dream," he said. "They're pretty prevalent, they're easy to catch, and they taste great."

On a recent charter to Block Island, the six clients on Bellavance's boat caught only two striped bass and one bluefish between them, so he started setting lines for black sea bass. They promptly snagged 20 of the fish that were big enough to take home.

Although he applauded the new regulations, he said the changes have been slow to come and haven't gone far enough. He'd like to have the current six-month season extended year-round and the per-person daily limit raised to 10 fish.

"We need to recognize that the stock has shifted to the north and to the east," he said. "Rhode Island is closer to that epicenter than it used to be."

Monti, who is vice president of the Rhode Island Marine Fisheries Council, which advises the DEM on state fishing policy, agreed.

"There's no doubt the waters have warmed and black sea bass have moved in," he said. "The quotas haven't done a good enough job at figuring in climate change yet."

About half the morning's catch on Monti's boat were black sea bass. Among the rest were other warm-water fish that are becoming more common in Rhode Island: scup and summer flounder.

After Monti freed the little black sea bass from the hook, he held it in his hand. As the fish age, their scales become more blue. This one had yet to develop the bright coloring, but it was still striking.

"Pretty, isn't it?" Monti said as he dropped it back into the Bay.

Not everyone loves the fish.

Black sea bass have voracious appetites, hunting on the ocean bottom for crabs, clams and shrimp. The fish don't have teeth but will swallow crustaceans whole.

Lobstermen complain of pulling up their traps and finding black sea bass inside that have gobbled up their lobsters.

"I see it everyday," said Lanny Dellinger, a Newport lobsterman and board member of the Rhode Island Lobstermen's Association. "Everyday, every trawl. It doesn't matter if it's mud bottom, hard bottom, deep water, shallow water. There are so many black sea bass, it's unbelievable."

The rise of black sea bass is coming at the same time that the lobster catch is on a steep decline in Rhode Island, falling from 8.2 million pounds in 1998 to 2.3 million pounds in 2016, according to the National Marine Fisheries Service.

Lobster is a cold-water species that is moving north as Rhode Island's waters warm. The higher water temperatures have made the lobsters that remain more susceptible to shell disease. Dellinger and others believe that predation by black sea bass is also pushing down the lobster numbers.

Black sea bass could be contributing to the decline, but the fish is probably not the primary cause, said Jon Hare, science and research director at the National Oceanic and Atmospheric Administration's Northeast Fisheries Science Center in Woods Hole. Crabs and other crustaceans that the fish eat aren't feeling similar impacts, he said.

McNamee agreed, saying that the fish generally prey on smaller juvenile lobsters, leaving the bigger ones alone.

As part of a larger study of black sea bass, the Rhode Island-based Commercial Fisheries Research Foundation is analyzing the gut contents of fish caught by nine participating commercial and recreational boats.

"We know that black sea bass do eat lobster, but we just don't know if the rate of consumption is having an impact on the size of the lobster population," said Anna Malek Mercer, executive director of the foundation.

One lobsterman sent her photos of a 2½-inch long lobster found inside a black sea bass in a trap.

"When they end up in lobster traps, there usually aren't any lobsters inside," she said.

Dellinger wants loosened regulations on both the recreational and commercial sides to allow fishermen to catch more black sea bass. He likened the fish to coyotes that

need to be culled or to rodents afflicting farmers.

"It's like owning a corn bin full of rats and nobody's allowed to get rid of them," he said.

Despite the recent changes, scientists and fishermen in Rhode Island say that the management system for black sea bass is still outdated.

Tellingly, none of the New England states has a seat on the Mid-Atlantic Fishery Management Council—one of the two key decision-making bodies for the species—even though much of the fish's population is located off the region's coast.

That has meant that allocations remain high for fishing boats in states like Virginia and North Carolina that must sometimes travel half a day north to find the fish, while Rhode Island boats are forced to discard their catch because, local fishermen say, their quotas aren't high enough.

