

## Climate Science and Policy for Nonscientists

One picture is worth a thousand words.

### CLIMATE ALARMISM—THE USE OF EXAGGERATION OR MISREPRESENTATION FOR THE PURPOSE OF CAUSING FEAR OR ANXIETY

Climate Alarmism is the exaggeration, or even the misrepresentation, of the negative consequences of some type of climate change for the purpose of causing fear or anxiety. The media routinely engages in Climate Alarmism. A basic premise of this website is that the current state of climate science is best summarized in the most recent Assessment Report (AR6) of the International Panel on Climate Change (the “IPCC”). So Climate Alarmism may also be defined as an exaggeration, or even a misrepresentation, of the findings in AR6. One of the goals of this website is to point out such Alarmism.



Climate Alarmism predates the concern about global warming. Back in the 1970s alarmists were warning about a coming ice age. So Time Magazine in 1973 warned about the coming big freeze and then in 1977 advised on how to survive this coming climate disaster. The world started to warm in the late 1970s, and concern about global warming first arose in the mid 1980s. The IPCC was formed in 1988.



Most of the IPCC Assessment Reports are written by professional scientists, which is the reason they are widely accepted as an accurate statement of current climate science. But from the first the IPCC staff has routinely issued alarmist press releases, such as is shown here, a press release from 1989 before the First Assessment Report was even published in 1990. Readers of such press releases tend to assume that they are based on findings in the Assessment Reports, when, in fact, they are not. To the present day zero nations have been “wiped off the face of the Earth.” Note the use of the “weasel” word “could,” a common practice in alarmist publications. A major league baseball player today “could” bat .400 for the season, but the likelihood is infinitesimal.

In April 2006 Time warned us to “BE WORRIED. BE **VERY** WORRIED” about global warming. In 2023 Alarmism at the UN is led by Secretary-General Antonio Guterres who warns about climate catastrophe - “We are hurtling towards disaster,” and “Humanity has opened the gates of hell.”

**A 2021 poll led by the University of Bath in collaboration with 5 other universities. Responses received from 10,000 people aged 16-25 in 10 countries including the US**

**Responses:**

- **People have failed to care for the planet. 83%**
- **The future is frightening. 75%**
- **Very or extremely worried about climate change. 59%**
- **Humanity is doomed. 56%**

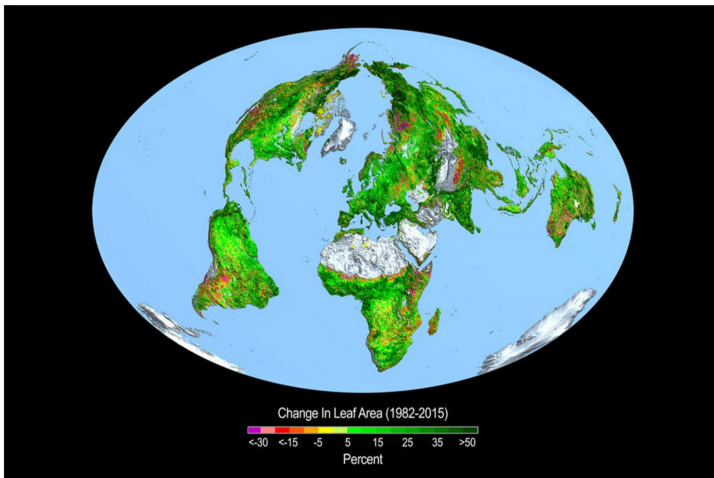
The BBC is an example of a media organization that routinely engages in Climate Alarmism. The image shows the title and lead sentence from an article published November 2, 2023, in the BBC Science Focus Magazine. This article is an example of Climate Alarmism and displays a number of the devices routinely used in such articles. In particular, an article may be written and published based on some new report or study without making any effort to evaluate the accuracy of the results presented in the new report or study .



Alarmism is so widespread and so exaggerated that it is having a serious negative impact on young people, as shown by various polls. The image shows the results of a major such poll led by the University of Bath.

