

My meeting with IPCC scientist from WGII, Ulf Molau

Reflections on works within the IPCC working groups

The IPCC will provide a scientific view of climate change, they will describe the effects, and give possible measures to counteract climate change. The panel's findings are addressed primarily to the world's decision-makers and are intended to be used both nationally and internationally, including in the negotiations that take place within the UNFCCC which took place in Paris.

IPCC reports are produced by three working groups.

According to the IPCC site the three groups has this different objectives.

The IPCC Working Group I (WG I) assesses the physical scientific aspects of the climate system and climate change.

The main topics assessed by WG I include: changes in greenhouse gases and aerosols in the atmosphere; observed changes in air, land and ocean temperatures, rainfall, glaciers and ice sheets, oceans and sea level; historical and paleoclimatic perspective on climate change; biogeochemistry, carbon cycle, gases and aerosols; satellite data and other data; climate models; climate projections, causes and attribution of climate change.

The IPCC Working Group II (WG II) assesses the vulnerability of socio-economic and natural systems to climate change, negative and positive consequences of climate change, and options for adapting to it.

It also takes into consideration the inter-relationship between vulnerability, adaptation and sustainable development. The assessed information is considered by sectors (water resources; ecosystems; food & forests; coastal systems; industry; human health) and regions (Africa; Asia; Australia & New Zealand; Europe; Latin America; North America; Polar Regions; Small Islands).

The IPCC Working Group III (WG III) assesses options for mitigating climate change through limiting or preventing greenhouse gas emissions and enhancing activities that remove them from the atmosphere.

The main economic sectors are taken into account, both in a near-term and in a long-term perspective. The sectors include energy, transport, buildings, industry, agriculture, forestry, waste management. The WG analyses the costs and benefits of the different approaches to mitigation, considering also the available instruments and policy measures. The approach is more and more solution-oriented.

The Working Group II has no mandate to assess climate change, they should look at the effects of climate change identified by Working Group I.

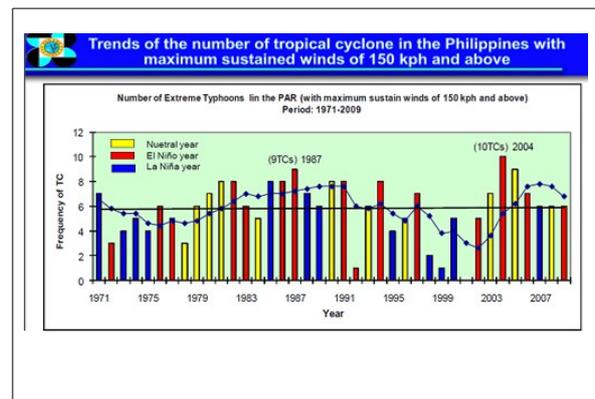
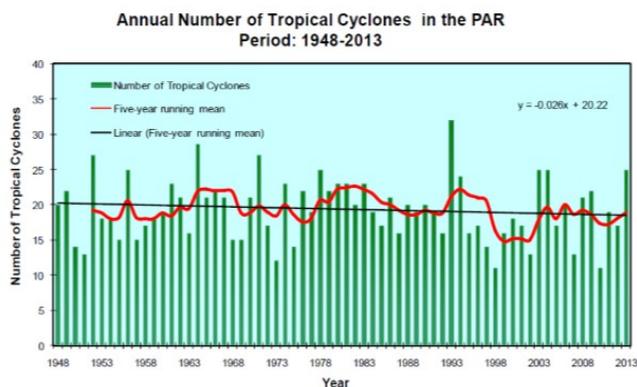
Professor Ulf Molau from Gothenburg participated in the work of IPCC WGII

<http://science.gu.se/aktuellt/nyheter/Nyheter+Detalj/goteborgsforskare-huvudforfattare-i-ny-rapport-fran-klimatpanelen.cid1212714>

Prof Ulf Molau is one of the lead authors of Chapter 18, which we will take a closer look at. I met him at a lecture on October 7, 2014. This lecture inspired me to look at WGII's work, and particularly Chapter 18, where Ulf Molau is one of the lead authors.

At the lecture, he told the audience first about his work in the group, but then he took up climate change. More extreme weather and cyclones will increase he said.

