



## Laughing gas not so funny

*Study: Thawing permafrost releases overlooked emissions contributing to climate change*

Thawing permafrost is releasing nitrous oxide, commonly called laughing gas, an often overlooked contributor to climate change, according to a study involving The University Center In Svalbard.

Samples collected in Svalbard and Greenland between 2006 and 2008 show emissions

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considerably exceeding that of tropical forests, the main source of the greenhouse gas. Along wetlands in Zackenberg in eastern Greenland, for instance, some readings were 20 times higher.

"Measurements of nitrous oxide production permafrost samples from five additional wetland sites in the high Arctic indicate that the rates of nitrous oxide production observed in the Zackenberg soils may be in the low range," notes a study of the project published Sunday in the journal *Nature Geoscience*.

The study is authored by University of Copenhagen professors Bo Elberling and Hanne H. Christiansen – who both led a 2008 UNIS course – and Birger U. Hansen.

Melting permafrost underlies about 25 percent of the land in the Northern Hemisphere.

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Randi Østvik prepares her 3-month-old son, Eirik Alexander Åkvik, for baptism by Leif Magne Helgesen during Easter Day Mass at Svalbard Church. A just-completed renovation relocated the church's altar and removed a rail shielding the altar's murals from view. Also removed was red carpet Helgesen said was visually distracting.

## Revival lights up church

*Pulpit renovations bring murals of altar into view, improve space for services and events*

The day of the Resurrection saw new life celebrated in a multitude of ways at Svalbard Church.

Renovations to the pulpit, completed just before Easter, brought a new look after 50 years as part of a reform in the Norwegian

church. Leif Magne Helgesen, priest at Svalbard Church, said the changes made to the sanctuary during the past year are designed to give a lighter feel and more versatility to the space.

"The idea was to keep the old symbols with the new design," he said.

"It is more flexible," he added. "You can move (items) and fix it for concerts."

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## Balloon an early riser for historic trip

*French explorer seeks to make first solo crossing of North Pole*



Jean-Louis Etienne prepares Monday for his attempted balloon crossing of the North Pole. Photo provided by Generali Arctic Observer.

The winds of fortune, at least, are favoring Jean-Louis Etienne's hope of making the first solo crossing of the North Pole in a balloon.

The French explorer lifted off from just outside the city limits of Longyearbyen at about 6 a.m. Monday for a 3,500-km trip over the North Pole to Alaska expected to take seven to 10 days. He is taking atmospheric readings during the flight to help gauge the impact of climate change on the Arctic.

Etienne, after taking off earlier than planned due to the push of rising winds, said in

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### Editor

Mark Sabbatini

### Copy editor

Kristan Hutchison

### Psychiatrist

Irene Gallion

### Mailing address

*Icepeople*  
Vei 210 -2- 13  
Longyearbyen, Svalbard  
9170  
Norway

### Telephone

Norway: +47 41 51 46 38  
U.S. +1 (970) 673-4472

### E-mail

marksabbatini@yahoo.com

### Web site

www.icepeople.net

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## Corrections policy

When we screw up you'll know about it – on the front page. One of the big complaints about newspapers is they tend to bury corrections and clarifications deep inside where few people who read the original article see them. If we need to fix something, an alert box on the front page will state what story is in error and where the full correction is printed.

## Submitting material

Letters, columns, photos and other material are welcome, but we can't offer pay for published items since nobody here is getting paid at the moment. Submissions in electronic form (text, Word documents, JPEGs, etc.) are highly preferred, although typing and/or scanning of items will be considered on a per-case basis. We reserve the right to edit submissions for length, clarity, accuracy, libel and other reasons, but we will also make every reasonable effort to contact the author about any changes prior to publication.



A hot air balloon carrying Jean-Louis Etienne drifts above Spitsbergen shortly after takeoff Monday from just outside Longyearbyen as the French explorer seeks to make the first successful solo balloon crossing of the North Pole. Photo provided by Generali Arctic Observer.

## Challenges come early during Pole trip

### BALLOON, from page 1

the first of his daily in-flight radio broadcasts that navigational challenges came quickly.

