NOTE: This is the speech as delivered.

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STATEMENT OF SENATOR GEORGE MITCHELL
BOWDOIN COLLEGE BICENTENNIAL
ENVIRONMENTAL INSTITUTE CONFERENCE

Bowdoin has played a significant role in the development of Maine and the nation. Its alumni include one President, more than forty members of the Congress, authors of distinction like Nathaniel Hawthorne, and men of such character and achievement that they can only be called heroes, like Joshua Chamberlain, the civil war general and Bowdoin president.

Bowdoin's student body today is drawn from across the nation and the world, as well as Maine. Its focus on the challenges of the contemporary world, such as the environment, make Bowdoin a continuously relevant institution among the nation's colleges.

I owe a great deal to my experience at Bowdoin.

It was a chance to grow and to learn. I know today's students feel the same way.

I wish the college continued success as it undertakes its third century of teaching, challenging, and creating a community where students and faculty can learn about the world together.

Learning to live with the natural world is a lifetime process. Our scientific knowledge is still in its infancy. And each piece of information we learn reveals the many pieces we do not know.

The world's oceans contain about 97 percent of all the water on our planet'. They cover three-quarters of the earth's surface. Their surface temperatures change the temperatures of the air above them and so affect the climate of the world.

The oceans are the world's most important factor in climate control. They absorb much of the sun's heat and redistribute it from the Equator to the Poles. In the process they moderate the climates of continents like Europe and North America and nations like Japan.

One third of the world's population lives within 37 miles of a coastline. Many millions more live within an easy day's travel of coastlines. The majority of the earth's 5.5 billion people live around the coastal fringes of the continents.

Surface ocean water all over the world carries phytoplanktons and other microscopic plant and animal forms vital to the oceans' food chain, but the oceans come to life in a significant way only where the salt water gives way to land. Coasts are the most significant for human life, both economically and biologically.

Coastal environments, whether they are tropical mangrove swamps, tidal flats, marshes or estuaries are the biologically richest parts of the oceans.

They are feeding and nursery grounds for more than ninety percent of fish, including fish which spend their adult lives in the open seas. Almost ninety-nine percent of commercially valuable fish are caught within 200 miles of a coastline. Coastal environments are enormous sanctuaries for migratory birds. They are catchment areas for river sediments which would be dispersed in the oceans if they were not trapped by marsh grasses and other plants.

From the earliest times of known human settlements, coasts, marshes, and river deltas have been the locus of human settlement.

Human settlement and its density has already taken a toll on our planet's coasts. Many of the world's large coastal cities don't have wastewater treatment, and spill raw sewage directly into the oceans.

No international body now monitors ocean pollution. Eight UN agencies have created a working group of specialists which samples ocean waters and reports on coastal pollution.

It began its work in 1969 and its first report, released in 1982, found no oceanic pollution. But that finding didn't hold for long.

Its second report, released in 1990, found pollution traces in the open ocean and documented the devastation along continental coastlines.

Pollution traces in the open ocean are troublesome, but the open ocean is a biological desert in comparison with coastal regions.

And in coastal regions, the warning signals of trouble have been visible for a while.

The U.N.'s Food and Agriculture Organization, which monitors two hundred fisheries worldwide, reports that every one of the 200 fisheries is being fully exploited today and one-third are overexploited.

The collapse of the New England fishery isn't a local phenomenon. It reflects a worldwide phenomenon; one whose full effects are becoming apparent only now.
What's happened?

Many factors played a role.

First and foremost is the single largest factor in history, and that is the enormous growth in population this century.

In 1800, there were about one billion people on earth. By 1900, there were 1.6 billion. By 1950, when I entered Bowdoin, there were 2.5 billion. Today there are nearly 5.5 billion people alive. By the year 2025, there will be about 8.5 billion.

In 1900, most Americans still lived on farms and in small towns. By 1950, we had become a predominantly urban society and so had the rest of the developed world -- Europe, Japan, and the former Soviet Union.