I was surprised with that, when he unexpectedly began talking about the increasing numbers of cyclones/extreme weather, then I felt the need to put up my hand and I interrupted him and asked him if the cyclones actually will increase. I referred to the IPCC WGI and I even had the report with me and I showed it to the audience. WGI came to the conclusion that the number of tropical cyclones would not increase, perhaps they would even decrease slightly. ETC cyclones (cyclones at our higher latitudes) would be reduced but not by more than a few percent. In certain ocean basins, it could be that the intensity of the rain and wind associated with the cyclones would increase as demonstrated by model studies despite the fact that there are no trends that indicate that the largest and most intense cyclones are on the increase. Philippine weather service, Pagasa Dost, speaks of rising number of cyclones in the future while they publish statistics showing the absence of any increasing trend of extreme weather. And the Philippines are often badly hit by tropical cyclones.



My students in Sweden and the Philippines (<http://www.lagmansnaturesida.se/sommarlovet.pdf>) has learned that cyclones will be more frequent in the future, in a textbook for high schools students in Sweden, the authors have included a picture of the disaster film "The Day of Tomorrow," to illustrate the future climate with more cyclones. See my previous article on this topic <http://www.klimatupplysningen.se/2014/09/14/gastinlagg-om-skolans-larobocker-och-klimatet/>

Considering the conclusion that WGI (included in the technical summary) arrived at, I was very surprised over Ulf Molau's statement. I also told before all the audience of the new research on stalactites along Australia's coasts used to examine the frequency of cyclones in the past. The result of the research showed that the 1700 century appeared to be the most turbulent century and since 1970 the cyclone frequency had decreased. Ulf Molau admitted that he was not aware of this research.

Before this meeting when teaching in Alléskolan in Vara Municipality I and my co-teacher had shown all the students the 4 kg heavy book from WGI, my colleague had seen the IPCC statement on decreasing cyclones which surprised her and the students thought it was good. "Good," said a kid in grade seven very high. My colleague who also attended the lecture of prof Molau, was very surprised when Ulf Molau spoke of increasing cyclones and extreme weather now and in the future. My colleague had seen and read what WGI wrote.

What then is written in WGII?

From WGII Chap. 18.4.3. **Impacts of Extreme Weather Events.**

Here WGII oddly enough, makes a small investigation of their own into the question if the frequency of the cyclones has increased instead of taking WGI's conclusions direct to the point as they should have done. WGI's conclusions are contained in the technical summary so they didn't

need to read the full WGI. But the WGII should work from WGI's conclusions and continue from that. For them to make their own, albeit small investigation is unnecessary. They write about changes in the frequency and intensity of extreme weather events.

“The last Several decades have seen changes in the frequency and intensity of extreme weather events including extreme temperature, droughts, heavy rainfall, and tropical and extratropical cyclones with low to very high confidence, depending on the type of extreme events (IPCC, 2012; WGI AR5 Chapter 2)”

Here they write that: "Changes in the frequency and intensity of extreme weather events" in a way that you get the impression that there is an increase in extreme weather events, and I also understand that on the basis of professor Ulf Molau's lecture.

Here it may be interesting to recall what the "Report Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX) 2011 says on page 124 in a question box FAQ 3: 1 Is the Climate Becoming More Extreme? The answer given is that it is not possible to answer the question.

On page 158 in SREX "While the global frequency the has remained steady, there can be substantial inter-annual variability to multi-decadal frequency variability within individual ocean basins." Furthermore, "Natural variability combined with uncertainties in the historical data makes it difficult to detect trends of tropical cyclone activity" but they note a regional trend that differs, namely in the North Atlantic. They also note that it is difficult to say when the changes in tropical cyclone activity exceed natural variability, p160. On page 161 you are referred to some scholars who say that it will take several decades before any increasing trend can be discerned.

18.4.3.1. Economic Losses Due to Extreme Weather Events

“Economic costs of extreme weather events have increased over the period 1960-2000 (high confidence), with insured losses increasing more rapidly than overall losses. This is also reflected by an increase in the frequency of extreme weather-related disasters over the same period. However, the greatest contributor to increased cost is rising exposure associated **with population growth and growing value of assets.**

Studies of normalized losses from extreme winds associated with hurricanes in the USA and the Caribbean, tornadoes in the United States, and windstorms in Europe have failed to detect trends consistent with anthropogenic climate change,”

“**In conclusion**, although there is limited evidence of a trend in the economic impacts of extreme weather events that is consistent with a change driven by observed climate change, climate change can not be excluded as at least one of the drivers involved in changes of normalized losses over time in some regions and for some hazards.”

