

Off The Beaten Path

Part One

**How easily we lose our way
when we try to solve technical problems
by not using real science...**

3/18/11





wish I could be the bearer of good news, but that's not going to happen here. In fact, I will measure the success of my comments by how concerned you are when I'm done: *the more the better*.

Who am I to be saying anything? Quite frankly it doesn't really matter who I am, as I'm just the messenger, the lowly canary in the mine. If you must have more: I'm a physicist who has worked for some thirty years trying to improve our environment, using real science. I haven't been paid by anyone for this.

Let's start with the big picture and work our way down to a specific example of interest: the 2010 *North Carolina Sea-Level Rise Assessment Report*.

Today, *real Science* is under an intense assault. The simple reason is that those with political agendas or financial gain at stake, fully understand that **genuine Science is a major obstacle in their path to achieving their ends**.

Science is about **real world facts** and **truth**. Needless to say, facts and truth are anathema to propaganda promoters. But as much as they would like to, these evangelists realize that they can't simply discard Science. It is too imbedded in our history.

So they have taken a different, more subtle attack on this impediment. *Their strategy is to sway individual scientists into becoming advocates*. When enough of these attenuated individuals speak out in their favor, the public can be fooled into believing that what they are hearing is actually "science."

Let's take my home state (NC) as an example. North Carolina has an extraordinary amount of coastline, so a key agency set up by our legislators is the NC CRC (Coastal Resource Commission) <<<http://tinyurl.com/6h4gqon>>>.

The paid staff of NC CRC is DCM (Division of Coastal Management). It's stated objective is: "to protect, conserve and manage NC's coastal resources... through a model program using ... best science to shape publicly supported policies and decisions." *Sounds good, right?* (See <<<http://tinyurl.com/4szmwm>>>.)

As I understand it, the NC DCM chose a 13 member "Science Advisory Panel". These selected people are a driving force behind the stated "best science" guarantee — so we would expect that they would be the *crème de la crème*. You can draw your own conclusions about that after finishing this critique.

But why is this agency emphasizing the concept of "best science" anyway? Clearly, the audience for this message is politicians and citizens.

Such agencies not only want to keep their job, but they would also like to be in an expanding position of influence.

What that translates to is that when they generate a report, they want us to not only accept it as legitimate, but also to ask them for additional help and advice.

To attain that end, they are using a well-established marketing technique: tying their credibility to something they know we already believe in — in this case, “best science.” After all, who can argue with “best science”? And in dealing with technical matters, who can ask for more than “best science”?

With that said, please consider two things:

- 1) do citizens even know what “best science” is, and
 - 2) are NC citizens actually getting “best science” from these NC agencies?
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To answer that we need to know what “Science” really is. At its core, science is a *process*. The process is about evaluating actual evidence to come to conclusions about how our world works right now. The better we understand today’s reality, the better we can guess as to what we can expect in the future.

The fundamental time-tested process of science is called the **Scientific Method**. In layman’s terms this means that when a hypothesis is proposed, that we subject it to a *comprehensive, objective, transparent and empirical* assessment. The methodology and results are available for all to see, and can be replicated.

Note that at no time is there is any “consensus” in this process. In fact, many of the famous scientists who have gotten us where we are today, made discoveries that were the exact opposite of what the consensus was in their time. History is replete with examples where the consensus of experts was wrong.

True scientists are people who **continually** ask “how?” and “why?”. One thing is for certain: the proper answer to any *how* or *why* question is NEVER “because Dr. Expert said so.” For example, we don’t say that gravity is real because Newton said so — but rather because Newton **proved** it to be so (using the Scientific Method).

So that is what we should look for when a claim of “best science” is made: **that all assertions made are subjected to a comprehensive, objective, transparent and empirical assessment.**

So now on to question #2: are NC citizens getting “best science” from the NC DCM — especially their “Science Advisory Panel”?

A pertinent case in point is the 2010 “NC Sea-Level Rise Assessment Report” (<<<http://tinyurl.com/4a24my9>>>). Just to make sure that citizens were onboard with DCM’s marketing strategy, the official release of this paper stated: “The report synthesizes the best available science on sea level rise...” <<<http://dcm2.enr.state.nc.us/News/2010%20Releases/slrreport.html>>>.

NC citizens not only have a right, but they have an obligation to ascertain whether in fact they are **getting what they are paying for**. So let’s look closer as to what we are being asked to accept as “best science” here.

Question 1: is the Scientific Method used in arriving at the main conclusions of this report?

Answer: The term “Scientific Method” does not appear in this report, and there is no evidence that it has been utilized in reaching the panel’s conclusions. On the other hand the word “consensus” appears twice, and “best science” is NOT about consensus. This is a red flag that the methodology used in this report is seriously flawed.