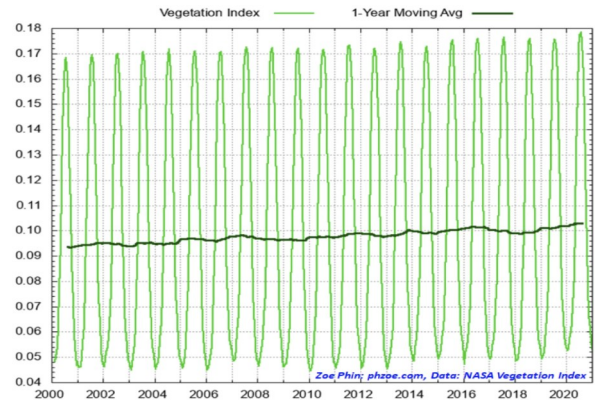
## Why Scientists are now Racing to Stop a Mass Plant Extinction

**The race is on to document and protect the world's plant and fungi species ...and everything is at stake if we lose.**



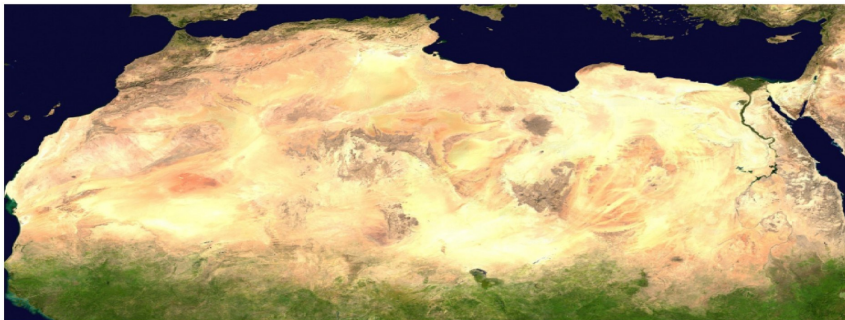
When the NASA greening index shows a 10% improvement from 2000-2020?

While the BBC would have you worry about a “mass plant extinction,” the November 2023 CLISCIPOLE Newsletter documents the greening of the world and the soaring world food production. How can there be a threatened mass plant extinction, as claimed by the BBC article, when the world is greening?



NASA's Vegetation Index has risen from 0.0936 to 0.1029, which is a 9.94% increase. Chart by [Zoe Phin](#)

**Using satellite images, Venter et al. 2018 found an eight percent increase in woody vegetation in sub-Saharan Africa over the last three decades, underscoring the global “greening trend”.**



*Recent study by Venter et al finds that the Sahara has shrunk by 8% over the past three decades. NASA image, public domain.*

When the entire Southern rim of the Sahara Desert is greening, and the Sahara has shrunk by 8% over a recent 30 year period?

When the IPCC in AR6 WGI (2021) makes numerous findings confirming the greening of the world, as shown here? In addition the IPCC has found that the growing season for plants has on average lengthened by up to two days per decade since the 1950s in the Northern hemisphere extra-tropics, which includes the US. (AR6 WGI p. 6).

## AR6 FINDINGS

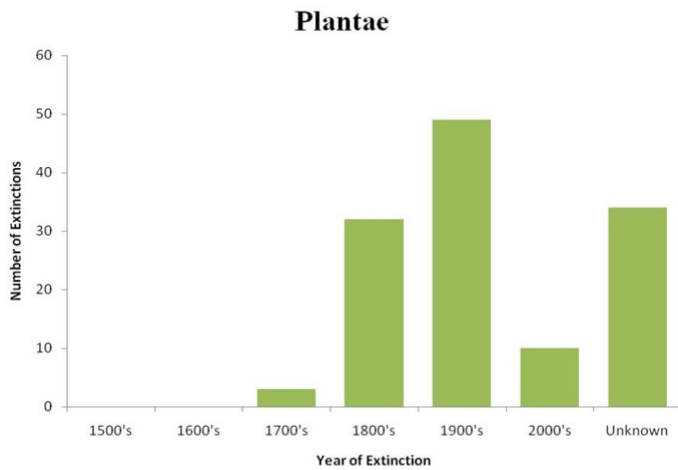
**Greenness has increased globally since the early 1980s. (WGI p. 292, 365-6)**