18.4.3.2. Detection and Attribution of the Impact of Single Extreme Weather Events to Climate Change

“Only a few studies have attempted to evaluate the role of climate change in the impacts of individual extreme weather events..... For instance, using observational constraints on climate and hydrologic modeling simulations, concluded that greenhouse gas emissions have increased the probability of occurrence of a comparable flooding event in autumn 2000 over the UK.”

The likelihood of similar floods like those in England have increased due to greenhouse gas emissions, they say. (Would like them to comment on what George Monbiot says. Man has been part of this, but in a completely different way. <http://www.monbiot.com/2014/01/13/drowning-in-money/> / See also <http://wattsupwiththat.com/2014/01/07/is-englands-bad-weather-a-sign-of->

[climate-change/](#)

Furthermore they write, "In highly temperature-sensitive regions, such as high mountains several extreme impact events of recent decades can be qualitatively attributed to effects of long-term warming (high confidence), namely glacier lake outburst floods due to glacier recession and subsequent formation of unstable lakes, debris flows from recently deglaciated areas, and rockfall and avalanches following the release of mechanical support accompanying glacier retreat."

Certainly since the Little Ice Age has ended, it is logical with such events that the glaciers are melting at lower levels.

They also notes that warming take place more noticeable at higher latitudes. This is in line with the IPCC's conclusion that additional CO2 does not have so much impacts in the tropics. Ulf Molau had a clear understanding that the greenhouse effect was concentrated in the tropics. Later, at another lecture by Per Holmgren (a well-known TV-weather man) I asked the question if it was so that about 70% of the greenhouse effect was found between 30 degrees north and 30 degrees south. He thought for a while and then replied that it seemed reasonable.

18.6.4. Reasons for Concern

Finally they writes "Current evidence does not, however, indicate sustained global trends in tropical cyclone or extratropical cyclone activity (see WGI AR5 Section 2.6.3)."

In their conclusion, they write that climate change is visible in Arctic ecosystems and coral reefs. Climate change in Arctic ecosystems, certainly, in the northern Sweden, Swedish researchers studies changes in the permafrost formed during the Little Ice Age, after the warm Middle Ages.

The authors of Chapter 18 starts by saying that the frequency of extreme weather events have changed in a way that makes you believe that they believe in increasing number of cyclones as Ulf Molau said at his lecture in Vara. But towards the end they say that there are **no global trends** "in extratropical cyclone or extratropical cyclone activity". Then there is also **no increasing trend**. This comprehensive study is completely unnecessary.

They refer to WGI Chapter 2.6.3, the title is "Tropical Storm".

In this chapter the IPCC authors from WGI writes:

"AR4 concluded that it was likely that an increasing trend had occurred in intense tropical cyclone activity since 1970 in some regions but that there was no clear trend in the annual numbers of tropical cyclones. Subsequent assessments, including SREX and more recent changes literature indicate that it is difficult to draw firm conclusions with respect to the confidence levels associated with observed trends prior to the satellite era and the ocean basins outside of the North Atlantic. Section 14.6.1 (*here the author refers to another important chapter*) discusses changes in tropical storms in detail. Current data sets indicate no significant observed trends in global tropical cyclone frequency over the past century and it remains uncertain whether any reported long-term increases in tropical cyclone frequency are robust after accounting for past changes in observing capabilities. **Regional trends in tropical cyclone frequency and the frequency of very intense tropical cyclones have been identified in the North Atlantic and these appear robust since the 1970s.** However, arguments reigns over the cause of the increase and on longer time scales the fidelity of these trends is debated (Landsea et al., 2006; Holland and Webster, 2007; Landsea, 2007; Mann et al., 2007b) with different methods for estimating undercounts in the earlier part of the record providing mixed conclusions. **No robust trends in annual numbers of tropical storms, hurricanes and major hurricanes counts have been identified over the past 100 years in the North Atlantic basin.** Measures of land-falling tropical cyclone frequency are generally considered to be more reliable than counts of all the storms which tend to be strongly influenced by those that

are weak and/or short lived. **Callaghan and Power (2011) find a statistically significant decrease in Eastern Australia** land-falling tropical cyclones since the late 19th century although including the 2010/2011 season data this trend becomes non-significant (ie, a trend of zero lies just inside the 90% confidence interval). **Differences between tropical cyclone studies highlight the challenges that still lie ahead in assessing long-term trends.**”

Frequently Asked Questions FAQ 2.2 | Have There Been Any Changes in Climate Extremes?