The southern states don't want to give up their share because black sea bass fetches a good price—more than \$3 a pound on average—and the commercial fishery is growing in value—tripling since 2009 to more than \$12 million.

The black sea bass study being done by the CFRF is using different gear types—from gill nets to trawls to lobster traps—to gather more data on the species and strengthen stock assessments that may be missing some fish.

Malek Mercer said that scientists are getting a better understanding of the fish's changing population, but managing the species is the problem.

"For better or worse, science is not going to fix that," she said. "But if we get our management there, I do think we can have a really strong black sea bass fishery here."

McNamee described the management system as "deliberative and slow by design." He acknowledged the frustration felt by Rhode Island fishermen who have seen the state's traditional groundfish stocks drop off while black sea bass proliferate.

"There's still way more fish to catch than fishermen can get access to," he said.

Mr. WHITEHOUSE. Mr. President, we have to fix this. To use the black sea bass example, the species is co-managed by the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission. Rhode Island only has a seat on the Atlantic States Commission; it does not have a vote on the Mid-Atlantic Council. That means that my State is not fully represented in the decision-making process, and perfectly good black sea bass keeps being thrown into the sea by fishermen who ought to be able to bring that catch home.

In 2016, NOAA scientists assessed the vulnerability to the effects of climate change of over 80 commercially valuable species in the Northeast. So this is not just a story about black sea bass or about lobsters; this Northeast climate vulnerability assessment ranked species based on climate risk and sensitivities to changing ocean conditions.

Here is the climate risk factor graph. As we see, all 80 species scored in the high or very high risk of climate exposure categories. All 80 commercially valuable species they studied faced high or very high risk. This is a red flag for our fisheries.

Maine is the place for lobster. In Rhode Island, squid is king. In 2016, 56

percent of the longfin squid caught on the east coast was landed in Rhode Island. According to NOAA, this catch was valued at over \$28 million, accounting for nearly 30 percent of our landings value in 2016. But climate change is putting our calamari at risk. Warm waters may actually open more habitat for the species, but its carbon cousin, ocean acidification, is the hazard. Like its shellfish brethren, squid require calcium carbonate—for squid, it is to grow the hard beaks they use to feed. Acidic waters decrease the availability of this necessary compound in the seawater and can even dissolve calcium carbonate organisms' shells under extremely acidic conditions.

On the west coast, shellfish farmers have been dealing with ocean acidification since the mid-2000s. Dr. Richard Feely is the researcher who first identified ocean acidification as the cause for oyster spat failures in the Northwest back in 2005. He noted in a recent NPR article that the acidification problem is only going to get worse. "The acidification water welling up from the ocean floor now contains carbon dioxide gas emitted 50 years ago." Carbon emissions are worse since then. Some hatcheries in the Northwest are already moving operations to less acidic waters off Hawaii, and others are looking to buffer the water with seagrasses to absorb carbon and lower acidity. Shellfish farmers in Rhode Island are facing the challenge of acidifying waters as well.

At the same time, marine species are also facing deoxygenation, increased harmful algae, and other consequences of a warming and acidifying ocean. The symptoms of climate change in the ocean are everywhere.

A recent study in Global Change Biology warned that reduced oxygen availability could limit the growth of fish and other species. Fishermen can't make a living off sick and tiny fish.

California's lucrative Dungeness and rock crab season was cut short in 2015 to 2016 due to a harmful algae bloom.

Our Great Lakes have been hit too. I went out on Lake Erie after the horrible algae event there, and the fishermen who took me out sounded like Rhode Islanders. One of them said: "Everything I've learned from fishing a lifetime on this lake is worth nothing now, because it's all changing so fast."

If we have an opportunity to have an open, bipartisan debate on a strong Magnuson-Stevens Act reauthorization, I urge my colleagues not to overlook the toll climate change is taking on our fishing industry. The changes that are happening in our oceans do not care whether you believe they exist. The physics, chemistry, and biology driving these changes will happen anyway, and our fishermen are depending on us to give the scientists and the managers the tools and resources they need to meet the challenges climate change is bringing to our shores.