"I flew along the mountain sides and had a few scary moments suddenly seeing dark rock faces slipping by," he said. "Flying over mountains is not that easy. I had to remain low enough to find my way from one valley to another and at the same time stay as close as I could to the trajectory that Christophe Houver (the flight's coordinator) gave to me. At one point I found myself flying in foggy conditions, as the wind was in the right direction in the mist. Piloting the balloon in misty conditions is a bit stressful, especially with the mountains around."

Etienne, 63, became the first person to reach the North Pole solo overland in 1986 after pulling a sled there in 63 days. He also spent three months on the sea ice around the North Pole in 2002, gathering climate change data aboard the *Polar Observer*.

He spent a year and a half preparing for his journey in the Rozière-type balloon, supported by a combination of helium and hot air. Inside the six-porthole capsule he is taking "scientific measurements of CO<sub>2</sub>, of the magnetic field, of suspended particles, and of tropospheric ozone," according to Generali Arctic Observer, the expedition's organizer.

## Arctic thaw releasing climate-changing gas

### EMISSIONS, from page 1

Nitrous oxide is considered the third most important greenhouse gas generated from human activity, behind carbon dioxide and methane, but also has 300 times the impact on the atmosphere as carbon dioxide. Human sources include fertilizers and fossil fuels.

The professors state past studies indicate carbon dioxide and methane are released by a thaw of permafrost while nitrous oxide stays locked up.

**There's more! Visit [www.icepeople.net](http://www.icepeople.net) for the complete story.**

"In embarking on this daring adventure, worthy of the novels of Jules Verne, I want to draw the world's attention to: the shrinking of the polar sea ice and its impact on the lifestyle of the native peoples of the north; the state of Arctic biodiversity; and the planet-wide climatic chaos that will ensue if the polar ice disappears," Etienne said, according to a GAO statement. "The sea ice is the best indicator we have of the effectiveness of the measures that man must take to curb global warming."

Etienne was scheduled to begin his journey Thursday, but the launch was moved up to sometime between 8 a.m. and noon Monday when weather conditions became favorable. Support staff arrived shortly after midnight to ready the balloon, inflating it at about 2 a.m. as winds calmed, but they began rising again a few hours later.

"It was a bit of a handful on the ground," said Dave Boxall, design engineer for Cameron Balloons, which made the 2,000-square-meter canopy. "If we had kept the balloon on the ground another hour or two it would have gotten messy."

Etienne's progress, including video and radio broadcasts, are available at [http://www.jeanlouisetienne.com/generali\\_arctic\\_observer](http://www.jeanlouisetienne.com/generali_arctic_observer). **There's more! Visit [www.icepeople.net](http://www.icepeople.net) for the complete story.**



UNIS students drill the permafrost in Greenland as part of a project examining nitrous oxide emissions in the Arctic. Photo by Bo Elberling.



Svalbard Church Priest Leif Magne Helgesen, left, and Elisa Stokka, a visiting student priest, prepare communion during Easter Day Mass. The church's altar was moved forward as part of a renovation, allowing priests to stand behind it instead of in front of it with their backs to the congregation.

## Renovation brings altar, priest into view

**CHURCH, from page 1**

Space was opened up by removing a rail and kneeling benches in front of the altar, which was then moved forward so the priest can stand behind it while preparing communion and for other duties. Helgesen said one of the biggest benefits of the new arrangement is being able to face congregants rather than turning his back during such moments.

The pulpit's red carpet was replaced with a hardwood floor and a large solid lectern replaced with a smaller framework stand. The old lectern is now on display at Svalbard Museum. Helgesen said some minor work remains, such as padding a couple of kneel chairs that match the lectern's design.

Among the first to be blessed in the new sanctuary was 3-month-old Eirik Alexander Åkvik, who was baptized during Easter Day Mass. His mother, Randi Østvik, who has lived in Longyearbyen for six years and now has two children baptized at the church, is among the residents who appreciate the overhaul.

"I like that we removed the carpet and I like the light," she said. "I think it's very nice."

Reaction from locals is generally positive, although some are predictably unhappy with a



Svalbard Church, before recently completed changes, featured red carpet in the pulpit and a rail around the altar. It also had a larger lectern, now on display at Svalbard Museum.

new look to long-familiar sacred space, Helgesen said. But since the changes began when the church invited an architect a year ago, it's not a sudden shock.

"He came with a lot of ideas," Helgesen said. "We looked through it and changed some things he suggested, not all of them."