“There is strong evidence that warming has lead to changes in temperature extremes” they say. Among other things, they says “Considering the other extremes, such as **tropical cyclones**, the latest assessments show that due to problems with past observing capabilities, **it is difficult to make conclusive statements about long-term trends. There is very strong evidence, however, that storm activity has increased in the North Atlantic since the 1970s.**”

Here WGI chapter 2 takes up the Atlantic Ocean and its cyclones, and they refer to chapter 14 who study this in more detail. Interestingly, they take up a reference to Landsea 2006 something that I noted that the authors of Chapter 14 failed. They even in Chapter 2 have a chart of "land falling hurricanes, United States" that resembles Landsea’s charts. That is missing in chapter 14.

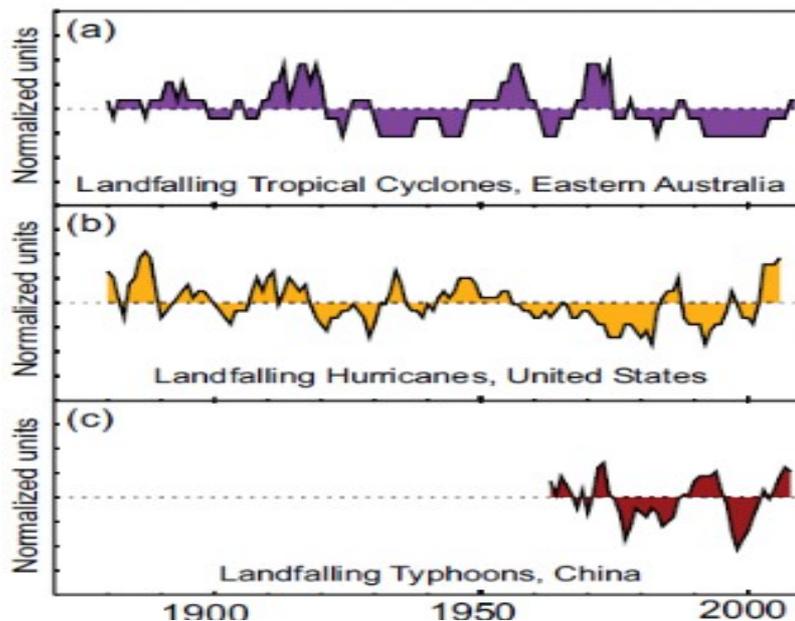
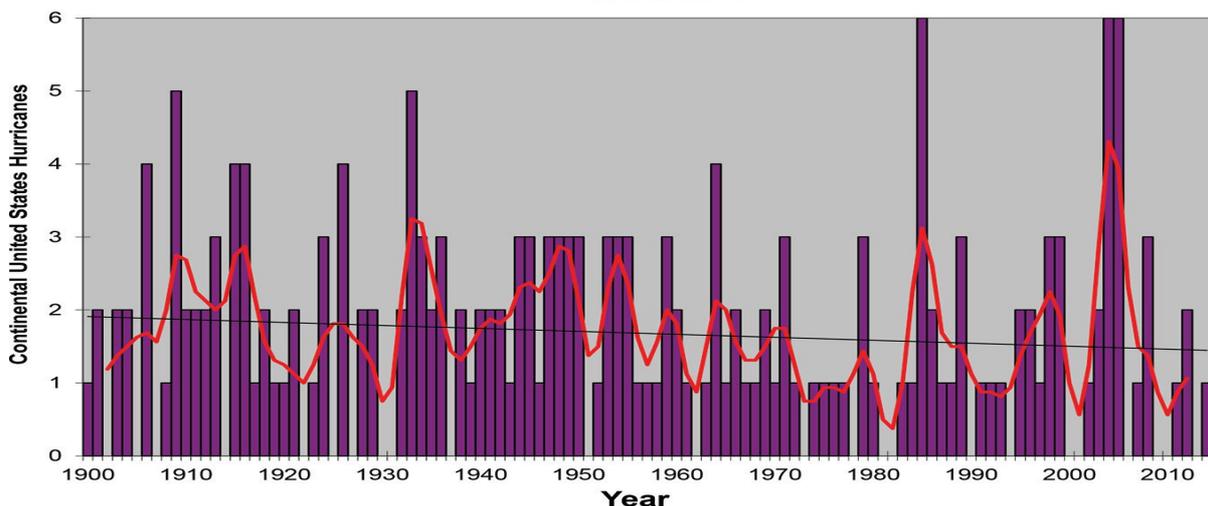


