



# arctic

as goes the Arctic, so goes the planet



**OCEANA**

Protecting The  
World's Oceans



# THE ARCTIC

## AWE AND WONDER AT THE TOP OF THE WORLD

The Arctic Ocean is facing incredible pressures. As goes the Arctic, so goes the planet. There is no single Arctic treaty, so it is up to our global community to save this vital part of the Earth.

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### WHERE IS THE ARCTIC?



The answer depends on who you ask. Some define the Arctic as the areas above the Arctic Circle, but this includes areas in Scandinavia with a decidedly “un-Arctic” climate while excluding some more “Arctic-like” areas such as parts of southern Greenland and Hudson Bay.

Many scientists define the Arctic as the area in the northern hemisphere where the average temperature does not rise above 10° C (50° F) for any month of the year. The red line on the map above delineates this area, and it is what we mean by the term Arctic in this publication.



## ARCTIC MARINE ECOSYSTEMS

Some of the world's most extraordinary animals call the Arctic home, including more than 25 species of marine mammals, dozens of species of birds and hundreds of different fishes. Many of these animals are endangered, and all of them are facing unprecedented challenges as the Arctic environment undergoes rapid changes.



*A lone polar bear floats on Arctic sea ice*

**Marine mammals** migrate to and from the Arctic, with some living permanently in the far north. Bowhead and beluga whales swim underneath a ceiling of ice, searching for their next breathing hole. Polar bears patrol the ice on a quest for food, while seals and walrus swim gracefully through the water.

**Birds** flock to the Arctic from all seven continents in the summer, when twenty-four hours of daylight spawn a short-lived but explosive growth of food.



*Spectacled Eider, USFWS*

**Fish** make up the heart of the Arctic marine food web. Forage species such as Arctic cod and capelin are especially important to other animals of the Arctic. Fish are also a staple of the diet of many Arctic peoples.

# THE ARCTIC OCEAN

The Arctic is one of the most beautiful and forbidding places on Earth, where temperatures regularly plunge well below zero and the time between sunset and sunrise is sometimes measured in months rather than hours. Yet despite these difficult conditions a variety of people and animals have adapted to thrive at the top of the world.



*Courtesy of Caleb Pungowiyi*

*Caleb Pungowiyi fishing on the ice in Hotham Inlet, an arm of Kotzebue Sound on the northwest coast of Alaska*

## ARCTIC PEOPLES

The Arctic is home to vibrant communities of indigenous peoples who have lived in harmony with their surroundings since time immemorial.

About four million people live in the Arctic. Indigenous peoples include the Inuit (Alaska, Canada, Greenland, Russia), Saami (Norway, Sweden, Finland, Russia), Athabaskan Indians (Alaska, Canada), Aleut (Alaska, Russia), and dozens of distinct indigenous peoples in north Russia.



*Caleb Pungowiyi, Oceana Senior Advisor and Rural Liaison, educates the public on climate change impacts in the Arctic.*

The cultural richness and traditional knowledge and wisdom of these peoples is an incredibly valuable part of the shared tapestry of human experience.