Today population growth in developed countries has slowed, but is still rising rapidly in Africa, Asia and Latin America. There, about one-third of the population today is urban, but urban areas are growing fastest. We can predict the same process on those continents that occurred on our own -- the increased concentration of people in huge cities, with all the attendant environmental effects: Waste disposal, food supply, traffic congestion and its pollution.

When those cities are coastal, as many of them are, those environmental problems inevitably end up in the nearby coastal waters.

During the postwar decades of the 1950s and 1960s, global seawater fish landings tripled to 60 million metric tons worldwide, as a result of improved commercial fishing technologies, the drive to gather more food, and the sheer growth of population. In the 1970s and 1980s, fish landings rose but more slowly. They peaked at 86 million metric tons in 1989.

The 1976 international agreement which established the 200-mile exclusive economic zones offshore was meant to create ways to prevent over-exploitation of fisheries. But that didn't happen, for a number of reasons.

The first response to the 200-mile limit was the negotiation among nations for fishing rights in each others' waters. During the 1970s, Mainers became accustomed to the sight of huge Soviet trawlers and factory ships operating off our coasts. That sight was repeated around many of the world's coasts by fishing fleets flying the flags of such nations as Great Britain, Norway, Iceland, Japan and the United States.

The next reaction to the 200-mile zone -- usually a political reaction in democratic countries -- was the end to foreign fishing rights, and a compensating expansion of national fishing fleets. That happened here in America as it did in virtually every fishing nation around the world.

Governments subsidized the construction of newer, more modern and more efficient

fishing vessels for their own citizens, and barred from their waters the ships of other nations.

The next response, as fish landings failed to increase in pace with expanded, more efficient fleets, was the exploitation of secondary species for export. In Maine, we sought out fish species prized by the Japanese and others to maintain income and make up for falling groundfish catches.

The fourth factor was the effort to scientifically manage the fisheries. Those efforts varied widely. But overall, the first attempt at management didn't succ[eed].

Men and some women have wrested a living from [the] sea for centuries. If they are going to keep on doing so, we will have to pay more attention to the oceans than we have in the past.

Paying attention to the oceans means paying attention to the entire environment because the oceans are a huge and integral part of the world's environment.

Here in the United States, attention has focused on our coastlines only sporadically as we have worked to clean up polluted air, rivers and lakes. But I'm pleased to say that one of the places where the process of study, pollution control, and abatement is taking place is the Gulf of Maine.

The Gulf of Maine covers a vast area that includes open ocean as well as islands, bays, harbors and estuarine environments. It has historically been a rich fishery and therefore a richly diverse biological environment. It has also been subjected to the kinds of u[n]managed development that have taken a toll on all the world's coastal regions.

The Gulf of Maine includes the watershed that contributes so much of the sedimentation and pollution to which it is subjected. We learned in dealing with the Chesapeake that even states which have no frontage on a body of water contribute to its condition by the runoff from their farms and factories. In the case of the Chesapeake, New York, Delaware, Pennsylvania and West Virginia are all states included in the watershed region which have no Bay frontage.

The situation with respect to the Chesapeake, the Gulf of Maine and other similar waters is like that which obtained with respect to the tall stacks of electrical generating plants in the midwest whose effluent ended as acid rain on Maine's forests and in our ponds and streams[.] Neither pollution nor the natural environment acknowledge political subdivisions. It is up to the people who have created the political subdivisions to recognize this and act accordingly.

Compared with other waters, the Gulf of Maine appears to be one of the better quality bodies of water in the world. But we should not wait until permanent damage occurs before we act. And we have plenty of advance knowledge of potential damage.

I've been working to address some of the Gulf's problems over the past several years. In 1990, I supported the designation of Casco Bay as a national estuary under the National Estuary Program in the Clean Water Act.

I also wrote a law creating regional marine research programs, which defined the Gulf of Maine as one of nine major marine ecosystems. The Research Board created by this law identifies what we don't know and should be researching.