Chart from Chapter 2 above. Chart from Landsea below.

**Continental United States Hurricanes
1900 to 2014**



They have found a straw man in the North Atlantic.

On page 220 Chapter 2, there are a compilation of wind strengths from all over Europe. No increases in wind velocity/strength will be the conclusion when you look at this page.

It was from the technical summary referring to Chapter 14 and Chapter 14, I gathered information about the decreasing frequency of cyclones which I wrote about in my article on school textbooks threats posted on the blog Climate Enlightenment (Klimatupplysningen)

Why doesn't Ulf Molau and the authors of WGII Chapter 18 read chapter 14 in WGI that goes into more details, as they refer to Chapter 2, and the authors of that chapter refers to chapter 14? The authors of Chapter 14 writes in the technical report: From Chapter 14.6.3

"The influence of past and future climate change on tropical cyclones is likely to vary by region, but the specific characteristics of the changes are not yet well understood,..... Although projections for 21st century greenhouse warming indicate that it is likely that the global frequency of tropical cyclones will either decrease or remain essentially unchanged, The global number of ETC's is unlikely to decrease by more than a few percent due to anthropogenic change." *Due to anthropogenic change??????*

But about the Atlantic they say "Shorter term increases such as those observed in the Atlantic over the past 30 to 40 years appear to be **robust** and **have been hypothesized to be related, in part, to regional external forcing by GHGs and aerosols**, but the more steady century-scale trends that may be expected from CO2 forcing alone are much more difficult to assess given the data uncertainty in the available tropical cyclone records. "

Here they write about the Atlantic 30-40 years back and the increase of cyclones "appear to be robust." Ok it's robust but not unusual when studying Landsea's chart and the chart in Chapter 2. Is the earlier decreases also robust?

Conclusions

What to say about those working in the IPCC organization?

Several groups are working in parallel with the same questions. Chewing the same things in multiple places. Trying partly to build up a feeling that extreme weather may be increasing in spite of the absence of the trends.

We have seen the differences in the argumentation in Chapter 2 and chapter 14 WGI. There are differences in references in chapter 14, which goes into more detail with the cyclones, compared with chapter 2. But what is missing in chapter 14 are found in chapter 2. In chapter 2, there are multiple references made to Landsea, up to 2011, but in chapter 14, they have a single reference to him from 1999. Landsea is a highly merited researcher of cyclones in the Atlantic Ocean, a man whose conclusions it is hard to deny. He is working at the National Hurricane Center in Miami. WGI is trying to build up a picture that the increase in cyclones in the North Atlantic in recent years is due to human activity.

The authors of Chapter 18 WGII makes their own little unnecessary investigation of whether cyclones has increased or not and come to the conclusion that you can not comment on that. This instead of just accepting the conclusions of WGI. They could have had a reference to the

straight conclusions that WGI came up with in Chapter 14 and in the technical summary. Were they not able to read more than up to Chapter 2? Didn't they read the technical summary which relates to chapter 14 and concluded that cyclones will not increase in numbers?

One of the lead authors of chapter 18 WGII, Ulf Molau, lectures and talks about the increasing number of cyclones now and in the future.

In addition, we remind ourselves that the notion that the cyclones will not increase in numbers but instead may be reduced in numbers in a warmer climate is forgotten in SPM, Summary for Policymakers.