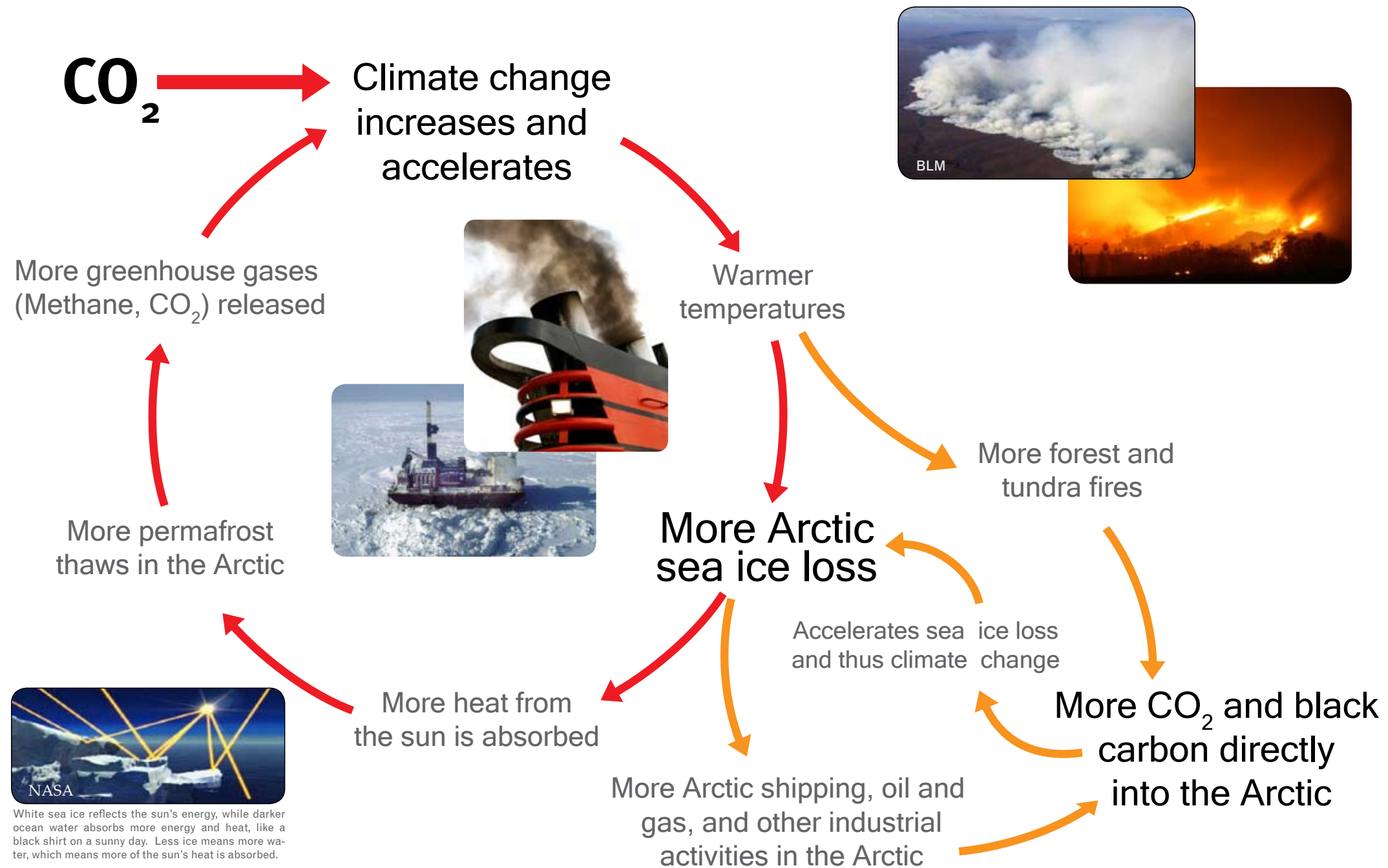


*Courtesy of Chris Krenz*

*Whale bone arch and umiak in Barrow, Alaska.*

# AS GOES THE ARCTIC, SO GOES THE PLANET

## THE ARCTIC ICE PACK IS THE TRIGGER FOR CATASTROPHIC CLIMATE CHANGE



## WHAT HAPPENS IN THE ARCTIC AFFECTS ALL OF US

The Arctic ice pack is the trigger for catastrophic climate change. As sea ice declines, climate change accelerates, and we must act quickly to protect the Arctic and address climate change. If we fail to act we will see dramatic impacts in the Arctic that will cascade around the world.

Catastrophic climate change will likely redraw the map of the world. Coastal communities in the Netherlands, U.S., south Asia and China will end up under water. Conversely, droughts in inland China, Australia and the American mid- and southwest will cause a major shift in populations and communities.



