

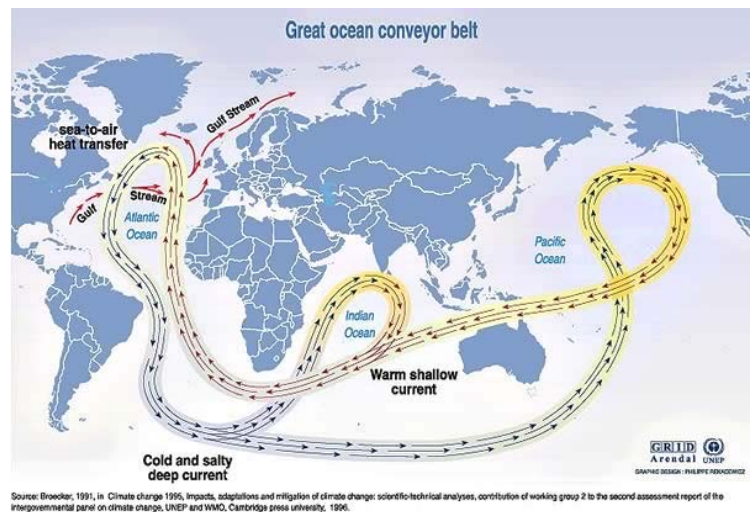
The Day After Tomorrow: Fact or Fiction?

NASA and NSIDC analyze *The Day After Tomorrow* for truisms in the following questions and answers.



Is rapid climate change possible?

- “Yes. At the end of the last glacial period (10,000 years ago), the **Younger Dryas** event was a very sharp transition around the North Atlantic from warm conditions at the end of the last glacial period back to cold conditions which lasted about 1000 years before switching back to warm conditions. Scientists think that this was caused by the last major ice sheet in North America collapsing and putting a lot of fresh water into the North Atlantic. This may have caused the North Atlantic "overturning" to slow down, reducing the amount of heat transported toward the pole.”
- “Temperature and salinity differences in the world's oceans work together to create what is known as **thermohaline circulation**. This circulation pattern, illustrated in the figure, acts as a "conveyor belt," slowly overturning the oceans. The strength of the thermohaline circulation is strongly determined by the sinking of the waters associated with the Gulf Stream. This releases vast amounts of heat to the atmosphere, keeping Europe warm.”



Is the movie real?!

- “While aspects of the movie have a distant basis in fact and real theories of climate change, the film greatly compresses and exaggerates events. Scenarios that take place over a few days or weeks in the movie would actually require centuries to occur. Nevertheless, climate change is real, and is having an effect on Earth’s ice and oceans. Not tomorrow, or the day after, but today.”

As preparations for filming of *The Day After Tomorrow* accelerated through 2002, unusual weather patterns added a sense of urgency to the project.

"With the floods in Europe and the breaking of that ice shelf in Antarctica, I realized we had to hurry up or otherwise we're making a documentary," film-maker Roland Emmerich said.