

Arctic shrinkage

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A decrease in the amount of Arctic sea ice and the melting of the Greenland Ice Sheet.

Rising [temperatures](#) from [global warming](#) have caused rapid melting of ice in the Arctic sea and on the Greenland Ice Sheet in recent years.

[Climate models](#) predict that this trend will continue in the future. Eventually this development will make the Arctic Ocean completely ice-free during the summer months.

This change will cause [sea levels to rise](#) on a global scale. It is not known exactly how much sea levels will rise when the Arctic Ocean is ice-free during summer. If all of the Greenland Ice Sheet melted, sea levels would rise by seven meters globally, but this is not expected to happen in the near future.

Melting of ice also reduces the [albedo](#) in the Arctic region. This leads to a [positive feedback](#) mechanism called [Arctic amplification](#).

There are several proposals as to how Arctic shrinkage can be halted or slowed down, but even the most optimistic scenarios predict further melting. The effective methods for slowing Arctic shrinkage are the same as those used to [mitigate global warming](#) in general, namely primarily a reduction in the [emission](#) of [greenhouse gases](#).

Arctic shrinkage poses a serious problem to polar bears. Polar bears hunt seals from platforms of sea ice. When the ice melts earlier in the season, polar bears have less time to feed which leaves them with less of the fat reserves necessary to survive periods with little available food.

Territorial disputes are also a future possibility because Arctic shrinkage opens up the area to resource extraction. This makes it interesting for a number of neighboring countries.

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