



The Big Thaw¹

1 The Chacaltaya ski area in Bolivia used to be the highest in the world. Although it was less than a kilometer long, it hosted international ski competitions. Today the snow has almost gone, and so have Chacaltaya's days as a popular ski resort.

▲ A polar bear and her cub rest on an iceberg in the Arctic Ocean. If warming continues, the Arctic could lose its permanent ice cap by the end of this century.

5 The ski area sits upon a small mountain glacier, which was already getting smaller when the ski area opened in 1939. In the past ten years, however, the glacier has been melting at an increased rate. As the glacier melts, dark rocks beneath it are **uncovered**. The sun then heats the rocks, causing faster melting. Despite attempts to make snow with snow machines, this
10 cycle seems **unstoppable** in the long run.

As experts debate how to **solve** the global warming problem, ice in mountains such as Chacaltaya and near the North and South Poles is **melting** faster than even the most pessimistic² **environmentalists** may have once feared. Rising air and sea temperatures are two well-known causes, but researchers
15 have recently discovered other **unexpected** processes that take place as glaciers melt. The effects are having an impact on humans even now, and they could change the face of the world in the future.

¹ When ice, snow, or something else that is frozen **thaws**, it melts.

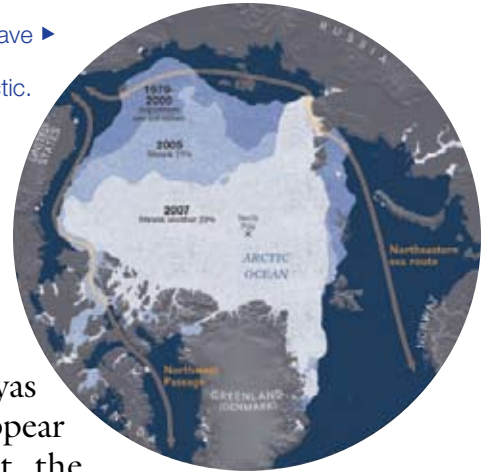
² Someone who is **pessimistic** thinks that bad things are going to happen.

In just six months in 2006, ►
this glacier in Iceland lost
more than 60 meters
(200 feet) of ice.





Warmer temperatures have ►
reduced the amount of
sea ice covering the Arctic.



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Serious Consequences

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The glaciers of the Himalayas and the Andes³ could disappear in this century. As a result, the millions of people in India, Bolivia, and Peru who now depend on melting water from mountain glaciers could find themselves in a **critical** situation. The ice sheet of Greenland is also melting more quickly than scientists predicted. Greenland's largest outlet glacier,⁴ the Jakobshavn Isbræ glacier, is moving toward the sea twice as fast as it was in 1995. One cause could be meltwater⁵ that runs down to the bottom of the glacier and gets between the ice and the rock below. This water makes it easier for the glacier to **slide** along to the ocean.

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Many ice researchers believe that Greenland's melting, if it continues, will add at least three feet to global sea levels by the year 2100. If the ice sheet of Antarctica, now largely unaffected, begins to melt, the next few centuries could see a six-foot rise in sea levels, forcing tens of millions of people out of their homes.

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How can we avoid these dire **consequences** of global warming? "We have to have a serious and immediate **shift** in attitude," says Laurie David, producer of the prize-winning movie *An Inconvenient Truth*, which helped to raise awareness of the problem. Many believe that an attitude of hope and a desire to stay informed make a good beginning. An informed public is in a better position to help address this critical issue.

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³ The **Andes** are the largest mountains of South America.

⁴ An **outlet glacier** is a glacier that moves out from the edge of an ice sheet.

⁵ **Meltwater** is water released from melting snow or ice.

▲ A white arctic fox hunts for baby seals in the ice of Norway. Scandinavia's arctic fox population, with fewer than 200 animals remaining, now faces serious threat of extinction.