

# Abundant Arctic fresh water could alter Gulf Stream

Associated Press

**AMSTERDAM** — Scientists are monitoring a massive pool of fresh water in the Arctic Ocean that could spill into the Atlantic and potentially alter the key ocean currents that give Western Europe its moderate climate.

The oceanographers said Tuesday the unusual accumulation has been caused by Siberian and Canadian rivers dumping more water into the Arctic and from melting sea

ice. Both are consequences of global warming, scientists say.

If it flushes into the Atlantic, the infusion of fresh water could, in the worst case, change the ocean current that brings warmth from the tropics to European shores, said Laura De Steur of the Royal Netherlands Institute for Sea Research.

German researcher Benjamin Rabe, of the Alfred Wegener Institute, said the Arctic's fresh water content had

increased 20 percent since the 1990s — about 8,400 cubic kilometers. That is the equivalent of all the water in Lake Michigan and Lake Huron together or double the volume of water in Lake Victoria, Africa's largest lake.

Increased runoff from the great northern rivers "could potentially impact the large scale ocean circulation in the Atlantic Ocean. This is important for us in Western Europe because our climate is pretty

much dictated by the Thermohaline ocean circulation," said De Steur.

The Thermohaline current loops like a conveyor belt from the tropics to the North Atlantic, driven by the differences in salt content and wind patterns. Warm water from the south gains in salinity and grows heavier as it cools. At its northern end, the current is further chilled by cold air and sinks, warming again and rising as it travels south.

That cycle could be affected when the pool of fresh water is released into the Atlantic, said De Steur and Rabe.

"It's important to monitor this to see if this can be transported to the Atlantic, where it might potentially effect the Gulf Stream and the Thermohaline circulation," De Steur said.

Rabe cautioned that scientists have not been studying the situation long enough to predict what may happen.