I now yield to my friend from Maine to give the perspective from his rocky shores.

The PRESIDING OFFICER. The Senator from Maine.

Mr. KING. Mr. President, I first want to thank Professor—I mean Senator WHITEHOUSE for the information he shared. It was compelling, important, and very worthy of our deep consideration.

To talk about renewing the Magnuson-Stevens Act without talking about the effects of climate change and the effects on the water itself would be an enormous missed opportunity.

First, I commend Senator WHITEHOUSE, the Senator from Rhode Island, for his longstanding commitment to the issue of climate change, the well-worn “Time to Wake Up” poster, and the work he has done over the years to force us to pay attention to this issue.

I am, as he indicated, going to talk about what is going on in the Gulf of Maine, but I want to broaden the discussion just for a few moments to talk about the issue of climate change as a broader question before us.

This isn’t some environmental dream. It is not something that was invented by someone. It was discovered by scientists, and it is dollars and cents. It is the most practical problem that we have to deal with.

I am on the Armed Services Committee. We are talking about military bases all over the world—some as close as right down in this region and then down toward Norfolk, VA—that are under a severe threat from rising sea levels and that are going to cost us billions, if not trillions, of dollars to upgrade and maintain because of rising sea levels. This isn’t something abstract. This is something that is happening today, and it is something that we are going to have to deal with that is going to have an enormous cost. The longer we put off preventing and dealing with this issue, the higher that cost is going to be.

There is a second reason this is a national security issue, and that is the aggravation of conflict and the initiation of migration. The number of refugees from Syria—which has disrupted the politics of Europe and disrupted many of the European countries and, indeed, has had a reflection here in this country—is roughly 3 to 4 million people. The estimate for refugees from climate change—from extreme temperature, from drought, from famine—is in the hundreds of millions as opposed to 3 to 4 million from Syria. Imagine the disruption to all of the countries of the world that are destinations for these refugees who are fleeing places that have become uninhabitable.

This is a question we are going to have to address, and, as our military characterizes it, it is a threat multiplier because when you have people moving from one region to another, you have conflict. From time immemorial, conflict has largely been based on things like access to water and access to arable land, and we are talking about an enormous accelerator of that across the world.

Now let me talk about the effects in my home State. First the good news. Lobster landings in Maine are up. We have ridden a lobster boom over the past 30 years. Since the 1980s, the poundage of lobsters harvested in Maine has grown 500 percent. When I was Governor, a good harvest of lobsters was 50 to 60 million pounds; 2 years ago, it was 127 million pounds—more than double. That is the good news.

The bad news is that it is starting to change, and we may have seen the turning point in this boom. We don’t know that, but the last 2 years have been down substantially from the peak in 2016. We will see what happens this year. Hopefully, it is a blip and not a trend.

By the way, one of the reasons the lobster industry has survived and flourished in Maine is not only the favorable impact of gradual increases in temperature but because of the conservation ethic of the lobstermen themselves, who voluntarily throw back egg-bearing females. They cut a V-notch in their tails so they won’t be caught again. If they are too small or too large, they throw them back. An amazing ethic of conservation has been imbued in the culture of lobstering and also in our laws for many years. So the fact that we still have a lobster fishery and that it is as vigorous and as productive as it is, is due in large measure to the creativity and conservation ethic of our lobstermen.

Here is the bad news. The bad news is, when water temperature gets to about 68 degrees, it is like turning a switch. It stresses the lobster population to the point where they can’t survive. The good news is, it gets warmer, and they multiply. The bad news is, once it reaches a certain critical point, the species could collapse. Indeed, that is what has happened, as the Senator from Rhode Island has indicated, to the once-plentiful lobster population of New York, Massachusetts, and Rhode Island.

