

HELPING THE WORLD PLAN FOR POLAR MELTDOWN

Polar explorer to lead scientific survey to predict date of North Pole ice cap's meltdown

London, October 16 2007 - Today, world leading polar explorer and environmentalist, Pen Hadow, announced an international scientific endeavour to predict the meltdown date of the North Pole permanent ice cap more accurately, thereby helping governments around the world to prepare for the significant consequences.

Hadow (45) is leading the Vanco Arctic Survey to capture the most detailed and accurate data ever recorded on the thickness of the North Pole ice cap which floats on the Arctic Ocean. This unique data will help scientists determine how long an ice cap will remain around the North Pole. Its disappearance will cause accelerated climate change, rising sea levels, and even geo-political conflicts over resources which will affect almost every region of the world.

Scientists' current predictions for the melting of the ice cap vary wildly, from 100, to just 16, years from now. The ice at the North Pole is currently decreasing at a rate of 100,000 square kilometres per year due to global warming.

Setting out next February, 2008, the Vanco Arctic Survey team - comprising Hadow, leading polar explorer Ann Daniels, and specialist Arctic photographer Martin Hartley - will undertake a 120 day, 2000km crossing of the ice cap in temperatures as low as minus 50°C. The survey team will depart from Point Barrow, Alaska, pulling 'sledge-boats', and on occasions even swimming across stretches of open water, reaching the North Geographic Pole in June.

Hadow will be using a specially-developed, 4kg impulse radar (reduced from 100 kg) which has taken his team two years to develop, backed up by a daily programme of manual ice-coring, to determine snow and ice-thickness. The survey will provide over 10 million readings, and will for the first time gather separate measurements of the thickness of the ice and overlying snow, including the little-studied region of the central Arctic.

Wake Up Call

Hadow is working in collaboration with some of the world's leading oceanographers and climatologists at the University of Cambridge and the US Naval Postgraduate School. NASA, the UK Met Office and the European Space Agency are also linked to the project.

The data secured by Hadow's elite polar survey team will be used to reassess existing satellite and submarine-generated data and to provide a firmer date for the ice cap's loss.

"Remote-sensing instruments aboard submarines, aircraft and satellites cannot measure separately the thickness of the ice and snow layers. This complicates the processing of the data and requires adjustments involving poorly-known densities of

sea ice and snow. So this data becomes estimations rather more than actual measurements," said Hadow.

"There is no substitute for taking the measurements directly from the surface of the cap. Such a surveying service can only be done by the few who are accustomed to the rigours and hazards of travelling on the sea ice.

"If we discover the central region of the North Pole ice cap really is thinning as fast as some experts fear, this survey will provide the decisive wake-up call for political leaders everywhere to take the urgent steps needed to prepare us all for the global consequences of North Pole ice cap meltdown," claimed Hadow.

Ice Volume

"Up to now, most estimates for the likely disappearance of the permanent ice cap have been based on the current rate of shrinking, coupled with complex climatic models. However, reliable predictions are hampered by the fact that the actual thickness distribution of the Arctic ice cover is not accurately known.

"By measuring this third dimension along this 2,000 kilometre transect, we hope to provide climatologists with the data they need to better estimate when, in the summer months, the Arctic will be totally free of ice," said Dr Joao Rodrigues, the survey's head of science, who is part of the Polar Oceans Physics Group at the University of Cambridge.

"In addition, recording the amount of lighter-packed snow overlying the ice is very important for the large-scale determination of the sea ice thickness from satellite altimetry, which requires the depth of the snow to be exactly known" commented Dr Rodrigues.

Serious Regional Implications

During the survey, the team will be using state-of-the-art communications systems to transmit an unprecedented variety of film, photography and scientific data – environmental and physiological – giving access to the dramatic reality of polar exploration to a global audience for the first time direct from the ice.

"It is a sad thought that for all the children born on the day we start our journey, there may be no permanent ice cap at the North Pole by the time they become adults," reflected Hadow.

"Unprecedented levels of coastal flooding, storm damage and shoreline erosion are the inevitable results of such rising sea levels. Already we are seeing the severe impact of global warming all over the world," he continued.

Global Repercussions

"In human terms, access to one of the world's largest untapped oil and natural gas reserves is already leading to geo-political tensions as Russia and other circumpolar nations stake territorial claims on the seabed," said Hadow.

