
Oct 01, 2017
ALASKA

1
00:00:04,160 --> 00:00:08,330
On March 17, the Arctic region reached a milestone

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00:00:08,330 --> 00:00:12,330
…the second-lowest sea ice maximum extent since satellite measurements began.

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00:00:12,330 --> 00:00:16,780
The four lowest maximum Arctic extents on record have been in the last four years,

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00:00:16,780 --> 00:00:21,130
according to analysis from NASA and the National Snow and Ice Data Center.

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00:00:21,130 --> 00:00:25,130
This year’s maximum extent reached 5.59 million square miles.

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00:00:25,130 --> 00:00:29,130
But…what does that really mean?

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00:00:29,130 --> 00:00:33,140
How, and why, do we track sea ice?

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00:00:33,140 --> 00:00:37,140
We’ve got a good record of extents since the late 1970s.

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00:00:37,140 --> 00:00:41,640
So by now, the record of the Arctic ice is clearly

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00:00:41,640 --> 00:00:45,640
one of a decreasing ice cover.

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00:00:45,640 --> 00:00:50,420
To answer some of my questions, I talked with Dr. Claire Parkinson,

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00:00:50,420 --> 00:00:54,600
who has been studying sea ice from space for the past four decades.

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00:00:54,600 --> 00:00:58,730

I got a job at NASA’s Goddard Space Flight Center in July of 1978,

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00:00:58,730 --> 00:01:02,920
and I’ve been here ever since

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00:01:02,920 --> 00:01:07,220
and I’ve had the phenomenal opportunity of getting to start

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00:01:07,220 --> 00:01:12,370
when the satellite data were still fairly new and when,

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00:01:12,370 --> 00:01:16,370
at Goddard, people were trying to figure out

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00:01:16,370 --> 00:01:20,550
how to use the satellite data to reveal information about the Earth.

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00:01:20,550 --> 00:01:24,550
After several years when we started getting a longer record,

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00:01:24,550 --> 00:01:29,370
then our attention got changed into

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00:01:29,370 --> 00:01:33,430
“Well what kinds of trends are we seeing in sea ice?”

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00:01:33,430 --> 00:01:37,730
We’ve maintained this record of sea ice and we recognize now

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00:01:37,730 --> 00:01:41,730
that it’s very important for climate change,

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00:01:41,730 --> 00:01:45,890
because sea ice is one of the variables in the Earth system that has been changing

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00:01:45,890 --> 00:01:49,980
the most dramatically, especially in the Arctic.

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00:01:49,980 --> 00:01:54,140
But sea ice doesn’t just react to warming global temperatures…

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00:01:54,140 --> 00:01:59,320
it can actually accelerate the temperature increases.

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00:01:59,320 --> 00:02:03,450
Now the less sea ice coverage feeds back

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00:02:03,450 --> 00:02:08,080
into the warming, because if you’ve got less sea ice cover,

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00:02:08,080 --> 00:02:12,270
that means less of the sun’s radiation that comes down

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00:02:12,270 --> 00:02:16,280
to the surface will get reflected back.

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00:02:16,280 --> 00:02:20,490
Sea ice fluctuates with the seasons, growing during the cold,

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00:02:20,490 --> 00:02:25,930
dark winters until reaching an annual maximum extent

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00:02:25,930 --> 00:02:30,980
in February or March in the Arctic, and then shrinking through the summer

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00:02:30,980 --> 00:02:35,030
until reaching a minimum in September.

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00:02:35,030 --> 00:02:39,040
In the Arctic case, in late summer, it extends over about 5 million square kilometers.

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00:02:39,040 --> 00:02:43,050
In late winter, it extends way further, over about

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00:02:43,050 --> 00:02:47,060

15 million square kilometers, which is about one and a half times the area of Canada.

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00:02:47,060 --> 00:02:51,240
So studying sea ice

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00:02:51,240 --> 00:02:55,250
includes tracking how it changes seasonally. Rather than just looking

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00:02:55,250 --> 00:02:59,260
at the annual summer minimum, scientists track how the ice changes throughout the year,

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00:02:59,260 --> 00:03:03,270
to get a fuller picture of change.

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00:03:03,270 --> 00:03:07,280
Every month of the year has decreases in the Arctic and it doesn’t mean