

Simulation shows it's possible to tow an iceberg to drought areas

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Image credit: Trevor Williams.

(PhysOrg.com) -- Way back in the 70's Georges Mougin, then an engineering graduate, had a big idea. He suggested that icebergs floating around in the North Atlantic could be tethered and dragged south to places that were experiencing a severe drought, such as the Sahel of West Africa. Mougin received some backing funds from a Saudi prince but most "experts" at the time scoffed at his idea and the whole scheme was eventually shelved.

Cut to 2009 and French software firm Dassault Systemes, who thought maybe Mougin was on to something after all and contacted him to suggest modeling the whole idea on a computer. After applying 15 engineers to the problem, the team concluded that towing an [iceberg](#)

from the waters around Newfoundland to the Canary Islands off the northwest coast of Africa, could be done, and would take under five months, though it would cost nearly ten million dollars.

In the simulation, as in a real world attempt, the selected iceberg would first be fitted with an insulating skirt to stave off melting; it would then be connected to a tugboat (and a kite sail) that would travel at about one knot (assuming assistance from ocean currents). In the simulated test, the iceberg arrived intact having lost only 38 percent of its seven ton mass.

A real world project would of course require hauling a much bigger berg; experts estimate a 30 million ton iceberg could provide fresh water for half a million people for up to a year. There would also be the problem of transporting the water from the berg in the ocean to the drought stricken people. The extraordinary costs for such a project would, it is assumed, come from the price tag for the skirt, five months of diesel fuel for the tugboat, the man hours involved and then finally, distribution of the fresh water at the destination.

Scientists estimate that some 40,000 icebergs break away from the polar ice caps each year, though only a fraction of them would be large enough to be worth the time and expense of dragging them to a place experiencing a drought, such as the devastating one currently going on in the Horn of Africa.

Mougin, newly reinvigorated by the results of the recent study, at age 86, is now trying to raise money for a real-world test of the idea.

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