



1  
00:00:12,449 --> 00:00:09,690  
Hurricane Katrina took the world by

2  
00:00:14,520 --> 00:00:12,459  
storm when it ravaged Louisiana and

3  
00:00:15,810 --> 00:00:14,530  
surrounding states in late August of

4  
00:00:18,500 --> 00:00:15,820  
2005

5  
00:00:20,970 --> 00:00:18,510  
Katrina's effects were far-reaching and

6  
00:00:23,300 --> 00:00:20,980  
researchers continue to uncover new

7  
00:00:26,370 --> 00:00:23,310  
areas of devastation left in her wake

8  
00:00:29,250 --> 00:00:26,380  
the storm incubated very very rapidly

9  
00:00:33,090 --> 00:00:29,260  
and intensified very very rapidly to a

10  
00:00:34,739 --> 00:00:33,100  
very very strong hurricane and you

11  
00:00:36,119 --> 00:00:34,749  
couldn't really find anywhere you could

12  
00:00:39,389 --> 00:00:36,129  
escape from this thing it was just

13  
00:00:41,790 --> 00:00:39,399

simply enormous the urban effects of the

14

00:00:44,389 --> 00:00:41,800

storm are well-known but Katrina had a

15

00:00:48,059 --> 00:00:44,399

huge impact on regional forests as well

16

00:00:50,700 --> 00:00:48,069

using data from NASA's Landsat and Terra

17

00:00:53,489 --> 00:00:50,710

satellites a group of researchers have

18

00:00:57,629 --> 00:00:53,499

estimated that Hurricane Katrina killed

19

00:01:01,319 --> 00:00:57,639

or severely damaged 320 million large

20

00:01:03,389 --> 00:01:01,329

trees in Gulf Coast forests scientists

21

00:01:06,060 --> 00:01:03,399

study images like these from NASA's

22

00:01:07,950 --> 00:01:06,070

Landsat satellite to assess the extent

23

00:01:10,620 --> 00:01:07,960

of the vegetation loss brought on by the

24

00:01:13,470 --> 00:01:10,630

storm the change in color from bright

25

00:01:16,470 --> 00:01:13,480

green to bright red shows researchers

26  
00:01:19,080 --> 00:01:16,480  
where trees were killed or damaged we

27  
00:01:21,030 --> 00:01:19,090  
think of these storms as producing giant

28  
00:01:23,310 --> 00:01:21,040  
waves that come in and inundate

29  
00:01:25,890 --> 00:01:23,320  
coastlines and we think of the heavy

30  
00:01:28,380 --> 00:01:25,900  
rains that flood but the winds are a

31  
00:01:31,290 --> 00:01:28,390  
third very powerful facet of these

32  
00:01:35,610 --> 00:01:31,300  
systems and a storm like Katrina

33  
00:01:38,220 --> 00:01:35,620  
projected a very high amount of wind far

34  
00:01:41,220 --> 00:01:38,230  
inland and furthermore with the heavy

35  
00:01:43,230 --> 00:01:41,230  
rains that Katrina created that soils

36  
00:01:45,390 --> 00:01:43,240  
became saturated and so these trees are

37  
00:01:48,180 --> 00:01:45,400  
more likely to be blown over when the

38  
00:01:51,030 --> 00:01:48,190

root systems are loosened up Katrina's

39

00:01:53,700 --> 00:01:51,040

powerful winds affected 5 million acres

40

00:01:56,090 --> 00:01:53,710

of forest across Mississippi Louisiana

41

00:01:59,130 --> 00:01:56,100

and Alabama

42

00:02:02,160 --> 00:01:59,140

scientists regard young healthy forests

43

00:02:04,440 --> 00:02:02,170

as carbon sinks forests play a vital

44

00:02:07,070 --> 00:02:04,450

role in removing carbon dioxide from the

45

00:02:09,300 --> 00:02:07,080

atmosphere through photosynthesis

46

00:02:12,660 --> 00:02:09,310

vegetation killed by a storm like

47

00:02:15,030 --> 00:02:12,670

Katrina decomposes over time reversing

48

00:02:18,540 --> 00:02:15,040

the carbon storage process and making

49

00:02:20,640 --> 00:02:18,550

the forest a carbon source researchers

50

00:02:23,070 --> 00:02:20,650

conclude that the loss of so many trees

51  
00:02:24,870 --> 00:02:23,080  
in Gulf Coast forests will be a net

52  
00:02:30,290 --> 00:02:24,880  
source of carbon dioxide to the

53  
00:02:35,460 --> 00:02:33,720  
the 2005 hurricane season will long be

54  
00:02:38,190 --> 00:02:35,470  
remembered for the devastation of

55  
00:02:41,160 --> 00:02:38,200  
Hurricane Katrina in this climate of

56  
00:02:43,710 --> 00:02:41,170  
intensified storms many are wondering is

57  
00:02:46,920 --> 00:02:43,720  
Katrina just the first taste of what's

58  
00:02:50,670 --> 00:02:46,930  
to come is global warming creating more

59  
00:02:52,380 --> 00:02:50,680  
frequent more intense storms there's

60  
00:02:54,120 --> 00:02:52,390  
basically two camps of scientists that

61  
00:02:56,340 --> 00:02:54,130  
have developed you've got one campus

62  
00:02:59,820 --> 00:02:56,350  
scientists that firmly believes that

63  
00:03:02,760 --> 00:02:59,830

years like 2005 are a harbinger and a

64

00:03:04,710 --> 00:03:02,770

signal a sign of what humans have been

65

00:03:06,300 --> 00:03:04,720

doing to warm the climate and there are

66

00:03:09,780 --> 00:03:06,310

other groups of scientists or are

67

00:03:11,880 --> 00:03:09,790

skeptical of this they think that there

68

00:03:14,070 --> 00:03:11,890

are natural cycles that control the

69

00:03:17,340 --> 00:03:14,080

frequency of hurricanes scientists like

70

00:03:20,820 --> 00:03:17,350

myself believes that both groups of

71

00:03:23,130 --> 00:03:20,830

scientists have some merit what NASA

72

00:03:25,860 --> 00:03:23,140

brings to the table is a very

73

00:03:28,170 --> 00:03:25,870

sophisticated suite of remote sensors

74

00:03:30,449 --> 00:03:28,180

that are able to image the clouds in the

75

00:03:32,970 --> 00:03:30,459

ocean in an unprecedented level of detail

76

00:03:34,949 --> 00:03:32,980

we can now see through cloud layers and

77

00:03:37,979 --> 00:03:34,959

we can take cat scans literally of the

78

00:03:40,650 --> 00:03:37,989

inside of the storm we can throw the

79

00:03:44,370 --> 00:03:40,660

veil off and see all these workings of

80

00:03:47,310 --> 00:03:44,380

the engine for the first time the earth

81

00:03:49,410 --> 00:03:47,320

is a complex system whether revealing

82

00:03:51,630 --> 00:03:49,420

the inner workings of a storm or

83

00:03:54,540 --> 00:03:51,640

providing a window onto the devastation

84

00:03:57,830 --> 00:03:54,550

it causes NASA's sensors help scientists