**Increasing atmospheric CO2 concentrations have increased plant growth and water-use efficiency. (WGI p.1057)**

**One study shows that there has been a 7% rise in global tree cover from 1982 to 2016, and another study found an expansion of shrub extent in the Arctic tundra from 1982 to 2017. (WGI p.365)**

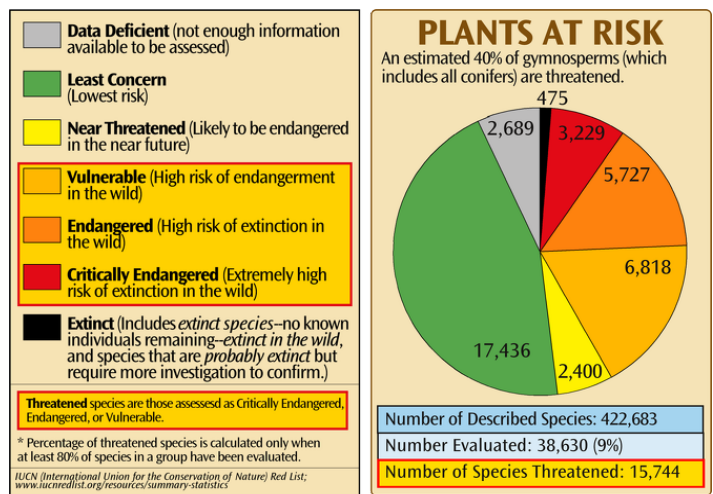
**Increased greening is largely consistent with CO2 fertilization at the global scale. (WGI p.365)**

A common practice of Alarmist publications, such as the BBC article referenced above, is to rely on computer models rather than actual data. But nowhere in the BBC article is there a discussion of the accuracy of the model. It is virtually impossible to prove the accuracy of models such as this that predict events in the distant future except by waiting for decades to see if they prove to be correct. And models can perform their hypothetical calculations only if a variety of assumptions are fed into them. The accuracy of a model's output can never be better than the accuracy of the assumptions that are plugged into the model. But nowhere in the BBC article is there a discussion of the assumptions used. The Environmental Movement has a long history of presenting alarming model "predictions" that prove to be inaccurate.



Alarmist articles, such as this BBC article, while relying on speculative models, routinely omit relevant actual data. The BBC article states that extinctions are "double" the rate that they were before 1900, but provides no other actual data. This particular graph shows that about 30 plant species went extinct in the 1800s and about 50 in the 1900s, which is almost a doubling. But these are numbers are not significant. There are an estimated 320,000 plant species in the world.

The International Union for the Conservation of Nature ("IUCN") is the leading world organization that assesses species' extinction risk. It has documented a total of only 475 plant species as extinct or probably extinct. It counts 15,744 species threatened. This is a significant problem but no where near a threatened "mass" plant extinction, as claimed by the BBC article. A "mass" extinction is usually understood to mean at least 75% of the total species, i.e. 75% of 320,000 .



Alarmist articles, such as this BBC article routinely misstate the findings from the reports or studies on which they rely. The BBC article is based on a new (October 2023) report published by the Royal Botanic Gardens Kew.

The BBC article states the findings from the report as appears to the right. But in fact, the report only found that “45% of flowering plant species are *potentially* threatened with extinction.” (Report p.68, italix added). The analysis performed by Kew was intended as a first screen for extinction risk to find candidates for further analysis. Among the factors considered in the screening “by far the most important single predictor of extinction risk” was just the “number of botanical countries in which a species was present. (Report p.70).