The problem is, over recent years—and I have talked to a lobsterman friend today, just this afternoon—the center of gravity of lobstering along the Maine coast is steadily moving north and east. He told me it has moved about 50 miles in the last 10 years.

The other problem that is occurring is that the lobsters are going further offshore to seek cooler water, which means the lobstermen have to go further. They have to have bigger boats. They have to make more of an investment in order to make a living.

Right now, we are in good shape, but the trend is not good. We are seeing other changes that have magnified both the boom, and what we are worried about is the bust. We have seen changes decline in some fish species like the cod that fed on baby lobsters. Now, as Senator WHITEHOUSE mentioned, we are seeing a growth of a fish that was never seen in Maine in the recent past, the black sea bass.

My friend tells me, today they are catching triggerfish in the Gulf of Maine, which is a North Carolina species. They have even caught seahorses in lobster traps. This is a dramatic change as the waters warm.

As I mentioned, if they get close to the 68-degree level, the lobster population is in trouble. It is not only lobsters. By the way, lobstering is a serious business in Maine—half a billion dollars just in land value, a billion and a half dollars in the overall economic impact of this species to our State.

By the way, before I leave the question of lobsters, I have to acknowledge the comments made by the Senator from Pennsylvania earlier when he was talking about the economy, and he flashed a warning light at the end of his remarks about trade and tariffs. We are already seeing the negative impact of what I consider ill-considered tariffs on China. The first place they retaliated was against lobsters. Twenty percent of the entire lobster catch in Maine is sold and exported to China. It is our fastest growing market. If the Chinese tariffs they have already announced are imposed and fully implemented, it could cut that to zero.

Canada doesn’t have those tariffs. Canada is not engaging in a trade war with China. Canada and other countries are moving into the vacuum we have created. The idea that we can impose tariffs on other countries without any ill effects here just isn’t true.

Right now, it looks like the lobster industry, soybeans in the Midwest, maple syrup in Vermont, other agricultural products across the country are going to be collateral damage in an incipient trade war that I don’t understand where it is going.

I would like to know what the strategy is. What is the end game? Where does this go? So far, I haven’t seen any indication of that. What I have seen an indication of is severely dangerous impacts on our economy industry.

Another part of our ocean ecosystem is clams. There is a massive decrease in harvest because of two reasons: One, acidification. As the Senator from Rhode Island indicated, 30 percent of all the carbon dioxide that has been emitted during the Industrial Revolution has ended up in acidification in the ocean and, two, nonnative green crabs, which are exploding because they like the warmer water. They have been around for 100 years, but that population is growing enormously. They are just devastating the clams. Green crabs can consume 40 half-inch clams a day. Those crabs have decimated blue mussels and scallops along the shore. They are going for clams, and we are concerned that maybe lobsters could be next.

Warming water and shifting predators are not the only challenges we face: more carbon dioxide into the atmosphere, absorbed into the ocean, and one-quarter of what is emitted goes into the ocean. The ocean then becomes more acidic. Any kind of shelled

animals—lobsters, clams, oysters—expend evermore energy maintaining the pH balance in their bodies, and that means they can't grow and reproduce. The world's oceans have become 30 percent more acidic since the Industrial Revolution.

Oysters have become a great new product for Maine. We are growing them in oyster farms along the Damariscotta River and other places. You can go to fancy restaurants and see Damariscotta oysters. They are wonderful.

My friend Bill Mook, who is one of the pioneers of the oyster industry in Maine, has had to move the incubation of his oysters out of the ocean, out of the natural river, onshore, and into tanks so he can buffer the water to minimize the acidification and then put them back in the water to grow out. That is a pure result of climate change and acidification of the ocean.

Freshwater runoff is another issue that increases the acidification. We have had an enormous increase in the amount of freshwater rainfall in this country, and in Maine that has increased the acidification in the oceans. What do we do? The first thing we do is admit there is a problem. You can't solve a problem if you act like there is nothing wrong. The first thing we have to do is admit there is a problem. I think more and more people are coming to that conclusion.

