

## ACID RAIN

Continuing their vilification of 'Industrial Man', the Greens launched their acid rain campaign in the late 1970s. The world was told that without taking rapid action, all the forests in the world would be dead within 10-15 years. They asserted that pollution from industrial processes was being carried around the world and was mixing with the rain. When it fell, this acid rain was going to kill all the trees in the world.

As usual, "all the scientists" agreed, and no 'reasonable person' should question these assertions. The Greens ensured we were inundated with visions of sick and dying trees on our TVs, and 'important people' told us about the horrors that would fall upon the World. The United Nations "Brundtland Report", rather like the present United Nations IPCC reports, stated unequivocally that "*In Europe, acid precipitation kills forests*"<sup>1</sup>. Others assured us that acid rain was an "*invisible plague*"<sup>2</sup> which would create an "*ecological Hiroshima*"<sup>3</sup>.

Even after several scientific studies showed that, once again, this was Green nonsense, the propaganda effect still persisted. A popular book released in 1989, called "*Acid Rain: Threats to Life*" told its readers;

*"An acid plague is sweeping the Earth. The rain, snow, fog and mists have become acid because of pollution from factories and cars all over the world, and it is now converted to acid rain.*

*Acid rain destroys our buildings and statues but it also threatens the natural environment. One third of the German forests have been attacked, so the trees are either dead or dying. 4000 Swedish lakes are dead, and 14,000 are in the process of dying....*

*In cities all over the Earth, people are being suffocated - or dying - because of the smoke they cannot escape....*

*Acid rain has become one of the most serious threats to life here on Earth."*

Even much later, the discredited acid rain factoids were still being peddled by the Greens and their followers. In 1999, *The American Journal of Public Health* casually stated that "...as communities discover toxic waste dumps, polychlorinated biphenyls (PCBs) in their rivers, and acid rain destroying their forests..."<sup>4</sup>. Similarly, the Danish daily "*Politiken*", in 1993, succinctly asserted "*Sulphur in the atmosphere produces acid rain. And acid rain kills forests*"<sup>5</sup>.

## SO WHAT HAPPENED?

The predicted ten to fifteen years have well and truly past, so what has happened? Have **all** the forests in the world died – killed by acid rain? No. So were the Greens wrong? Yes they were wrong. Did 75%, 50%, or 10% of the

world's forests die because of acid rain? No. So the Greens were not only wrong, they were very wrong. And, once again, the world has wasted valuable resources, time, and money to confirm that another Green Armageddon story is a Green myth. These resources, money, and research time have been diverted from existing more important real problems in our society – an important foregone opportunity cost that the Greens never recognise.

### INVESTIGATING THE ACID RAIN MYTH

In their emotional propaganda campaign about acid rain, the Greens never told the world that normal rain is naturally acidic. So the term acid rain only refers to the small increase in the acidity of natural rain. This might occur when nitrous oxide compounds or sulphur dioxide mixes with rain to create weak sulphuric or nitric acid. This increased acidity level was asserted to have a devastating effect on forests, waterways (lakes and rivers), and buildings.

The propaganda campaign run by the Greens, predicting Forestry Armageddon, led many countries to waste time, money and scarce research assets in finding how wrong the Greens' alarming assertions were. This section briefly looks at some of these scientific studies.

#### **United States' National Acid Precipitation Assessment Program (NAPAP).**

Not surprisingly, this American study became the world's biggest, longest and most expensive (Half a billion dollars) scientific investigation into acid rain. It lasted more than a decade, involved about 700 scientists and carried out several long term investigations to answer questions about the link acid rain *might* have with forests, lakes and buildings<sup>16</sup>.

The strength of the acid rain used in the studies was four to ten times that of 'normal or expected' acid rain. Similarly, the trees were cultivated in relatively poor soil. This approach was used to maximise any negative effects of the acid rain. For so few effects of acid rain to then be identified under these conditions, reaffirms how trivial Forestry Armageddon turned out to be.

Some results and conclusions of the NAPAP studies were:

1. Acid rain did not affect the growth of trees. Even exposed to precipitation almost ten times as acidic as the average acid rain in eastern USA (ph:4.2), the trees grew just as fast as those trees in the control group. In fact, many of the tree species in the experiments grew faster when exposed to 'moderate' acid rain.<sup>7</sup>
2. NAPAP's conclusion was "the vast majority of forests in the US and Canada are not effected by (forest) decline....Moreover there is **no** case of forest decline in which acidic deposition is known to be a predominant cause"<sup>8</sup>.

3. NAPAP concluded that as far as lakes and waterways were concerned, that even in the most acid sensitive regions, acidification problems *may* have only affected 4% of lakes and 8% of water ways<sup>9</sup>. The effects of acid rain were nowhere near as draconian as the Greens had predicted. Apparently, the mountainous regions in the west and south eastern US highlands largely faced no problems. Here less than 1% were acidified.<sup>10</sup>
4. NAPAP's findings about the effect of acid rain on buildings were that normal restoration of building *may* have to be brought forward by 2-5%. For instance, it would be necessary to restore facades every fifty years instead of 52 years.<sup>11</sup>

### European Research.

In regards to forestry, European research drew the same conclusions as NAPAP. The annual report on the state of forests produced by the UN and the European Commission in 1996, concluded that; "Only in a few cases has air pollution been identified as a cause of [forest] damage"<sup>12</sup>. A more forceful conclusion in the UN's 1997 review of the world's forests was; "the widespread death of European forests due to air pollution which was predicted by many in the 1980s did not occur"<sup>13</sup>.