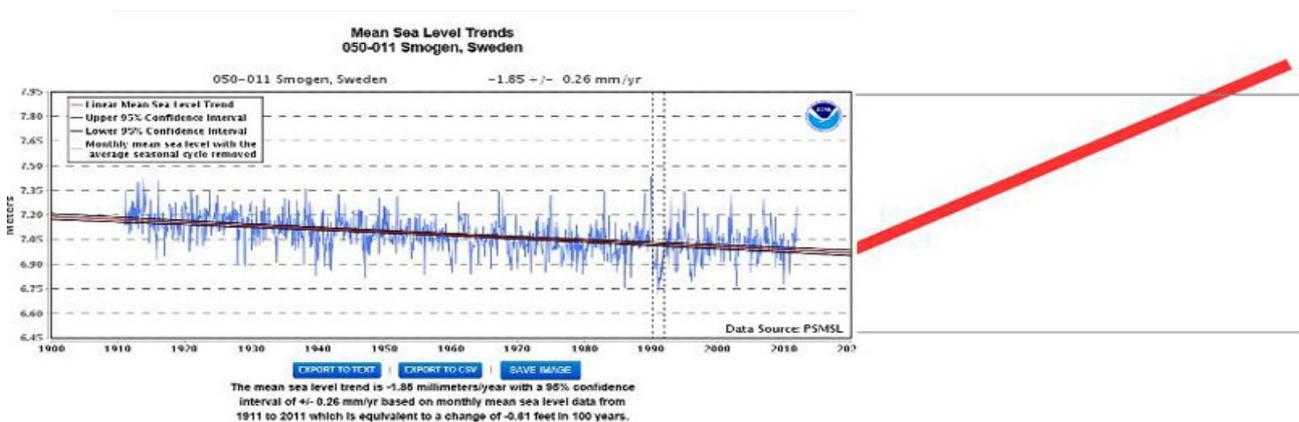
PS: Today, lobbyists are busy with their excesses. Two examples from Sweden:

Professor Johan Rockström at Stockholm Environmental Institute. Not a climate researcher and his doctoral dissertation was in the agricultural area. He is known to do research in earth resources. He has written a book with a foreword of Bill Clinton and three other well known figures. He goes public and say that the ocean will rise nearly 2 m until 2100. He is always on TV when climate is discussed. But he is not a climate researcher so he has to have some authorities in sea level rise. His authorities are the Australian scientists Church and White from Hobart, Tasmania and they say that the ocean will, with the present rise and acceleration, rise about 30 cm. This we learn from his fashionable book.

A little discrepancy of about 1,5 m.



<http://lagmansnaturesida.se/dbarkiv/2015/vecka45/db15nov06.htm>



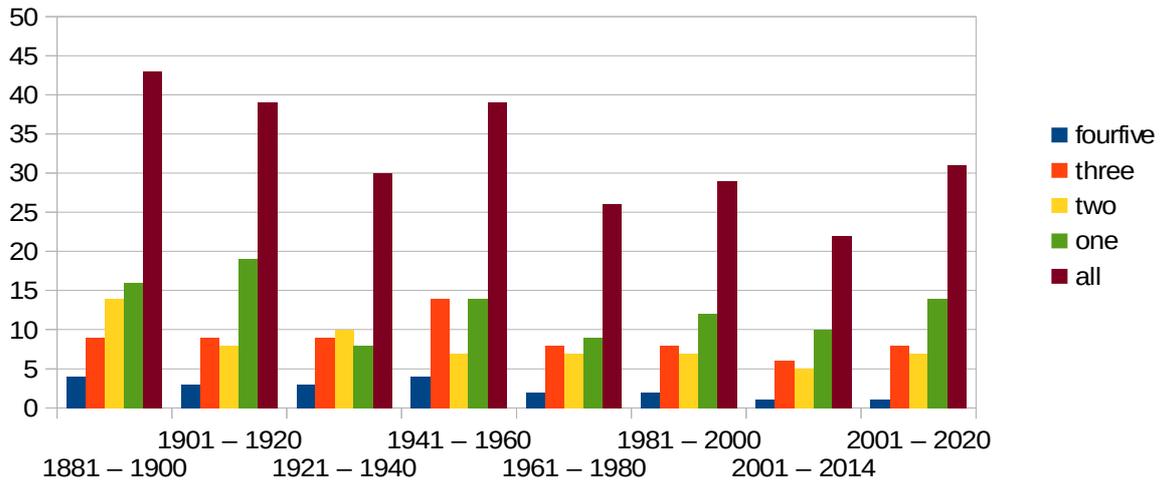
And from the west coast of Sweden comes the following. Some people expect the ocean to rise very much in the future and they write about it in the leading newspaper in Gothenburg. They also ask millions for their projects to save the city from sea level rise. The chart shows their expectations.