When this administration was nominating people, the refrain I heard in all of the hearings was climate is changing, man has an impact on it, but we don't know how much.

That is progress. At least it is an admission that something is happening. What do we do? We admit there is a problem. I think we are close to reaching that point.

The second thing we have to do is more research. We have to continue to fund the science to do the research to understand what is happening, to understand what we can do to mitigate these risks. Research and scientific data is crucial. For some of our great agencies that have the people who have been researching this for years, to be suppressing the research or not supporting it or burying it is not a service to our country. Research is crucial. We need the facts. We need the data. We need mitigation strategies. We also need to pay attention to the underlying cause of climate change, which is a combustion of fossil fuels and the enormous amount of carbon dioxide that is being added to the atmosphere.

This is a long-term challenge. It is not something we can solve in the next 1 or 2 years. Some people ask: Well, it is such a long-term challenge, why are we doing it? Because it may not be solved for 50 years.

In my office is Edmund Muskie's desk. I sit behind Edmund Muskie's desk—one of the greatest Senators of the 20th century and one of the greatest citizens Maine has ever produced. Fifty years ago—2 years from now,

1970—Edmond Muskie led the passage of the Clean Water Act and the Clean Air Act, which are two of the greatest and most important pieces of legislation passed in this body in the last 100 years; the first real recognition that we had a responsibility to the environment, that we had a responsibility to our children and our grandchildren. By the way, astoundingly, the Clean Water Act passed the U.S. Senate unanimously. Can you imagine? We can't agree on the time of day unanimously in this body. In 1970, under Ed Muskie's leadership, the Clean Water Act was passed unanimously.

The point I want to make is, the steps they took almost 50 years ago have cleaned up our rivers, have cleaned up our atmosphere, have made parts of our country blossom again.

In Maine, we are working on our rivers. The towns that turned their backs on the rivers are now turning back toward the rivers because people can fish, swim, and enjoy the rivers. When Ed Muskie started his lonely crusade in the late 1960s, the rivers were essentially open sewers.

Fifty years ago, Ed Muskie started that work. We see the benefit of it today. We should be doing the same thing. The fact that it may not come to fruition for 20, 30, 40, or 50 years is no reason to not start now. We have to start. This isn't pie in the sky. This isn't somebody trying to impose new regulations. This isn't something that is made up by environmentalists or people who just don't want to see any development. No. This is lives and livelihood. These are families, communities. It is responsible stewardship and just plain common sense.

There is a lot of science, and there is a lot of complexity to this issue. It seems to me we can take inspiration from Ed Muskie, Howard Baker, and all those a generation ago who built the edifice upon which we have a cleaner, healthier, stronger economy and stronger society.

I remember those days. The great debate was payrolls versus pickerel. You couldn't have payrolls if you preserved the pickerel. It turned out to not be true. We have developed the strongest economy in the history of the world. Yet we paid attention to the environment. We have paid attention to our responsibilities, to our children and our grandchildren, and we created the economy at the same time we were able to clean up the environment.

I remember those debates. They were bitter. You can't do it. If you do this, you are going to put everything out of business. There will be no economy. That was the argument. It hasn't happened.

Finally, you can talk about the science. You can get caught up in all the data. To me, there is a really easy rule that makes this easy to understand what our responsibilities are. I call it the "Maine rototiller rule." Many people in Maine have gardens, but it is a small garden. It is in your

backyard, so it doesn't make sense for everybody to buy a rototiller—the machine you use once or twice a year to clean your garden and till over the ground and begin to plant. We borrow them. I used to borrow one from my neighbor Peter Cox. The "Maine rototiller rule" goes like this. When you borrow your neighbor's rototiller, you return it to them in as good a shape as you got it, with a full tank of gas.