Thus, if a particular flowering plant grows in only one or two countries no matter how large, e.g. Brazil, it was considered potentially threatened with extinction.

Second, the report actually says that 77% undescribed plant species [which basically means unknown plant species] are “*likely* threatened with extinction.” The report does not say, as claimed by the BBC article, that the plants are *threatened* with extinction . Predicting an extinction rate for plant species that have not yet even been identified is speculation.



The actual causes of extinction have little to do with Global Warming or Climate Change. This website agrees with the BBC article that habitat loss or destruction is probably the biggest threat. Other significant threats include invasive species, human predation, and pollution, which does not include CO<sub>2</sub>, because CO<sub>2</sub> is plant food. If we want to reduce extinctions, reducing CO<sub>2</sub> levels will not do it. We need to address the real root causes of extinction, such as habitat destruction.

BBC Science Focus Magazine Article, November 2, 2023,

### Why Scientists are Now Racing to Stop a Mass Plant Extinction

“First, using new modelling, we found that 45 per cent of all flowering plants are threatened with extinction.”

“And second: we found that, of the species we have yet to describe (in a formal scientific paper), in the next years and decades over three quarters – 77 per cent – are already threatened with extinction.”

The April 2023 CLISCIPOLE newsletter available on this website, addressed animal and bird extinctions. It discussed a number of issues that are similar for plant extinctions. Extinctions are a serious concern that require serious attention., but there is no threat of a mass extinction of animals, birds, or plants.

BBC Science Focus Magazine Article, November 2, 2023,

**There is a serious level of threat. What caused it?**

“The biggest threat to plants is habitat loss – or, at least, it’s the biggest and most immediate documented threat. It’s something that we can look at on satellite imagery; we can see that the land has changed from intact rainforest to become agricultural land.”

“There are other threats like over-collection of useful species, and climate change is certainly on the horizon. But it’s a lot harder to document.”

“We’re certainly worried about climate change, but it’s a lot harder to put a number on it.”

## CONCLUSION

The BBC article is typical of alarmist publications. They start from some particular legitimate ground for concern, namely the increase in the rate of plant extinctions. They present calculations from models that, if true, indicate a threatened disaster, but there is minimal actual data to support the calculations. Also there is nothing to suggest that the model or models used are correct. The assumptions plugged into the model(s) are not disclosed so that they can be checked for reasonableness.

For over 50 years alarmists have been making doomsday predictions that have turned out to be untrue, such as this prediction by Al Gore at the UN Climate Conference in Copenhagen in 2009. Note the use of “may,” another “weasel” word. Gore did not say that the Arctic Ocean was *likely* to be ice free.

Dec 14, 2009

### Gore: Polar ice cap may disappear by summer 2014

Comment Recommend 404 Tweet 8 +1 0

By Douglas Stanglin, USA TODAY  
Updated 2009-12-14 4:36 PM

New computer modeling suggests the Arctic Ocean may be nearly ice-free in summer as early as 2014, Al Gore said today at the U.N. climate conference in Copenhagen.



CAPTION By Athla Kisbenedek, AFP/Getty Images

The former vice president

An alarming title is usually chosen suggesting some imminent disaster that is of general concern, such as here, “Why Scientists are now *racing* to stop a *mass* plant extinction.” [italix added]. And finally various alarmist terms are used that have no reasonable support in the text. For example, in the Report and in the BBC article are claims that we are facing a “nature emergency,” a “current nature crisis,” and an “incredible” level of extinction risk. The Report concludes, “We have one last chance to save the biodiversity we all depend on.” (Report p. 83).

None of these words or phrases are used in IPCC AR6 (2021). AR6's favorite word to describe types of climate change is “unprecedented.” Thus AR6 would call the 50 plant extinctions in the 1900s “unprecedented,” because it was higher than the numbers in the 1700s and 1800s, but, although unprecedented, the number is not significant in relation to the total number of plant species.