Similar studies to the NAPAP work were carried out in Norway but over longer time periods. Their results were very similar, and concluded that the predicted negative effects of acid rain "could not be demonstrated"<sup>6</sup>. In reality, only 0.5% of all European forest areas, at most, have been affected by acid rain<sup>14</sup>. More importantly, and contrary to the Greens' propaganda about acid rain, the Europeans forests have not disappeared or even diminished. A Dutch study has found that "during the past few decades, forest growth has strongly increased over large parts of Europe"<sup>15</sup>.

What has also been discovered is that the so called 'proof of the global problem of acid rain' has, on most occasions turned out to be:

1. Poor science (e.g. poor measurements, changes in methods of calculation, and misattribution of causes),
2. Local pollution or natural effects not associated with acid rain, and
3. Misidentification of natural tree diseases with the effects of acid rain.

A lesson can be learnt from this last point. German scientists, on studying photographs over a 30-60 year period, found that the proportion of damaged trees were as great then as it was today<sup>16</sup>. They also found that the foliage loss can be caused by numerous specific familiar diseases and the reason we think that this may have increased is that we have started monitoring it. Also, influenced by the fear and emotion campaign of Forestry Armageddon, observers looking for acid rain damage 'saw it' in *any damage to any trees*.

Today, in the fear campaign about global warming, people are seeing effects of global warming everywhere, even though we are entering the thirteenth year (2011) of a cooling period. In the unlikely event that any of these effects were caused by global temperatures, they should be attributed to global cooling, not warming. Encouraged by the Greens' propaganda about global warming, people will attribute any changes they see to global warming, in the same way that any tree damage was blamed on acid rain in the 1980s.

As Lomborg explains in his description of this campaign, the propaganda claims made by the Greens were overly simple and attention grabbing, but not borne out by the evidence<sup>16</sup>. Two recent environmental, not Green (see the difference between the Greens and Environmentalists in Handout 6-1), studies into the health of trees ranks acid rain as the 17<sup>th</sup> and 19<sup>th</sup> out of a list of 25 and 27 problems respectively, that have a negative impact on the health of trees. With these points in mind, an observer is encouraged to believe that the Greens are more driven by a desire for social engineering than trying to solve important environmental problems. Come what may, the Greens have wasted a significant amount of resources on another Green myth that would have been better employed on other real non-environmental (or real environmental problems) troubling our community.

## CONCLUSION

Acid rain was yet another Armageddon tale sold to Western societies by the Greens. When all the fear, emotion, propaganda and deceit are swept away, we find that the Greens' predictions, once again, were wrong. Not only were they wrong, but they were very wrong. Western nations can no longer afford to waste valuable time and resources listening to the Greens and their Armageddon myths.

### Notes:

1. *"Our Common Future"* (The Brundtland Report), The World Commission on Environment and Development for the General Assembly of the United Nations (WCED), Oxford: Oxford Press, 1987, p2.
2. Park, Chris C., *"Acid rain – Rhetoric and Reality"*, London and New York: Methuen 1987.
3. Claudi, Erik *"Greenpeace, Bind 1: Regnbuens krigere"* [Greenpeace: The rainbow warriors] Copenhagen: Tiderne Skifter, 1988, p249.
4. Rosner, David and Gerald Markowitz 1999, *"Labor Day and the War on Workers"*, American Journal of Public Health 89(9), p.319-21
5. *"Politiken"* 28 June 1993, section 3, p.3.
6. Abrahamasen, Gunnar, Arne O. Stuaes, and Bjorn Tveite, *"Discussions and Synthesis"*, in *"Long Term Experiments with Acid Rain in Norwegian Forest Ecosystems"*, 1994, p.321.
7. *"Integrated Assessment"* Vols 1-3, The National Acid Precipitation Assessment Program (NAPAP), External Review Draft, August 1990, p. 2-43.
8. Cited in Kulp J. Laurence *"Acid Rain"* In Simon, 1995, p. 523-35, 528-9.

9. NAPAP 1990:Q1, 1-30,1-65ff
10. NAPAP 1990:Q1, 1-1
11. NAPAP 1990: Q5,5-1
12. UNECE/EU “*Forest Conditions in Europa- Result of the 1995 Crown Condition Survey, 1996 Technical Report*”, Prepared by Federal Research Centre for Forestry and Forest Products (BFN) for UN Economic Commission for Europe and the European Commission.
13. “*State of the World’s Forests*” Food and Agriculture Organisation (FAO) of the United Nations, Rome, 1997 p.21.
14. Kauppi, Pekka E., Kari Mielikainen, and Kullervo Kuusela, “*Biomass and Carbon Budget of European Forests, 1971 to 1990*” *Science* 256:70-4 1992.
15. Van Dobben, H. F., “*Evaluating Integration*” In Heij and Erisman “ 1995, p.295
16. Lomborg, Bjorn, “*The Skeptical Environmentalist*”, Cambridge University Press, Cambridge, 2001, p.178-181.