Climate change means that mosquitoes are able to move from the tropics toward the poles, bringing West Nile virus, dengue fever, malaria and other diseases along with them. Diseases which had been previously eliminated or unseen in temperate climates are already appearing or re-appearing in places like the American south and new areas of Europe.

Climate change also can affect what we eat. Soybean, wheat and corn prices have all more than doubled recently in part due to climate change. Continuing drought and changes to traditional farming areas will lead to future shortages and increasing food prices.



# THE ARCTIC CHALLENGE

The Arctic is at the most dramatic of crossroads. The pressures of climate change and industrialization create a “bottleneck” for survival in the Arctic Ocean. The more pressure we put on the Arctic, the narrower the bottleneck becomes, but if we reduce or remove those pressures we still can widen the possibility for survival.

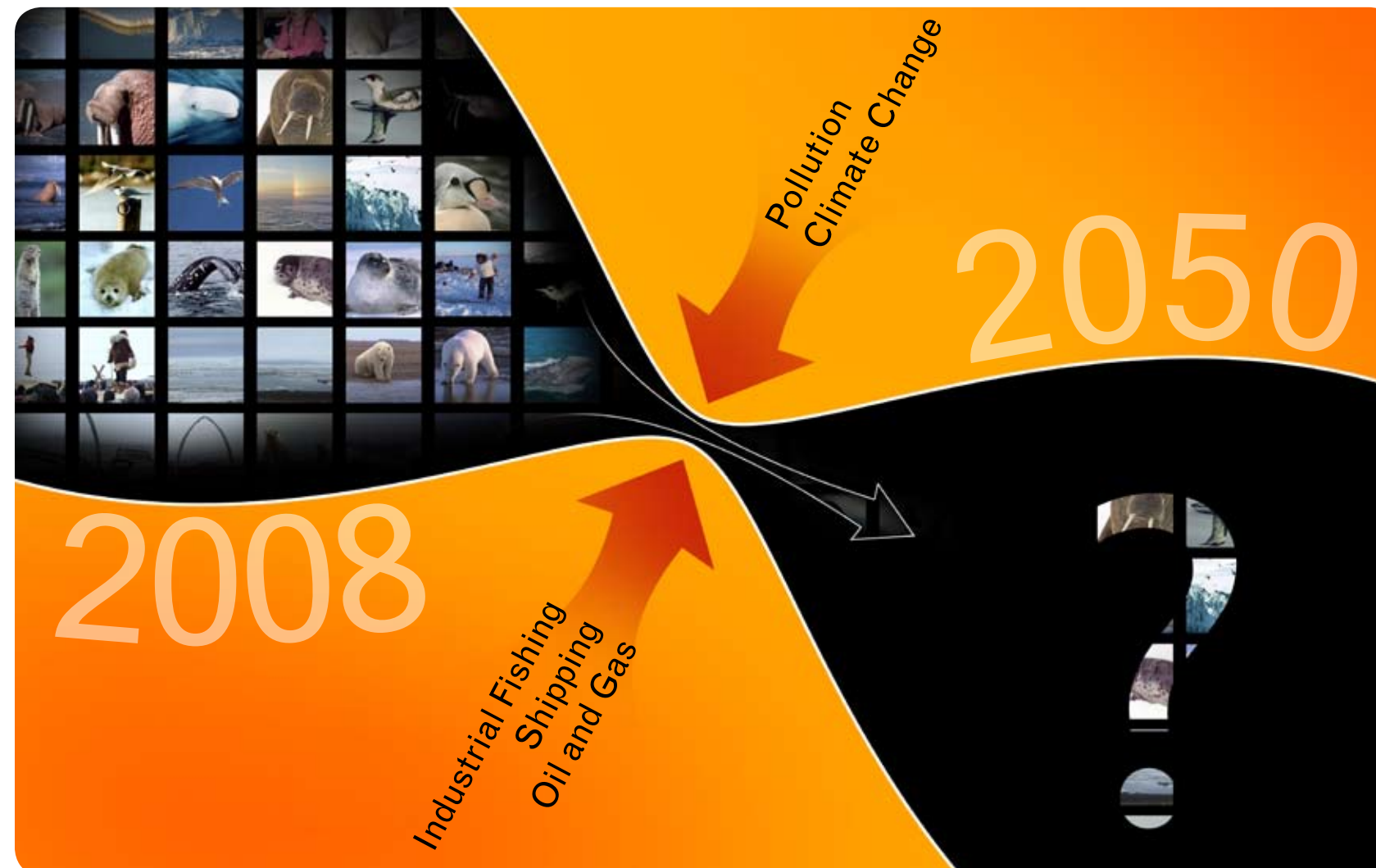
**The choice is ours.**

## ARCTIC PEOPLES AND ANIMALS ARE ALREADY UNDER STRESS

The Arctic is already experiencing significant impacts from global climate change. It is warming extremely rapidly — at twice the rate of the rest of the planet.

One of the most dramatic effects of global warming in the Arctic is receding sea ice. Warmer temperatures and changes to wind patterns have resulted in a shrinking ice pack, which is an important Arctic habitat.

The reduction in sea ice not only makes the lives of northern peoples and marine mammals more difficult, but also opens the Arctic Ocean to the possibility of unprecedented industrialization. The expansion of high-risk activities such as large-scale industrial fishing, shipping, and oil and gas exploration and development would add additional pressures on the already-stressed communities, animals and ecosystems of the far north.



