

MOUNT KILIMANJARO

Presently (2011), we are entering the fourth decade of the Greens' global warming campaign. On studying this campaign, you can identify two enduring, but conflicting strategies of the Greens.

First, global warming has to be sold as a global problem. The Greens want to influence the world, so they cannot afford to have global warming appear to be a regional or local problem. Even though it is recognised that the climate in the northern and southern hemisphere differ¹, the Greens will go out of their way to minimise or ignore this fact. They argue that the cost of solving a 'global' problem should be shared globally. They would consider it unfair to punish northern hemisphere societies for a northern hemisphere problem and not do the same for societies in the southern hemisphere. Consequently, their propaganda machine spends a disproportionate amount of time trying to prove the world has a global problem.

Unfortunately the science doesn't support their view that man is causing catastrophic global warming. To overcome this weakness, the Greens second strategy is to go around the world identifying regional or local changes that they then blame on global warming. By producing hundreds of examples like this, they hope the mere weight of numbers will be a convincing argument that 'proves' catastrophic global warming is occurring. This is fallacious reasoning but, unfortunately, it works. Faced with this irrational approach, sceptics find that they have what some call, the "Watt Handicap".

James Watt said "*A lie can go around the world twice, before the truth can put its boots on.*" In a similar fashion to a lie, the Greens can identify changes in this dynamic world, label them a problem, then assert they are caused by global warming faster than anyone can prove that they are wrong. On presenting each example, the Greens encourage you to make the following six assumptions:

1. The change or effect is caused by warming and not some other cause.
2. The warming is global, not local.
3. The global warming is caused by the greenhouse gases, and not caused by many of the natural causes of warming.
4. This warming is caused by carbon dioxide, and not caused by water vapour.
5. This warming is caused by the 3% of carbon dioxide produced by man, and not by the 97% of carbon dioxide naturally produced. And finally,
6. This warming is going to be dangerous or catastrophic.

On being shown one of these examples, instead of subconsciously accepting all six assumptions, you should consciously step through each of the six assumptions to see if they are valid. This handout looks at one of these examples - Mount Kilimanjaro.

The Birth of a Factoid

The Greens' assertion that man-made global warming was the cause of diminishing ice on Mount Kilimanjaro had 'gone around the world' once before Al Gore made his film "The Inconvenient Truth". The loss of ice on Mount Kilimanjaro was just one of many examples used in the film to 'prove' that manmade catastrophic global warming was occurring. The worldwide distribution of this film, and the viewing by school children of the film as part of the educational curriculum in western nations² ensured a rapid 'second trip around the world' to convert this assertion into a factoid³.

Millions of school children and young adults now believe this loss of Mount Kilimanjaro's ice is proof of manmade catastrophic global warming. Not to be left behind, bi-partisan support for this factoid was given in the US Senate in 2004 by Senators John McCain and Hillary Clinton. McCain described his affection for Ernest Hemingway's famous short story "The Snows of Kilimanjaro" and went on to attribute the decline of glacial ice atop the mountain during the intervening years to CO₂-induced global warming, calling this attribution not only a **fact**, but a fact "*that cannot be refuted by any scientist.*" Hillary Clinton, who at the same hearing as McCain displayed a set of photos taken from the same vantage point in 1970 and 1999, said that in those pictures "*we have evidence in the most dramatic way possible of the effects of 29 years of global warming.*" Unfortunately for the two political luminaries, the detailed measurements and analyses that are described in the research papers cited by many scientists⁴ provide **no support whatsoever** for McCain's and Clinton's contentions.

What is Happening on Mount Kilimanjaro?

Mt Kilimanjaro is a 19,341 foot high Tanzania mountain close to the border of Kenya. This majestic extinct volcano has had an ice cap that has been diminishing since 1912, which is now expected to disappear within a decade or two. Let us now test the first assumption the Greens want us to make – Is the change or effect caused by warming and not some other cause?

Being close to the equator, let us assume that the average annual temperature is 25 degrees at the base of the mountain. If you started climbing this peak the temperature would drop by approximately two degrees⁵ for each thousand feet you climbed. At 12,500 feet you would pass the freezing level, and on reaching the peak the temperature would average minus 14 degrees. So what has global warming done to this situation?

