
NASA
nasa.gov/fires
GODDARD
NASA
SPACE FLIGHT CENTER

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00:00:00,020 --> 00:00:04,180
Interviewer: Joining us now from NASA's Goddard Space Flight Center in Greenbelt, MD is

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00:00:04,200 --> 00:00:08,190
Dr. Doug Morton who's going to talk to us about wild fires. Lets talk about

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00:00:08,210 --> 00:00:12,230
this years wild fire season, what have you seen so far?

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00:00:12,250 --> 00:00:16,310
Doug: The 2013 fire season has been a pretty active year across the western U.S. We got an

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00:00:16,330 --> 00:00:20,330
early start in Southern California with fires in May. And that's just continued straight on

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00:00:20,350 --> 00:00:24,340
through with damaging wild fires across parts of Arizona and

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00:00:24,360 --> 00:00:28,400
Colorado some of the most damaging in history in terms of the loss of property.

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00:00:28,420 --> 00:00:32,590
This fire season actually represents a some what average fire year when you look at the

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00:00:32,610 --> 00:00:36,780
total amount of burned area and that's something we can do using NASA satellites to look at how

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00:00:36,800 --> 00:00:40,790
this year compares to previous years over the last 40 years.

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00:00:40,810 --> 00:00:44,970
Interviewer: So NASA has been monitoring fires from space for about 3 decades, what are some of the

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00:00:44,990 --> 00:00:49,160
trends you are seeing. Doug: Across the United States we've seen a large increase

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00:00:49,180 --> 00:00:53,340

in the total amount of burning over the last 30 years. When we look globally

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00:00:53,360 --> 00:00:57,340
we see a singular trend with an increasing number of fires across areas

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00:00:57,360 --> 00:01:01,350
like Southern Africa, the Amazon Brazilian Deforestation

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00:01:01,370 --> 00:01:05,540
Arc as well as areas in Siberia. So these large wild fires

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00:01:05,560 --> 00:01:09,730
are something we can see with the variety of satellites we have here at NASA

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00:01:09,750 --> 00:01:13,730
from space. Interviewer: What do your projections show for the future ?

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00:01:13,750 --> 00:01:17,820
Doug: Hot and dry conditions are really needed to have a large wild fire

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00:01:17,840 --> 00:01:21,840
and as we look out using the latest generation of climate models we see areas of the United

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00:01:21,860 --> 00:01:25,960
States that are already prone to fires getting hotter and dryer, here

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00:01:25,980 --> 00:01:30,160
showing shades of red. As well as the fact that we see areas that today

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00:01:30,180 --> 00:01:34,250
aren't at risk of large wild fires becoming a greater risk of those fires by the end

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00:01:34,270 --> 00:01:38,260
of this century, areas like the upper Midwest or the Great Plains.

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00:01:38,280 --> 00:01:42,440
Interviewer: So how are NASA satellites flying,

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00:01:42,460 --> 00:01:46,610
How are NASA satellites flying some 400 miles above the earth

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00:01:46,630 --> 00:01:50,610
used to detect and monitor wild fires? Doug: At NASA we have

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00:01:50,630 --> 00:01:54,620
14 different satellites that are observing the earth at all times. Those satellites give

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00:01:54,640 --> 00:01:58,710
us an opportunity to study fires globally. Satellites like NASA's LANDSAT

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00:01:58,730 --> 00:02:02,710
series allow us to look at a detailed opportunity of mapping

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00:02:02,730 --> 00:02:06,740
out individual fires and their burn scars, other satellites are used to actively

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00:02:06,760 --> 00:02:10,920
detect those fires and distribute that information in near real time. We even use

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00:02:10,940 --> 00:02:15,000
other satellite sensors to study the smoke that gets released by those fires and we can combine

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00:02:15,020 --> 00:02:19,190
all that information into a global model that allows us to look at where fires are burning

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00:02:19,210 --> 00:02:23,200
and how the aerosols, smoke and particulate matter that gets released from those fires

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00:02:23,220 --> 00:02:27,200
mixes into our atmosphere and helps us understand the Earth as a system.

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00:02:27,220 --> 00:02:31,200
Interviewer: Learn

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00:02:31,220 --> 00:02:35,220

and see more? Doug: This information and much more

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00:02:35,240 --> 00:02:39,230
is available at nasa./gov/fires with additional information about

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00:02:39,250 --> 00:02:43,250
the individual satellites and the scientists that use the data form those satellites to better