**There's more! Visit [www.icepeople.net](http://www.icepeople.net) for the complete story.**

## HEADLINES STOLEN FROM SVALBARDPOSTEN

VERDENS NORDLIGSTE AVIS

### No 98 octane gasoline at Svalbard Auto until June

Svalbard Auto is out of 98 octane gasoline until at least June as more snowscooters than expected are being filled with the premium fuel, said Frank Jakobsen, project director for LNS Spitsbergen. "On some new scooters it is recommended that 98 octane gasoline be used," he said, although he said he believes many drivers are using the pricier fuel even when it isn't required. Snowscooter dealers said many 98 octane machines and cars should run acceptably with 95 octane fuel, perhaps with reduced performance, but dealers should be contacted to be sure. Jakobsen said sea ice needs to be clear for the tanker ship and the gas station has to wait until its tanks are empty enough to require a full shipment, since a half shipment is too expensive. LNSS' tanks have capacity for 4,100 cubic meters of diesel, 1,000 cubic meters of 95 octane gas and 200 cubic meters of 98 octane gas.

### Svalbardbutikken workers upset, fearful of management

Employees at Svalbardbutikken are expressing frustration about inadequate information and poor cooperation from management. New leaders were elected to represent the employees at a regional meeting last month, where suggestions for resolving tensions were also discussed. The representatives and corporate officials in Tromsø agree problems should be discussed at the local level, although some employees have said they are reluctant to express dissatisfaction due to fears of management retribution. Morten Helliksen, the store's administrative director, said "I cannot understand the basis" for the reluctance to discuss matters with him or other management.

### Few problems during heavily traveled Easter weekend

A woman had to be evacuated last Friday after injuring herself on a snowscooter in Sassendalen, but generally the highly traveled Easter weekend was free of serious incidents, according to the Svalbard governor's office.

## Weather forecast for Longyearbyen

### Wednesday

Mostly cloudy. Winds from the SSE at 20 km/h. High -3C (-12C wind chill), low -8C (-15C wind chill).

### Thursday

A few flurries, low clouds. ESE winds at 20 km/h. High -6C (-14C wind chill), low -14C (-21C wind chill).

### Friday

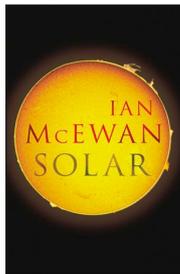
Cloudy, up to 5 cm snow. E winds at 16 km/h. High -12C (-19C wind chill), low -14C (-19C wind chill).

### Saturday

Warmer, up to 8 cm snow. ESE winds at 11 km/h. High -7C (-8C wind chill), low -9C (-9C wind chill).

**Extended forecast:** Sunday, mostly cloudy -8C (-8C), -12C (-29C); Monday, snow, -12C (-24C), -19C (-37C); Tuesday, low clouds and windy -16C (-36C), -19C (-39C); Wednesday, wind and snow, -16C (-34C), -19C (-37C).

Data provided by [AccuWeather.com](http://AccuWeather.com)



The *Noorderlicht*, at right, is the main setting in Svalbard for Ian McEwan's science satire novel, "Solar."



## Review: Icy misery climax of 'Solar'

### Climate change skeptic can't catch a break in Svalbard in Ian McEwan's new satirical novel

If Ian McEwan's version of Svalbard is accurate, it won't be much of a loss if global warming wipes it out.

The British author spent a week on the ice-bound *Noorderlicht* in 2005 with 24 artists and scientists observing the effects of climate change, a journey relived by the protagonist of his new novel "Solar." His Nobel-winning scientist discovers a frozen hell where people are insufferably happy in their harmonious ruminations about the Earth's demise, waitresses don't understand the English word for "coffee" and the wine is from Libya.

He arrives on a long-delayed flight at 3 a.m., devours the minibar in his room and barely a doze later proves staggeringly incompetent at donning any part of his outdoor weather gear. With a condescending guide's assistance, he finally stumbles into the minus 26°C outdoors with its 60 mph winds for the long snowscooter trip to the ship, only to realize he hasn't visited a urinal in more than 30 hours. Whatever your imagination might conjure as the most tragicomic thing that might happen during the journey, McEwan's version almost surely surpasses.