Although some would disagree with the figure, the Greens tell us that in the last hundred years global temperatures have risen by 0.7°C. This has in effect caused the freezing level to rise by approximately 350 feet⁶ from 12,150 to 12,500 feet on the mountain since 1912. Even this change, which is not necessarily caused by the greenhouse gases let alone Man's small contribution of carbon dioxide, still leaves more than six thousand feet that can support ice and snow. So why has 85% of the ice cover on the mountain disappeared from 1912-2007? The

short answer, backed by both common sense and science, is the lack of local precipitation (rain and snow).

So, global warming could have removed a 350 foot band of ice around the mountain in the past 100 years. However, there is no way such warming has remove the next six thousand feet of ice. You will not hear this common sense answer from the Greens who are likely to refer to the 'science' of Irion⁷ or Thompson et al.⁸ who attribute the loss of ice solely to temperature changes caused by manmade global warming. Because these two ideological biased studies had flagrantly ignore the adiabatic lapse rate, many papers⁹ from scientists who had devoted the better part of their scientific careers to study this subject were published to refute these views, and to hypothesise, the obvious, that the loss of ice *"is controlled by the absence of sustained regional wet periods rather than changes in local air temperature on the peak of Kilimanjaro."*

So, this Green example, that is meant to prove Man is causing catastrophic global warming, fails to satisfy the first assumption that warming and not some other cause is the problem. It also fails the second assumption that the effect is global rather than local. If this was a global problem then all mountains worldwide would have lost a similar amount of ice between 12,500 to 19,000 feet, not just Mt. Kilimanjaro. Obviously, this is not the case.

When faced with all this bad news, many Greens foolishly jump to the conclusion that global warming is causing less precipitation, so indirectly global warming is causing Mt. Kilimanjaro's ice loss. They forget global warming increases evaporation from the oceans leading to more rain, not less. This effect is stronger in the warmer equatorial region (e.g. Tanzania) than regions in the higher latitudes. Also, precipitation in other areas of Tanzania and surrounding countries remain unchanged. Consequently, this is a local phenomenon that is affecting the mountain and cannot be attributed to global warming irrespective of what is causing the warming.

Finally, the Greens have identified a change taking place on Mt. Kilimanjaro. They have made the subjective decision to label this as a problem or a major problem. Others would disagree with these labels. However, the Greens are wrong to then hold up this 'problem' as proof of manmade catastrophic global warming. The change is not caused by warming, manmade or natural, and is a local, not global change.

Lessons to be Learnt

By blindly trusting the Greens, we help their assertions or lies to spread rapidly around the world. On being repeated often enough, they become factoids. Even if you are foolish enough to believe these factoids, there is often no logic involved in holding these examples up as 'proof' of manmade catastrophic global warming. Like most of these 'proofs', this Mt. Kilimanjaro example shows it is easy

to check by using common sense or a little critical thought. This is rarely done. Checking the six assumptions discussed in this handout can help unmask a factoid and discover the facts.

We should be very careful to warn our citizens of being misled by pseudo documentaries which are closer to political propaganda than real documentaries based on facts. We also should never allow politics to be taken into our schools to brainwash our children, hiding behind the facade of an “educational documentary”.

Finally, part of the problem of generating Green factoids is caused by scientists responding to the “publish or perish” pressures, and how the Media report on science. Researchers, such as Irion and Thompson, either through ideological bias or responding to the pressure of “publish or perish”, are encouraged to arrive at the ‘right’ answer in their research. In the emotional environment created by the global warming debate, they are aware that their work, with the ‘right’ answer, is more likely to be published and, more importantly, the Greens will ensure it receives global media attention. This notoriety, in turn, may lead to extra research funding.