That is all you need to know about environmental stewardship. Do you know what? We have the planet on loan. We don't own it. We own a little piece of land for a generation, but we don't own it. We have it on loan from our children and our grandchildren and their children and their grandchildren. Therefore, we have a sacred responsibility to turn over the planet to them in the same or better shape than we found it. That is our responsibility. It is very simple. When you borrow something from your neighbor, you return it in as good a shape as you found it. That is what we should be doing today.

We can do this. There will be costs, but the costs of not doing it will dwarf the costs we can undertake today to protect the Gulf of Maine, the coast of the United States, the fields of Africa, the forests of North America, and the land and water and air that our children and grandchildren deserve to have passed on to them in better shape than we found it.

We can do this. We can start today. We may not live to see the results, but we will know we have done something important, something meaningful, something that will make a difference in the lives of generations we don't know. They will know what we do or what we don't do. I myself choose the side of action—recognizing the problem, analyzing it, understanding it, and acting to mitigate the harms that otherwise will befall our children.

I yield the floor.

Mr. WHITEHOUSE. Mr. President, Senator KING and I yield the floor.

First, let me thank him for joining us. Second, with Senators present here from landlocked States, let me make the requests to both of you that, when we come before this body with concerns about what is happening to our ocean economies, which I think are shared by every coastal Senator who is seeing these changes, that you view our pleas with the same courtesy and respect that we show you when wildfires burn through Utah and we come to make sure that there is adequate emergency response or when Oklahoma faces hurricanes or cyclones and tornadoes and the Federal Government and the Senate rally to the response of those who are experiencing the pain of that in your States. Our fishing communities and our coastal communities have a very different distress, but I hope you will see it as an equal distress and pay us the courtesy of your due consideration.

I yield the floor.

The PRESIDING OFFICER (Mr. LEE).  
The Senator from Oklahoma.

#### SECURING OUR ELECTIONS

Mr. LANKFORD. Mr. President, there has been a lot of conversation again, of late, about election security. It seems to be a frequent conversation in the hallways the last couple of days, and it is an ongoing issue that I think some people have lost track of, but we have not.

AMY KLOBUCHAR and I and several others have worked very hard for months on this issue of election security, quietly trying to get the language right and to work through the process of what it takes to secure our elections for 2018, 2020, and beyond, learning the lesson from 2016.

I do want to remind this body that the elections are not something that happens this November. It is already ongoing. Many States' primaries have already been conducted. Last night there was a runoff primary that happened in Alabama. Georgia holds their runoff primaries next week, and Tennessee is the week after that. Kansas, Michigan, Missouri, and Washington will be on Tuesday, August 7. It is already ongoing.

While we watch the indictments that just came down from the Mueller investigation on GRU officers from Russia who were trying to interfere in our elections in 2016, as we have seen the sanctions and the indictments that have come down on some of the oligarchs from Russia and from the Internet Research Agency for what they were doing in social media, trying to be able to interfere with our election in 2016, I think it may be important for us to do a quick lookback at what has happened and what is still going on and what we are trying to accomplish in the next few weeks.

Let me just give a quick look at what is happening in my State of Oklahoma. In Oklahoma, in the 2016 cycle, the FBI and others began to discover that there were issues with the elections and some interference from what they, at that time, called "bad actors" in June of 2016. Later that summer, in August of 2016, the FBI issued what they call a nationwide "flash alert" to every State dealing with a threat from a "bad actor."

The Oklahoma State Cyber Command director received that warning, as did everyone else, but at that time the FBI didn't share any details because no one in my State was given security clearance to be able to have that kind of classified conversation with the FBI.

It wasn't until September 22 of 2017, a year and a little bit later, that DHS actually notified my State and our State election authorities that we hadn't just been targeted by a bad actor but that we had been targeted by the Russians—a year later—because no one had clearance and there was no one engaged.

DHS told Oklahoma State Election Board secretary Paul Ziriaux, who is doing a great job, that there was evidence that the Russians conducted a

surveillance scan looking into vulnerabilities in the State computer network, but they didn't get into the election board computer network, and they didn't get into any of our equipment.