"In the natural world, the likely extinction of the polar bear highlights the potentially swift collapse of the northern sea ice ecosystem which is currently poorly understood.

"More commercially, the opening up of new shipping routes, and the associated infrastructural developments in the Arctic's fragile environment, are accompanied by new presently unregulated fishing grounds.

Press Release

“Meanwhile a multitude of negative impacts gather pace on the livelihoods of the indigenous pan-Arctic peoples, living on the coastal margins of the ocean.

“But the distortion of regional weather patterns and the acceleration of already rising sea levels, as the ocean warms up and expands, are likely to affect the largest number of people worldwide.

“Accurate information is vitally needed to enable world leaders to plan for the huge potential impact of the melting of the ice

“All these phenomena *will* happen,” said Hadow, “so it is critical that we know *when*, so that we can start to respond appropriately.”

VANCO agencies to incorporate relevant bullet points below into their regional releases – i.e. only one/two bullet points will be used per release

Vanco, the global telecoms company headquartered in the UK, is the title sponsor of the project, but is representing the Telecommunications Industry as a whole.

Vanco believes that the Telecommunications Industry has a unique and vital role in developing a sustainable world where economic growth can go hand in hand with environmental protection. ETNO, the European Telecommunications Network Operators Association, indicated in its 2006 Sustainability Report that if 20% of business travel in a major European country was replaced with an alternative, such as video conferencing, CO2 emissions would be reduced by over 5 million tonnes. Multiplied across tens of thousands of multinational businesses across the globe, the impact of meeting electronically rather than physically is substantial.

- ENDS -

FURTHER BACKGROUND

Satellites No satellites currently cover the top two degrees latitude of the earth’s surface. At present, satellite photography of the North Geographic Pole assumes the ice cap is there and colours it in white. Satellite determinations have, at present, some associated errors, in spite of the billions spent on them.

First Ever Live Footage A further innovation introduced by Hadow is the first ever ‘as live’ video footage to be filmed in the high Arctic and broadcast worldwide. By developing a custom-built, multi-iridium-modem, fixed antennae system, Hadow will deliver up to five minutes of webcam-quality footage daily, using sun powered batteries to condense and deliver 5kb per minute, the fastest delivery currently possible via the only usable satellite in the area: InMarSat. “We will be transmitting data in unprecedented amounts, opening up science and real polar exploration to a global audience for the first time direct from the ice,” he said.

History The Vanco Arctic Survey will follow in the footsteps of Sir Wally Herbert, whose team became the first in the world to walk to the North Geographic Pole, and on to cross the entire Arctic Ocean, a feat accomplished after eighteen months on the ice, as recently as 1969.

Sir Wally’s team-mate Fritz Koerniker, made daily ice core readings as they progressed, and Hadow believes these are the only accurate readings currently in existence. He plans to build on Sir Wally’s findings, nearly forty years on.

Geography The survey comes at a critical moment as evidence of an acceleration in the rate of melting is gathering. The North-West passage was ice-free during the summer months this year, and the length of the ice-free season is steadily increasing, with certain regions of the Arctic failing to freeze at all.

“It is crucial that people understand that what is happening in the Arctic is having a significant impact on the rest of the world - including some of the warmest parts of the globe,” said Hadow.

During the 20th century sea levels rose between 10 and 20 cms (4-8 ins) but the situation is set to deteriorate at an escalating rate.

The International Panel for Climate Change (IPCC) has predicted sea levels will rise by between 9 and 88 cms (4 – 35ins) during the 21st century. This would have a devastating impact on the lives of millions of people across the globe.

Indeed, the Stern Review on the Economics of Climate Change states that an increase of between 20 and 80 cms of sea level rise could lead up to 300m people being flooded each year.

Pen Hadow Pen Hadow is a polar explorer with more than 15 years of experience. In 2003, he became the first person ever to walk to the North Pole, solo and without resupply.

For more information please call Rod Macrae or Zahra Akkerhuys, at Macrae Media and Communication, on +44 1491 613715 or on +44 7814 029819 or +44 7825 229300

High-resolution photographs of the Arctic are available in advance of the launch event. Please email rod@macraecommunication.com or zahra@macraecommunication.com to request any images.