Question 2: how comprehensive is this report. One way to evaluate that would be to examine how detailed is the data they have that they are basing their conclusions on.

Answer: The primary data set is from one location (Duck), using some twenty five years of scientifically crude tidal gauge measurements, and stopping in 2002 (!). This does **not** pass muster as being scientifically sufficient data — either in *accuracy* or *quantity*. (We’ll go into this matter in detail, in Part 2 of this critique. Just one tidbit is that the NOAA site doesn’t even list Duck as a sea level measuring location. See <<<http://tinyurl.com/66bbn9z>>>.)

Question 3: how objective is this report — i.e. how many factors affecting sea level rise are genuinely explored?

Answer: The entire focus appears to be based on one possible cause: Anthropogenic (manmade) Global Warming (AGW). There is no evidence that AGW is questioned, or that other influences are given serious consideration. It seems that the panel started with the key assumption that AGW will consequentially affect NC sea level rise, and then went about finding sources that supported that belief. *If so, this is absolutely not how “best science” works.*

Question 4: how transparent is this report — i.e. how available is the data to be publicly examined?

Answer: The Duck data is available (see: <<<http://tinyurl.com/69dfqno>>>). However, the projections in the report (e.g. 39 inch NC sea level by 2100) are based on other studies, where the data and models are not always transparent.

Question 5: how empirical is this report — i.e. are the conclusions based on real-world measurements?

Answer: The key reports referenced (IPCC & Rahmstorf) are **not** empirical-based assessments. Both use computer models that are based on several unidentified and scientifically unproven assumptions. *No matter how fancy the ultimate facade is, when the foundation is built on sand, it will collapse.*

So the bottom line here is that this report fails on all five **real science** questions used as a template. As such, the conclusions are not only very suspect, but they are definitely **not** based on using “best science.” When we read this report we are entering into the realm of opinions and unscientific beliefs.

Part 2 of this critique is a 25± page addendum that looks at the validity of the primary technical statements made in the 2010 *NC Sea-Level Rise Assessment Report*. Based on what we have just seen here, it should be no surprise that essentially all the significant assertions of this report are **not** supported by real science. Before we get into that, though, here are two general observations.

First, I'd like to address the frequently used term “skeptical.” Remember what was the hallmark of a real scientist? It's an individual who **continually** asks “**How?**” and “**Why?**”. In other words, *skepticism is a requirement of being a true scientist!* The eye-opening revelation here is that the people who are calling the other side “skeptical,” have unambiguously identified themselves as those who are *against real science!*

To take the skepticism out of science would be akin to taking the eyesight away from a painter. Yet some evangelists (in their attempt to undermine real science) have aggressively tried to convey to the public that skepticism is a bad thing. Let me unequivocally state: *to be a skeptic is a scientific badge of honor.*

Secondly, please consider the inconsistency of what is going on here. Basically what the 2010 *NC Sea-Level Rise Assessment Report* says is that they consider the IPCC's sea level projection (of 15”± by 2100) to be inadequate. Instead they favor the opinions of a researcher named Stefan Rahmstorf, who projected the sea level rise to be some three times what the IPCC did (55”±). (See figure.)