## WE CAN AND MUST ACT NOW

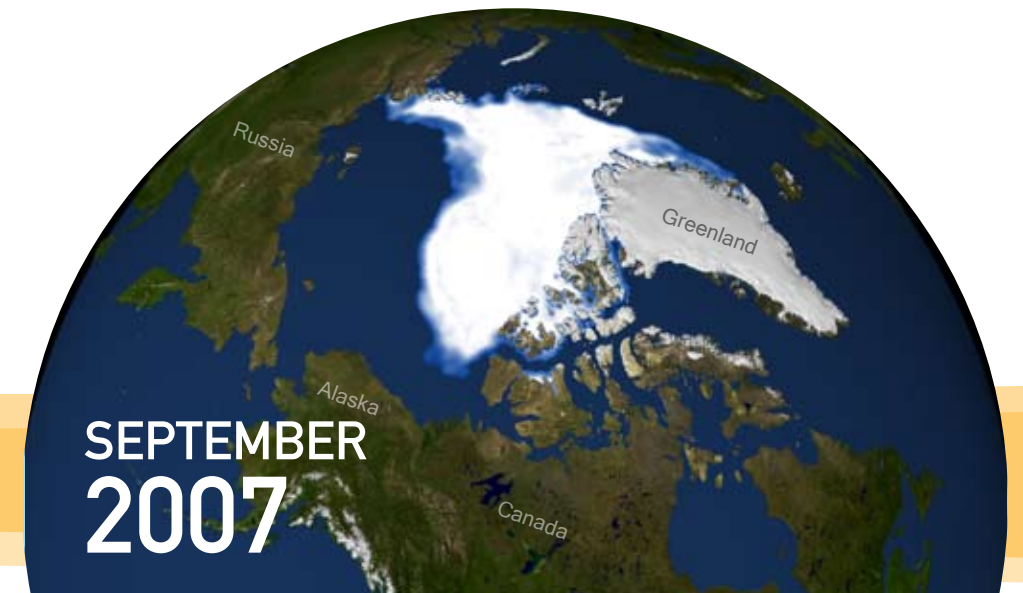
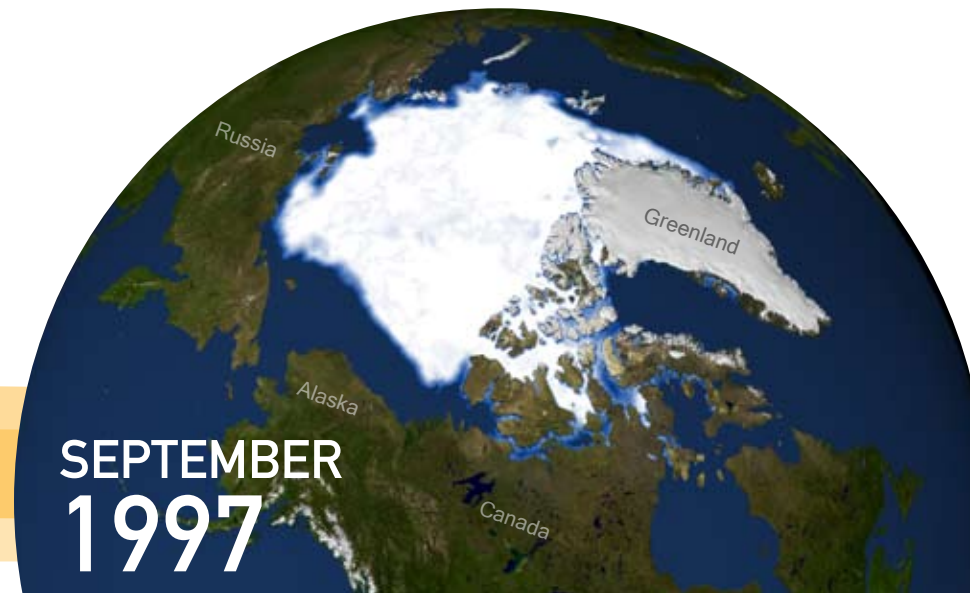
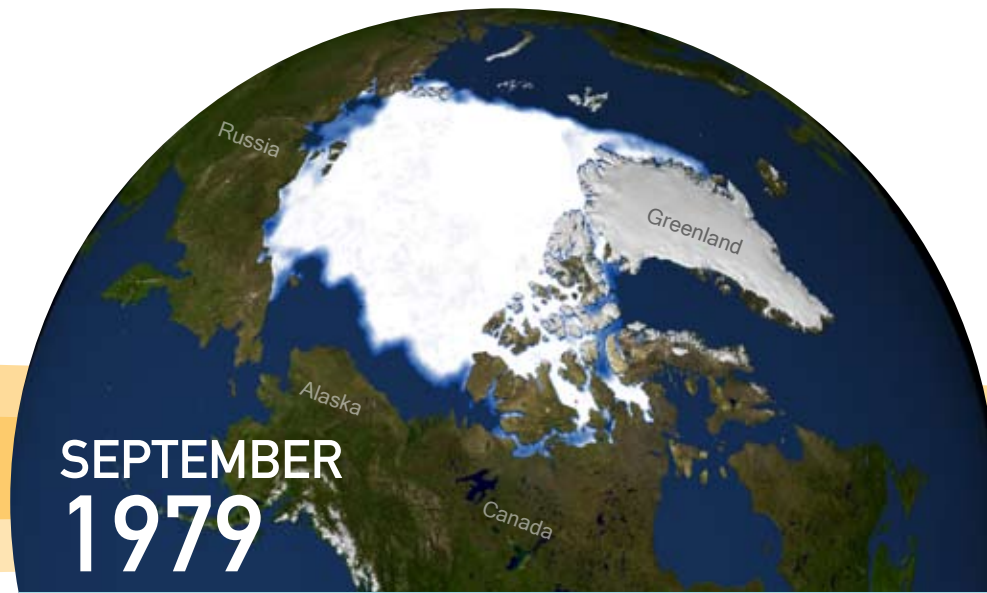
While the Arctic may be hovering on the edge of disaster, it also presents us all with the unique opportunity to use the lessons we have learned about ecosystem management and ocean conservation. We can decide today to protect, rather than recklessly exploit, one of the planet’s last frontiers and chart a new course for how we live on the Earth.

