1
00:00:00,030 --> 00:00:04,200
[music] Narrator: The Antarctic Ice Sheet covers 98% of the

2
00:00:04,220 --> 00:00:08,380
continent and contains more than half of the world’s fresh water.

3
00:00:08,400 --> 00:00:12,560
But it doesn’t just sit there like a giant ice cube – much of the ice

4
00:00:12,580 --> 00:00:16,740
is constantly flowing toward the sea under the force of its own weight.

5
00:00:16,760 --> 00:00:20,930
Measuring both the thickness of the Antarctic ice sheet

6
00:00:20,950 --> 00:00:25,110
(more than three kilometers thick in some places) and mapping the topography

7
00:00:25,130 --> 00:00:29,300
of the underlying bedrock, helps us understand how the ice flows

8
00:00:29,320 --> 00:00:33,470
and ultimately, how much it might contribute to sea level rise.

9
00:00:33,490 --> 00:00:37,620
An international consortium of scientists led by the British Antarctic Survey

10
00:00:37,640 --> 00:00:41,760
recently released an updated map of the bedrock that lies beneath the ice sheet.

11
00:00:41,780 --> 00:00:45,810
This map, named Bedmap2,

12
00:00:45,830 --> 00:00:49,900
builds on an earlier map that they released in 2001,

13
00:00:49,920 --> 00:00:53,980

and incorporates 25 million additional measurements, taken over

14
00:00:54,000 --> 00:00:58,030
the past two decades, from the ground, air, and space,

15
00:00:58,050 --> 00:01:02,080
including seven years of surface elevation readings from NASA's ICESat satellite

16
00:01:02,100 --> 00:01:06,260
and three years of laser and ice-penetrating radar data

17
00:01:06,280 --> 00:01:10,430
from a NASA airborne mission called Operation IceBridge.

18
00:01:10,450 --> 00:01:14,610
IceBridge has flown over many areas of West Antarctica,

19
00:01:14,630 --> 00:01:18,800
including some never before surveyed,

20
00:01:18,820 --> 00:01:22,980
improving the coverage and accuracy of a portion of this important data set.

21
00:01:23,000 --> 00:01:27,160
Bedmap2 gives scientists a more accurate picture

22
00:01:27,180 --> 00:01:31,340
of the terrain that lies beneath the ice sheet, along with ice thickness

23
00:01:31,360 --> 00:01:35,520
and surface elevation data. Together, these measurements

24
00:01:35,540 --> 00:01:39,680
will improve scientists' understanding of the evolving Antarctic ice sheet

25
00:01:39,700 --> 00:01:43,830
and its influence on the surrounding ocean and our global climate,

26
00:01:43,850 --> 00:01:47,950
and will enhance scientific study of the continent.