<http://lagmansnaturesida.se/dbarkiv/2015/vecka39/db15sep21.htm>

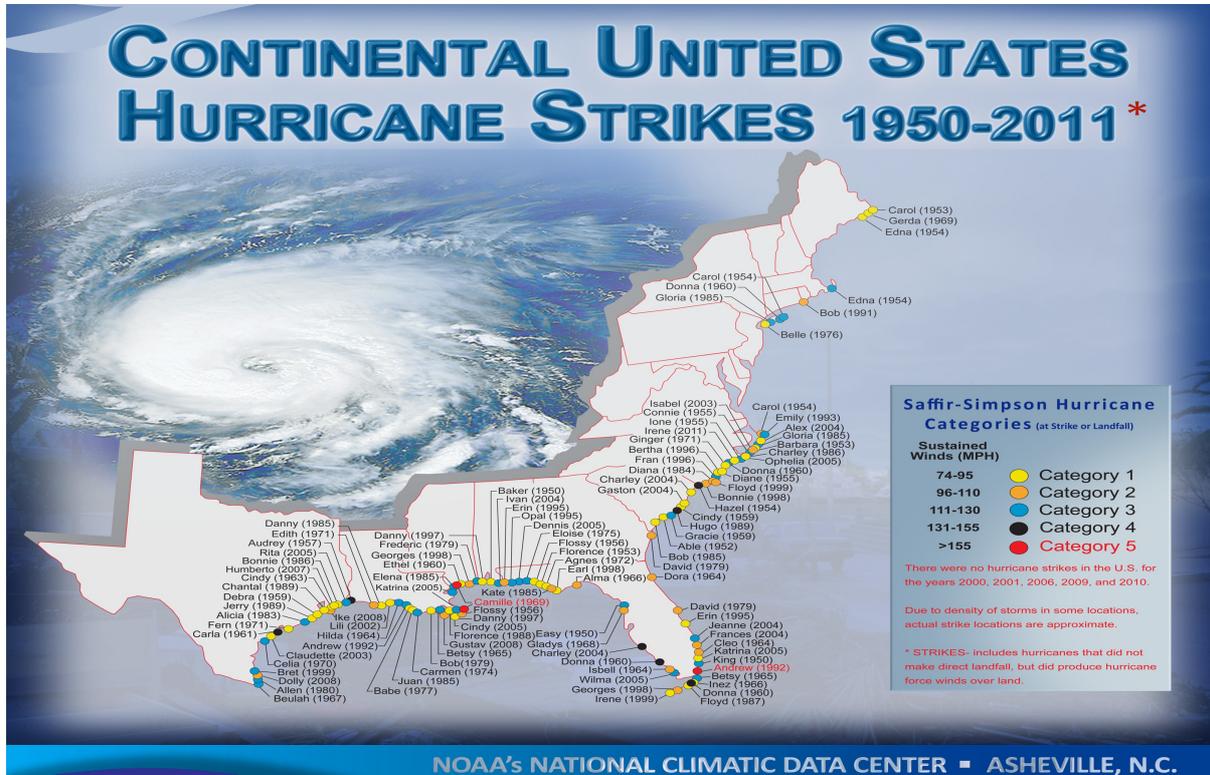
Hurricanes in the USA

Hurricanes that make landfalls in eastern and southern USA. Hurricanes are divided according to wind speed in categories 1 to 5. In this chart they are divided in twenty years periods. The last period we assume the same level of hurricanes as up to 2014.

Hurricanes that make a landfall USA



This chart is based on the list of hurricanes found here: <http://www.aoml.noaa.gov/hrd/tcfaq/E23.html>



See also <http://www.livescience.com/39619-major-hurricane-landfall-drought.html> and it continues.