We must act now to ensure that we do not industrialize the Arctic at a rate that is too much, too fast and too soon. Adding new industrial threats on the already-stressed Arctic could be catastrophic.

To best protect Arctic marine ecosystems and preserve opportunities for the subsistence way of life of Arctic peoples we must address all of the threats together – climate change, industrial fishing, shipping, pollution, and oil and gas exploration and development.

# CLIMATE CHANGE AND ARCTIC SEA ICE

## GOING, GOING . . . . GONE?



*Climate change is causing a dramatic loss of sea ice in the Arctic. 2007 was the lowest year on record, and some scientists now predict the Arctic could be ice-free in the summer by as early as 2013.*

### SEA ICE IS IMPORTANT TO ARCTIC PEOPLES...



Arctic communities rely on sea ice for hunting and fishing areas and other subsistence activities necessary for survival. As sea ice is lost and ice conditions become more unpredictable, those activities become more difficult.

Arctic peoples are telling us an important story about how we are living on this planet, and we need to listen and change our own ways before it's too late. Choices we make every day which increase CO<sub>2</sub> in the atmosphere – whether it's driving our cars or not driving home important policies that address climate change – impact the daily lives of people in the Arctic.



### ...AND TO ALL OF US

The Arctic impacts every continent and climate on the planet as changes in the Arctic cascade around the globe, affecting worldwide natural systems.

The Arctic is raising a huge red flag about climate change, and the dramatic impacts that may be coming to our own backyards if we don't act soon.

As all of us have a stake in the health of the planet, we all have a stake in the health of the Arctic.





# INDUSTRIAL THREATS TO THE ARCTIC OCEAN

## TOO MUCH, TOO FAST, TOO SOON

### OIL AND GAS ACTIVITIES

Oil and gas activities pose significant threats to Arctic ecosystems and to the people who depend on them.

Oil and gas activities are incredibly dangerous. Placing wells, pipelines, and vessels in the remote Arctic creates a substantial risk of a catastrophic oil spill, and there is no proven method to clean up an oil spill in the icy conditions often found in the Arctic. In addition, seismic activity, drilling and vessel traffic would bring rock-concert level noise to some parts of the otherwise quiet Arctic Ocean. Noise can severely impact whales and other marine life, damaging eardrums and driving them away from feeding areas and migratory routes.

We must limit any offshore expansion of oil and gas activities in the Arctic unless or until a strategic plan is developed that ensures that such activities can be conducted – and accidents controlled – without adversely impacting ecosystems or the subsistence way of life.



Alaska Sea Grant

### INDUSTRIAL FISHING

Large-scale industrial fishing has adversely affected much of the world's ocean ecosystems. The high Arctic has some of the last few ocean areas that are still relatively pristine.

Yet large-scale industrial fisheries are burgeoning in the sub-Arctic seas. Already there is evidence of northward migration of fish stocks and the fleets in these seas. Sea ice recession will open new fragile areas in the Arctic.

To best protect the Arctic from this potential threat we must stop the northward expansion of bottom trawling; ban all fishing for forage species – the heart of the food web – in the Arctic; ensure that any expansion of large-scale industrial fishing in the Arctic does not threaten the ecosystem or subsistence way of life; and develop international agreements to responsibly manage fishing in the Arctic Ocean.

### SHIPPING

Receding sea ice will open new shipping lanes across the Arctic, increasing the danger of a shipping accident or disastrous fuel spill in the far north. The remoteness and shifting ice of the Arctic not only make shipping incredibly challenging, but also make any efforts to respond to shipping accidents equally daunting.

Increased Arctic shipping would bring about an increase in the amount of black carbon, CO<sub>2</sub> and other pollution pumped directly into the Arctic, further stressing the ecosystem.