The Gulf of Maine is a microcosm which mirrors in smaller detail most of the problems reflected in the wider world's experience of oceanic degradation.

We should not wait until the seas off our coasts are as filthy as the Mediterranean or as toxic as the Sea of Azov before we take steps to monitor and correct the problems. We should not be trapped by superficial geographical differences into the belief that because the Gulf isn't an inland sea, it can't be seriouslycontaminated. We know it can be. We should make sure it won't be. The way to do that is to act, not to wait.

What's needed is an approach that crosses manmade political boundaries to bring together the needs the Gulf serves for the communities which live along its shores.

We must allow citizens to manage the resources to which their lives are linked.

Government cannot solve environmental problems in a vacuum. Laws like the Clean Water Act and the Clean Air Act have removed great amounts of pollution from our environment, but in the end it is the choices made by communities and individuals which are responsible for the long term health of our environment.

When the challenges are as complex as the ones the Gulf of Maine communities face, it's even more important for citizens to take part in finding solutions.

The fishermen who tied up recently in Boston and Portland harbors to protest regulations they say will reduce the groundfish harvest by half in the next five years, did it to be heard. Maine fishing families have told me that the regulations won't work because fishermen don't feel they had any hand in shaping them.

We need an environmental policy which factors human beings in, not out. Maine fishermen have been working our seas for generations. Sons have learned from fathers about the seas and the fish. We must use and analyze this practical knowledge.

We ought to be sharing with our fishermen the predictive abilities science has given us about sustainable fisheries. But we should be listening as well to the experience of those who work the fishery.

I've often been told in response that "anecdotal" information isn't scientifically useful. I respond, with all respect, that when our overall scientific understanding is as thinly based as our knowledge of the oceans is today, a more appropriate stance would be to say that all information is potentially useful.

The value of human knowledge rests in the use human beings can make of it. Scientific management of our fishery which leaves out the people whose lives depend upon it isn't scientific. And it's destined to fail.

I have developed a draft proposal to establish an approach to managing the Gulf of Maine for all its users, people along with birds and fish and mollusks. My approach is based on three conclusions:

-- If we're going to manage something as complex as the Gulf for our mutual benefit, we need to pool information and share it. Fragmented information isn't good enough any more. Nor should anyone have to spend half a day on a telephone to get an answer to a simple question, whether it's about marine resources or economic diversification.

Human beings invented the political subdivisions which now divide the Gulf. The birds and the fish don't recognize them. We have to move past them and look at the region as an ecological whole, because that's how it functions.

We have in place some bodies already working; the existing Governors Council on the Gulf of Maine Council, for instance. We don't have to invent new bureaucracies. We can build on what's in place now, use the accumulated expertise and move forward from this point.

I am circulating this proposal for discussion. Other ideas are welcome. I'm open to them. I hope some here will think it worth their while to contribute their views.

It is my vision that we should seek a Gulf of Maine environment that is naturally healthy, sustainable and one from which people can make a livelihood.

I believe in an environment which includes the work and existence of human beings. I believe human beings and their demands can be potentially as sympathetic to the environment as the demands of nesting falcons or spawning salmon.

I believe it is within the bounds of possibility, working with nature and not against it, to achieve that goal in our lifetimes. I cannot think of a more worthwhile goal to which we could dedicate our time and our effort.

A famed English poet wrote two hundred years ago, "Roll on thou deep and dark blue

oceans, roll, ten thousand fleets sweep over thee in vain, Man marks the earth with ruin --his control stops with the shore--"

Those words capture the magic and mystery of the oceans for humankind. It's the magic and mystery fishermen know and part of what binds them to their lives on the sea. It [is] part of what everyone in Maine feels about the oceans and it is, in a larger sense, part of what the whole human family knows to be true. The ocean is our common birthplace. It has its large share of human tragedies and pain and mistakes. But it has always stood for something larger than mankind, something more enduring and more permanent. It is our responsibility to keep that symbol clean for our children and theirs.