

REFERENCE SHEET

Climate Change in the mountains – its significance for your business

Presented by Nick Brown, Company Founder of Nikwax® Waterproofing



“The damage we have wreaked on our planet is terrifying and as individuals and as a species ourselves, we simply cannot continue to abuse the environment and the creatures we share the land with in the manner that we have become used to. In the past, we did not fully understand the effect of our actions – now we do, ignorance cannot be an excuse for not changing our behaviour.”

Arctic Explorer Glen Morris 2006.

To read more about Glen Morris' expedition click here:

<http://news.bbc.co.uk/1/hi/sci/tech/4568630.stm>

<http://news.bbc.co.uk/1/hi/sci/tech/4790238.stm>

Scientific conference organised by MRI about Change in the Mountains that was hosted in Perth, Scotland in November 2005. <http://mri.scnatweb.ch>

Conference in Mendoza, Argentina, about change in the American Cordillera. <http://mri.scnatweb.ch/content/category/7/44/66/>

IS CLIMATE CHANGE REALLY HAPPENING?

<http://www.met-office.gov.uk/research/hadleycentre/pubs/brochures/2003/global.pdf>

<http://www.climatestewards.co.uk/climatechange.php?menuid=1>

Less known key issues about climate change

- Uneven changes
- Increasing difficulties with water supplies
- Dramatic feedback mechanisms
- Abrupt large scale changes

Some examples to make the issues meaningful:

A. UNEVEN CHANGES

<http://www.newscientist.com/article.ns?id=mg18725124.500>

Western Siberia has warmed faster than almost anywhere else on the planet, with an increase in average temperatures of some 3°C in the last 40 years.

B. INCREASING DIFFICULTIES WITH WATER SUPPLIES

http://www.thewe.cc/weplanet/news/glaciers_melting.htm

The glaciers in the Tibetan mountain regions provide water for at least 300 million people in China. They are currently halving in size every 10 years. The overall effect of these changes will be greater desertification in China, more severe dust storms in the East and severe water shortages.

C. DRAMATIC FEEDBACK MECHANISMS

http://www.newscientist.com/article.ns?id=dn7964&feedId=climate-change_rss20

During the 2003 summer temperatures across central Europe soared and an estimated 35,000 people died because of the heat. But one factor that many people do not know about it is that in these extremely hot conditions, European forests became net Carbon Dioxide producers.

<http://www.guardian.co.uk/climatechange/story/0,12374,1324379,00.html>

The extremely dry conditions inhibited growth and promoted decay. Furthermore, dry conditions and higher temperatures lead to greater frequency of forest fires, in turn releasing more carbon dioxide. Snow and Ice reflect a considerable amount of heat back out into outer space. As the snow cover in the Arctic is reducing, so more of the heat from sunlight is absorbed at ground level.

<http://news.bbc.co.uk/1/hi/sci/tech/4790238.stm>



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D. ABRUPT LARGE SCALE CHANGES - GULF STREAM SWITCH-OFF?

Climate change is not being steady and will NOT be steady. When the 'Day after Tomorrow' movie was released the UK meteorological office put out a press release planning how the concept of rapid changes in sea currents underlay the film, and some of the misconceptions and bad science in the film.

<http://www.metoffice.gov.uk/corporate/pressoffice/2004/pr20040430a.html>

To quote the Met office in 2004:

The Hadley Centre used their complex climate model to look at the effect on the Gulf Stream of future climate change, caused by the greenhouse effect as carbon dioxide

is emitted in ever-increasing quantities. What they found was that, yes, the Gulf Stream did slow down - by about 20% by the middle of the century - but it didn't completely switch off. And the cooling effect on Britain of the decreased flow was more than offset by the greenhouse-effect warming.

But the following year an article was published in Nature with measurements that showed that the Gulf Stream has already reduced by 30% since the 1950's.

http://www.soton.ac.uk/mediacentre/news/2005/nov/05_204.shtml

For further information see:

<http://news.bbc.co.uk/1/hi/sci/tech/4834806.stm>

<http://www.newscientist.com/article/dn8889-glacial-earth-quakes-rock-greenland-ice-sheet.html>

How is climate change affecting the Outdoor business and how can we adapt?

Like agricultural activity, the Outdoor business is currently highly seasonally dependent, and therefore is driven by the weather.

The issues here for the Outdoor Retailer and Supplier alike are:

- How much should we buy (or make)?
- What should we buy (or make)?
- How can we hedge our bets?

For further reading click here:

<http://www.ulapland.fi/home/hkunta/jmoore/climateskiing.pdf>

So what can we do in the Outdoor Industry about Climate Change?

- Make a profit
- Educate
- Create a policy
- Assess carbon emissions for Action

<http://www.envirowise.gov.uk/page.aspx?o=about>

<http://www.carbonfootprint.com/>

<http://www.treesforlife.org.uk/>

http://www.carbonbalanced.org/personal/pcboffset.htm?1p%3D3x1z8i2y5l4m%204w9r5l5e9r4w5v%205v3n9r0h0h9r5l4m0h%20%260h5v%3DC1z8i2y5l4m_G5l5l7t2o5v%266k%3D0.25%26vw%3D1

<http://www.co2balance.com/pages.php?pageid=24>

- Target and Improve
- Get political and influence government policy

Chaney Glacier The Glacier National Park, Montana



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