Before vessel traffic expands into the Arctic Ocean, there must be effective contingency planning, shipping standards, regulations, enforcement, pre-positioning of equipment, and response capabilities in place. This must include adequate funding for such activities.



USFWS



### POLLUTION

Pollution of the air, water and soil is a worldwide crisis that affects billions of people. Global air and water currents bring a dangerous amount of the world's pollutants to the Arctic.

As a result, the Arctic holds a disproportionate amount of the world's fouler poisons, including DDT and other Persistent Organic Pollutants (or POPs), and other contaminants such as mercury and lead. This has profound impacts on Arctic communities and the marine food web.

It is essential that robust international agreements to reduce and eliminate pollution and POPs be established around the globe. We also must continually research the ongoing accumulation of POPs in the Arctic and the effects on local peoples and animals. Finally, there must be a substantial effort to educate the public, corporations and policymakers on the impacts of pollution on the Arctic and ways they can help to reduce pollution locally, nationally and internationally.

# TAKE ACTION

## THINK GLOBALLY, START LOCALLY

### WHAT CAN I DO?

The challenges we face from climate change may seem daunting, and the tasks too difficult, but we should all remember that we have done this kind of thing before. From the hole in the ozone layer to the threat of acid rain, we have faced large and seemingly insurmountable environmental challenges before...and we have met those challenges time and again.

We've Done This Before. We Can Do it Again.  
Here are some ideas for getting started:

1. **Save Energy:** Install fluorescent light bulbs. Lower your thermostat and unplug electronic devices. Advocate for your community to adopt sustainable energy sources.
2. **Drive Less:** Walk, bike or carpool when you can. Look into expanding public transit for you and your community.
3. **Use Less Stuff:** "Reduce, reuse, and recycle" when you can to limit your use of plastics, packaging and other materials.
4. **Eat Smarter (and Healthier):** When possible, buy local and sustainable foods for yourself and your family.
5. **Learn...and Teach Others:** Learn all you can about how we can overcome climate change and protect the Arctic, then spread the word.
6. **Use Your Dollar:** Support eco-friendly corporations, and use your purchasing power to spur others to change.
7. **Vote...and Don't Stop There:** Vote for environmentally responsible candidates. Join effective organizations like Oceana, and advocate as often as you can for a brighter future for your community and planet.

Visit our website for more ideas:

[www.ProtectTheArctic.org](http://www.ProtectTheArctic.org)

### WHAT CAN WE DO?

#### Communities, Businesses, Organizations, Governments

1. **Public Education:** Provide information and data about climate change, including opportunities for people to share information and stories.
2. **Protect Ecosystem Health and Plan Ahead:** Prepare for life on a changing planet. Maintain the health of ecosystems by limiting industrial stresses. Healthy ecosystems will better withstand climate change.
3. **Personal Responsibility:** Provide specific actions that individuals, families, groups, communities, and corporations can take to reduce greenhouse gas emissions.
4. **Research:** Invest in research in four areas: 1) the climatic system; 2) renewable energy sources; 3) efficient energy use; and 4) the impacts of climate change, including baseline data, ongoing effects, and ways to protect the resilience of ecosystems.
5. **Political Leadership / Activism:** Move the U.S. and world towards at least the "2020 plan" to reduce greenhouse gas emissions by 20% from 1990 emissions levels by 2020, and 80% by 2050.

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# OCEANA

Protecting the  
World's Oceans

*Oceana campaigns to protect and restore the world's oceans. Our teams of marine scientists, economists, lawyers and advocates win specific and concrete policy changes to reduce pollution and to prevent the irreversible collapse of fish populations, marine mammals and other sea life. Global in scope and dedicated to conservation, Oceana has campaigners based in North America (Washington, DC; Juneau, AK; Anchorage, AK; Portland, OR; Monterey, CA), Europe (Madrid, Spain; Brussels, Belgium) and South America (Santiago, Chile). More than 300,000 members and e-activists in over 150 countries have already joined Oceana.*

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