1
00:00:07,850 --> 00:00:05,599
our future is all about water it's too

2
00:00:10,280 --> 00:00:07,860
wet where you want it dry to dry where

3
00:00:12,379 --> 00:00:10,290
you want it wet and you need water or

4
00:00:14,900 --> 00:00:12,389
plants to grow SMAP will help address

5
00:00:23,109 --> 00:00:14,910
this issue by tracking water around our

6
00:00:30,130 --> 00:00:26,779
this map is a acronym for soil moisture

7
00:00:32,749 --> 00:00:30,140
active passive it's a satellite that

8
00:00:34,850 --> 00:00:32,759
studies the Earth's moisture content

9
00:00:35,510 --> 00:00:34,860
where it is where it comes from where it

10
00:00:38,150 --> 00:00:35,520
goes

11
00:00:40,939 --> 00:00:38,160
soil moisture plays a very active and

12
00:00:43,460 --> 00:00:40,949
vital role in the water cycle and and we

13
00:00:46,549 --> 00:00:43,470

all depend on it ways that we don't

14
00:00:49,100 --> 00:00:46,559
realize every day every three days will

15
00:00:51,979 --> 00:00:49,110
have a soil moisture map of the entire

16
00:00:54,410 --> 00:00:51,989
earth and it will allow scientists to

17
00:00:57,200 --> 00:00:54,420
track water availability around the

18
00:01:07,130 --> 00:00:57,210
globe which will also help in guiding

19
00:01:09,200 --> 00:01:07,140
policy decisions we can use the data to

20
00:01:11,899 --> 00:01:09,210
help forecast crop productivity

21
00:01:14,570 --> 00:01:11,909
conditions for floods to occur the

22
00:01:17,240 --> 00:01:14,580
extent of droughts risk for wildfires

23
00:01:19,429 --> 00:01:17,250
and also for vector borne diseases that

24
00:01:22,190 --> 00:01:19,439
can occur in regions or there's lots of

25
00:01:25,010 --> 00:01:22,200
surface water and it'll help us mitigate

26
00:01:26,660 --> 00:01:25,020
the impacts that these phenomenons have

27
00:01:29,750 --> 00:01:26,670
on people's lives

28
00:01:32,990 --> 00:01:29,760
soils are like sponges you know they can

29
00:01:34,880 --> 00:01:33,000
hold a certain amount of water and if we

30
00:01:37,970 --> 00:01:34,890
know the amount of water in the soils

31
00:01:40,430 --> 00:01:37,980
and we know that there's a big rainstorm

32
00:01:42,740 --> 00:01:40,440
coming for example and that the soils

33
00:01:44,600 --> 00:01:42,750
are near saturation then we can predict

34
00:01:46,460 --> 00:01:44,610
that that area might be at risk for

35
00:01:48,380 --> 00:01:46,470
flooding when there's a lot of moisture

36
00:01:50,780 --> 00:01:48,390
available in this in the soil that can

37
00:01:52,370 --> 00:01:50,790
support stronger thunderstorms so so

38
00:01:55,719 --> 00:01:52,380

being able to understand the soil

39
00:01:59,520 --> 00:01:55,729
moisture state is also useful for

40
00:02:05,950 --> 00:01:59,530
weather forecasting in the near term

41
00:02:10,370 --> 00:02:08,270
we're going to launch on a Delta to

42
00:02:13,940 --> 00:02:10,380
launch vehicle goes into a polar orbit

43
00:02:16,460 --> 00:02:13,950
around the Earth and we deploy a giant

44
00:02:18,830 --> 00:02:16,470
dish it's a six metre reflector so it

45
00:02:21,530 --> 00:02:18,840
unstow like a camp chair would what the

46
00:02:23,060 --> 00:02:21,540
big spinning antenna allows us to do is

47
00:02:25,730 --> 00:02:23,070
to make the measurements over a very

48
00:02:27,440 --> 00:02:25,740
wide swath thousand kilometers and

49
00:02:28,940 --> 00:02:27,450
that's the secret to our being able to

50
00:02:31,580 --> 00:02:28,950
make our measurements every two or three

51
00:02:34,550 --> 00:02:31,590
days this is the first time that such as

52
00:02:37,970 --> 00:02:34,560
large deployables antenna is being used

53
00:02:39,980 --> 00:02:37,980
for microwave remote sensing application

54
00:02:44,770 --> 00:02:39,990
we don't ever do the same thing twice

55
00:02:47,390 --> 00:02:44,780
and SMAP follows along that same formula

56
00:02:49,460 --> 00:02:47,400
it's vital to help us understand what

57
00:02:51,770 --> 00:02:49,470
our planets doing as well as to support

58
00:02:54,200 --> 00:02:51,780
these applications that will touch you

59
00:02:56,420 --> 00:02:54,210
know everybody on the planet in a fairly

60
00:02:58,760 --> 00:02:56,430
significant way the measurements are

61
00:03:00,980 --> 00:02:58,770
really important in terms of our future

62
00:03:04,070 --> 00:03:00,990
one of the biggest issues is water and

63
00:03:06,080 --> 00:03:04,080

SMAP will help us better understand this

64
00:03:08,750 --> 00:03:06,090
mobility of water from one place to