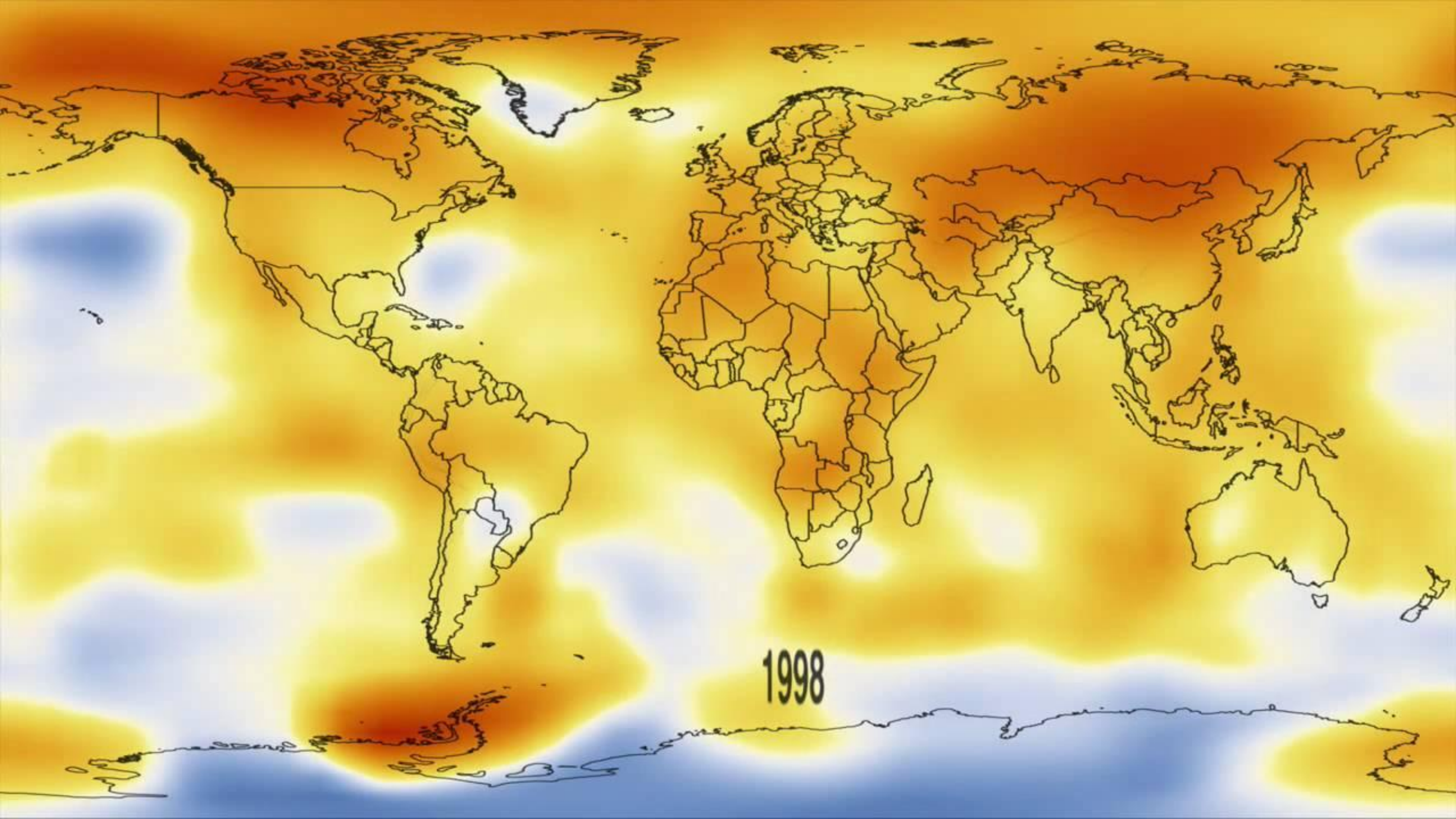
1998

1
00:00:00,001 --> 00:00:04,000
Climate scientists at NASA’s Goddard Institute for Space

2
00:00:04,000 --> 00:00:08,000
Studies or GISS just released a new analysis of global average

3
00:00:08,000 --> 00:00:12,000
temperatures showing that 2009 was tied as the second warmest

4
00:00:12,000 --> 00:00:16,000
year ever recorded. And looking just at the southern hemisphere

5
00:00:16,000 --> 00:00:20,000
2009 even broke the record as the warmest year ever

6
00:00:20,000 --> 00:00:24,000
ever in this half of the world. In fact 2009 was

7
00:00:24,000 --> 00:00:28,000
virtually tied with 5 other recent years in its position as second

8
00:00:28,000 --> 00:00:32,000
warmest on record, 1998, 2002

9
00:00:32,000 --> 00:00:36,000
2003, 2006, and 2007

10
00:00:36,000 --> 00:00:40,000
and was only a fraction of a percent cooler than the warmest year, 2005.

11
00:00:40,000 --> 00:00:44,000
Yet when looking at global temperatures over a longer timeframe

12
00:00:44,000 --> 00:00:48,000
these scientists found a persistent warming trend over the past

13
00:00:48,000 --> 00:00:52,000

three decades, with the average global temperature increasing by

14
00:00:52,000 --> 00:00:56,000
roughly a third of a degree Fahrenheit per decade. This past decade,

15
00:00:56,000 --> 00:01:00,000
from 2000 to 2009, was the warmest yet.

16
00:01:00,000 --> 00:01:04,000
And when looking back all the way to 1880, the year when precise

17
00:01:04,000 --> 00:01:08,000
temperature record keeping began, scientists observed about a one and a half

18
00:01:08,000 --> 00:01:10,000
degrees Fahrenheit rise in global temperatures.

19
00:01:10,000 --> 00:01:12,000
[QUOTE: Jim Hansen] “There are

20
00:01:12,000 --> 00:01:16,010
already beginning to be effects of 1 or 2 degrees warming and

21
00:01:16,010 --> 00:01:20,010
if we get 5 or 10 degree warming several decades

22
00:01:20,010 --> 00:01:24,010
down stream there will be huge effects.” GISS scientists came

23
00:01:24,010 --> 00:01:28,010
came to these results after analyzing information from three sources

24
00:01:28,010 --> 00:01:32,010
data from more than a thousand weather stations around the globe, satellite

25
00:01:32,010 --> 00:01:36,010
observations of sea surface temperature, and measurements from Antarctic research

26
00:01:36,010 --> 00:01:40,010
stations. So what's the cause of this long term warming trend?

27
00:01:40,010 --> 00:01:44,010
While there are several natural processes that can cause subtle climate warming

28
00:01:44,010 --> 00:01:48,010
or cooling, like variations in solar activity, fluctuations

29
00:01:48,010 --> 00:01:52,010
in ocean currents, and volcanic eruptions, climate scientists

30
00:01:52,010 --> 00:01:56,010
believe that rising levels of carbon dioxide and other greenhouse gasses

31
00:01:56,010 --> 00:01:58,010
are the dominant factor driving the rise.

32
00:01:58,010 --> 00:02:00,010
[QUOTE: Jim Hansen] "If we want to limit

33
00:02:00,010 --> 00:02:04,010
climate change and keep it under

34
00:02:04,010 --> 00:02:08,010
an additional one degree Celsius or 2 degrees Fahrenheit

35
00:02:08,010 --> 00:02:12,010
we would need to begin to decrease the CO2

36
00:02:12,010 --> 00:02:16,010
emissions gradually so that by the end of the

37
00:02:16,010 --> 00:02:20,010
century CO2 stopped increasing." So while 2009's