In contrast, the more boring existing and follow up research concluding that there is not an earth shattering problem suffers from what Lomborg calls “file drawer research syndrome”¹⁰. This research is harder to publish and will not attract the Media’s attention as it in effect spoils a “good horror story”. Obviously, no additional research funding will follow, and the research ends up at the bottom of some file drawer somewhere. I believe the speedy repudiation of both Irion and Thompson et al work, was a professional response to what was in effect ‘junk science’ that needed to be challenged as quickly as possible. The expected happen – the ‘junk science’ was spread far and wide with much publicity, while the repudiation by many scientists is sitting in a file drawer somewhere.

CONCLUSION

The loss of ice on Mt. Kilimanjaro is not a global problem that is proof of manmade catastrophic global warming. It is a local problem, in all likelihood, caused by a lack of rain and snow.

Many of the Greens’ ‘proofs’ of manmade catastrophic global warming are so flawed that a secondary school student, with a critical mind, can easily challenge them. Every time the Greens produce such ‘proofs’, they should be evaluated against the six assumptions the Greens want us to automatically assume.

There are many lessons that can be learnt from this example of the loss of ice on Mt. Kilimanjaro.

Notes:

1. The scientists have observed this and labelled the effect, but are unable to explain how, why or when it will occur. Whenever the Arctic region is cooling, the Antarctic will be warming. Then for some reason the reverse happens, with the effect lasting multiple decades.

2. The film is used as a teaching aid in many countries including America, Canada, the UK and Australia.
3. A '**Factoid**' is an assertion or speculation that is repeated often enough for it to become accepted as a fact.
4. A good summary and additional research is given in: Kaser, G., Molg, T., Cullen, N.J., Hardy, D.R. and Winkler, M. 2010. Is the decline of ice on Kilimanjaro unprecedented in the Holocene? *The Holocene* **20**: 1079-1091.
5. The atmosphere's adiabatic lapse rate will reduce temperatures by approximately 2°C each thousand feet climbed above sea level. Depending on the humidity of the air this 2°C can vary by approximately ten per cent.
6. $1000 \text{ feet} \times 0.7/2.0 = 350 \text{ feet}$
7. Irion, R. 2001. The melting snows of Kilimanjaro. *Science* **291**: 1690-1691.
8. Thompson, L.G., Mosely-Thompson, E., Davis, M.E., Henderson, K.A., Brecher, H.H., Zagorodnov, V.S., Mashiotta, T.A., Lin, P.-N., Mikhailenko, V.N., Hardy, D.R. and Beer, J. 2002. Kilimanjaro ice core records: Evidence of Holocene climate change in tropical A.
9. A good summary and additional research is given in: Kaser, G., Molg, T., Cullen, N.J., Hardy, D.R. and Winkler, M. 2010. Is the decline of ice on Kilimanjaro unprecedented in the Holocene? *The Holocene* **20**: 1079-1091.
 Some other research papers were: Cullen, N.J., Molg, T., Hardy, D.R., Steffen, K. and Kaser, G. 2007. Energy-balance model validation on the top of Kilimanjaro, Tanzania, using eddy covariance data. *Annals of Glaciology* **46**: 227-233.; Cullen, N.J., Molg, T., Hardy, D.R., Steffen, K. and Kaser, G. 2007. Energy-balance model validation on the top of Kilimanjaro, Tanzania, using eddy covariance data. *Annals of Glaciology* **46**: 227-233.; Kaser, G., Hardy, D.R., Molg, T., Bradley, R.S. and Hyera, T.M. 2004. Modern glacier retreat on Kilimanjaro as evidence of climate change: Observations and facts. *International Journal of Climatology* **24**: 329-339.; Molg, T., Chiang, J.C.H., Gohm, A. and Cullen, N.J. 2009a. Temporal precipitation variability versus altitude on a tropical high mountain: Observations and mesoscale atmospheric modeling. *Quarterly Journal of the Royal Meteorological Society* **135**: 1439-1455.; Molg, T., Cullen, N.J., Hardy, D.R., Winkler, M. and Kaser, G. 2009b. Quantifying climate change in the tropical mid-troposphere over East Africa from glacier shrinkage on Kilimanjaro. *Journal of Climate* **22**: 4162-4181
10. Lomborg, Bjorn, "The Skeptical Environmentalist", Cambridge University Press, Cambridge, 2001, p36.