That climactic moment, so to speak, obviously can't be sustained, and unfortunately it's the too-soon peak of an uneven tale satirizing scientific and academic life. Critics' reviews of the novel are mixed, and Svalbard residents and researchers will also likely find varying degrees of amusement and recognition within the hardback's 304 pages.

The protagonist is Michael Beard, a flabby fiftysomething failing miserably at his fifth marriage, earning his way by plodding mindlessly through speeches and events on the rep from his decades-old award. The invitation to Svalbard in the year 2000 is the stage setter for the first act, but it's the tragedy following his misadventure that sets the plot in motion during subsequent acts in 2005 and 2009.

Beard becomes obsessed with fighting climate change by inventing a form of artificial photosynthesis to generate cheap solar power, although his motives and actions don't exactly turn him into a sympathetic character. He experiences revivals in his personal and profession-

### Land of adventure?

*The following is Ian McEwan's introduction to Svalbard in his novel "Solar:"*

"There arrived an invitation to the North Pole – at least, that was how he described it to himself and everyone else. In fact, the destination was well below the eightieth parallel, and he would be staying on a 'well-appointed, toastily-heated vessel of richly-carpeted oak-panelled corridors with tasselled wall lamps', so a brochure promised, on a ship that would be placidly frozen into a semi-remote fjord, a long snowmobile ride north of Longyearbyen on the island of Spitsbergen. The three hardships would be the size of his cabin, limited email opportunities, and a wine list confined to a North African vin de pays..."

"An Italian chef of 'international renown' would be in attendance, and predatory polar bears would be shot if necessary by a guide with a high-calibre rifle...the guilty discharge of carbon dioxide from twenty return flights and snowmobile rides and sixty hot meals a day served in polar conditions would be offset by planting three thousand trees in Venezuela as soon as a site could be identified and local officials bribed."

al fortunes, only to get himself into progressively deeper quandaries with his bumbling and insufferable behavior.

The relationship between science and culture is an underlying theme. It's never clearly resolved, but cleverly portrayed at times, including whether the *Noorderlicht's* boot room represents hope or hopelessness for mankind.

It's hardly giving anything away to say Beard doesn't live happily ever after. McEwan told the *Guardian* of London he rewrote the last few pages after the Copenhagen climate summit failed to reach a meaningful agreement.

"Everything has collapsed around (Beard) and he knows that Copenhagen will be just the place for him," McEwan said. "It is where he would be heading to add his confusion to everybody else's."

**There's more! Visit [www.icepeople.net](http://www.icepeople.net) for the complete story.**

## What's up

### April 11

11 a.m.: Liturgy. Svalbard Church.

6 p.m.: Movie: "The Princess And The Frog," U.S. animated adventure, ages 7 and up. Huset.

8 p.m.: Movie: "Velkommen," French drama, ages 11 and up. Huset.

### April 12

7 p.m.: Presentation by polar explorer and author Børge Ousland about his trips in the Arctic. Radisson Blu Polar Hotel.

### April 15

Deadline for 2010-11 kindergarten registration.

### April 17-18

Trappers' Trail dogsledding race.

### April 18

11 a.m. Visiting liturgy by Bishop Per Oskar Kjølås. Svalbard Church.

8 p.m.: Movie: "Shutter Island," U.S. drama/thriller, ages 15 and up. Huset.

### April 20

7 p.m.: Aid to Botswana project meeting presented by Kari Schrøder Hansen. Svalbard Church.

### April 24

10 a.m.: Spitsbergen Skimarathon. Race information available at [svalbardturn.no](http://svalbardturn.no).

10:15 a.m.: Environment and industry committee meeting. Næringsbygget 1, Tundra room.

### April 25

6 p.m.: Movie: "The Fantastic Mikkel Rev," U.S. animation/comedy with Norwegian subtitles, ages 7 and up. Huset.

8 p.m.: Movie: "Breakup," French drama, ages 15 and up. Huset.

### April 27

10 a.m.: Administration Committee meeting, Næringsbygget 1, Tundra room.

## What's online

**Icepeople.net** provides daily updates of news about Svalbard and the world's polar regions, plus extras for articles from the print edition. Among the latest news:

- *Five nations spar, negotiate over Arctic*
- *Satellite tracking climate effect on ice*
- *Norway's whale quota at 25-year high*
- *Run Antarctic marathon for only \$17,000*