They basically came and checked to see if the door was locked, and they found out that in Oklahoma the door was locked, and the Russians could not get in. They didn't penetrate into our system, though they tried.

But it was a year after the elections before we were even notified that the Russians were trying to penetrate our system. A subtle flash warning is all that we received in the summer of 2016.

Oklahoma has a great system for elections. Our system is consistent across every single county. We have optical scanners with a paper ballot backup so that we can verify the computer count with a hand count if needed. We have had a very good system. That system was tested by the Russians when they evaluated the computer networks of our State, and they were also not able to get in, thanks to the leadership of some of the cyber and the technology folks who are in Oklahoma.

Not all States have the same practices. In some States, from county to county their election systems are different. From township to township they may have different systems with different companies and different backgrounds. They may not have the same kind of system where they get a chance to protect their cyber systems.

We saw that in 2016, when the Russians were able to penetrate some of the States and actually were able to harvest some of their voter register rolls. They weren't able to change any votes. They weren't able to affect the voting that day, but they did a tremendous amount of scanning through systems to be able to see where there were vulnerabilities, what they could learn on our election systems, and how they could engage for a future time.

I think we should learn a lesson from that and be aware that the Russians are trying to penetrate that system and learning as much as they could.

At the same time that they were hacking into different systems and testing them out to see if they could get in, a different set of folks from the Russian group the Internet Research Agency were trying to put out social media disinformation.

Some 200,000 Oklahomans saw Facebook and Twitter posts that Russians put out as false information. They weren't all on one candidate. There were multiple candidates and multiple issues. Sometimes it was on Hillary Clinton, sometimes on Donald Trump, sometimes on BERNIE SANDERS, sometimes on Jill Stein, and sometimes just on ideological issues. Over 200,000 Oklahomans saw those posts from different Russians, not knowing they were Russian posts at all. They were Russians pretending to be Americans, and they were pushing that information out.

What can we learn from this? One is the most simple of those things: You shouldn't believe everything you see on the internet. It is not always an American. It is not always who they post to be, and it is not always true. It should be the most basic information that we should learn about what is happening on the internet and what is online, including Facebook and Twitter.

The other lesson that we need to learn is a little more complicated. We have to be able to have better communication between the Federal Government and States, better cybersecurity systems, and the ability to audit that.

That is why Senator KLOBUCHAR and I have worked for months on a piece of legislation called the Secure Elections Act. That piece has worked its way through every State looking at it and their election authorities. We have worked it through multiple committee hearings. In fact, recently, just in the last month, there were two different hearings in the Rules Committee. It is now ready to be marked up and finalized to try to bring it to this body.

It is a very simple piece. It affirms that States run elections. The Federal Government should not take over elections nationwide. In fact, that would make a bad situation worse. States need to be able to run elections and be able to manage those.

But it qualifies several things. One is that it gives a security clearance to a person in every single State. If there is a threat from a hostile actor, there is not some vague warning that comes out. There is an immediate address about what is happening and a communication within the intelligence community here on the Federal level to individuals with a clearance on the State level.

Right now, the DHS, in absence of this legislation, has started implementing it anyway. Every single State has at least one person with a security clearance now, including my own. They are working to have at least three in every State to do a backup system.

We also need to be able to affirm that every State can audit their elections, that they would do what is called risk-limiting audits after the election just to check and to make sure that the results are correct, but also that they have the ability to audit it as the election is going on so that it is not just counting on a machine but that there is also some way to back it up. States have a variety of ways they can actually do that.

If elections are trusting that the electronics are going to work and not be hacked into and not be affected, we should have learned the lesson from 2016 that there are outside entities trying to attack these systems and to find vulnerabilities, and they will.

Some way to be able to back it up, to be able to audit the election while it is happening, risk-limiting audits after the fact, security clearances for individuals within States, and rapid communication State to State and State to