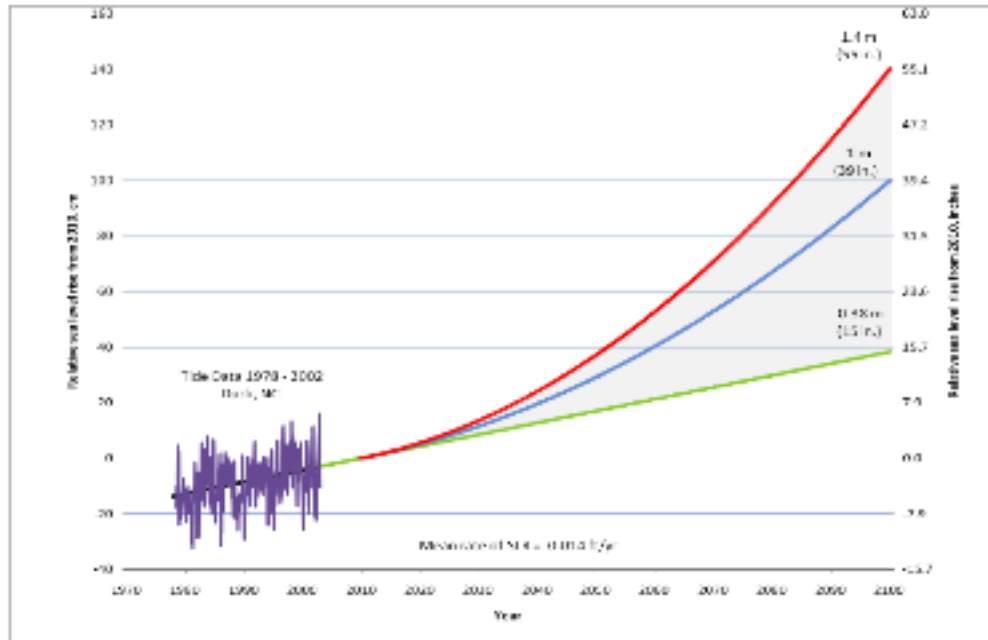


Figure 2. This chart illustrates the magnitude of SLR resulting from differing rates of acceleration. The most likely scenario for 2100 AD is a rise of 0.4 meter to 1.4 meters (15 inches to 55 inches) above present.

The authors of this report appear to have tried to make their position look “moderate” by picking a number in the middle of these two predictions: 39”. In Part 2 you will see how unscientific *both* predictions are — but that's not the point here.

As mentioned earlier, the thirteen members of the CRC Science Panel apparently all subscribe to the theory of manmade global warming. Put another way, they all have the same ideology. It brings to mind that famous quote by William Wrigley: “When two people always agree, one of them is unnecessary.”

In any case, if someone stood up and questioned their global warming beliefs it would be like someone saying that they doubt that Moses parted the sea. There would likely be a displeased response that this individual has the impudence to question the stated consensus of some of the world’s leading scientists.

That is what the IPCC is: a UN organization that got together selected experts and hammered out a document that puts forward their case for manmade global warming.

So, when this Science Panel was asked to look into the sea-level rise for North Carolina, why didn’t they just say: *the IPCC experts have essentially already done all the work here, so let’s go with their projection* (with small tweaks for local conditions like subsidence)???

You can make your own conclusions but it appears that they felt that they had to come up with something *to get people’s attention*. In the unscientific society we currently find ourselves in, it was an easy matter for them to find other like-minded researchers who had constructed computer models that projected wildly speculative outcomes.

BUT, in doing so, **they had to throw the IPCC conclusions under the bus!** That’s right. The same people who are offended when someone questions the IPCC, now tell us that the IPCC’s figures for future sea level rise are dead wrong. But these are the same individuals who say: “the IPCC’s projections are the stated consensus of the world’s leading scientists”!

Think about this: **if the IPCC consensus of experts can be seriously wrong about sea level rise, why can’t they be just as wrong about other things?**

This whole matter shines an unflattering light on today’s standards. That some will swear by the IPCC when it supports their agenda, but then will quickly ditch the IPCC when it doesn’t, should tell you all you need to know.

What is their agenda? Well that will have to be the subject of another paper, but it clearly has *nothing* to do with science, or the environment.

Here’s another question that should be asked: is this 2010 *NC Sea Level Rise Assessment Report* an aberration or is it the norm? Unfortunately, the evidence says that this level of unscientificness has become routine. Another recently released report “Coastal Wind: Energy for North Carolina’s Future” is a similar propaganda piece, where the important parts are based on political correctness, not on real science (see <<<http://tinyurl.com/62s98uh>>>).

There will undoubtedly be people who don't like this message, and the instinctive reaction of some of them will be to disparage the canary. Just keep in mind that no matter what they say to change the focus, it does not alter the fact that the emperor has no clothes.

So what's the solution? Here's an outline of a suggestion:

- a) Have state agencies make it a **requirement** that all of their technical reports be firmly rooted in the Scientific Method.
- b) Closely examine the commitment to real science by the staff at NC DCM. Any that are not fully onboard with using real science should be downsized.
- c) Thank the Science Panel for their efforts, and then get a new panel of scientists who are committed to science based on the Scientific Method.
- d) Scrap all unscientific reports done in the last two years by NC agencies and generate new studies, this time based on Scientific Method science.

Let me make one final point perfectly clear: I am **not** saying the projected rise of 39 inches is wrong (although it is very likely way too high).

What I **am** saying is that this projection is **not** based on a comprehensive, objective, transparent and empirical based assessment — i.e. it is **not** based on real science *aka* “best science.” In other words, *the methodology was wrong*.

We can and should do much better.

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For Part 2 of this critique go to <<<http://tinyurl.com/659pdqx>>>.

[BTW, if you don't have the time to read all of the technical critiques of Part 2, then to get a more balanced perspective it is strongly recommended that you read this one recent paper by world renowned sea level expert, Nils-Axel Mörner “The Great Sea-Level Humbug” (<<<http://tinyurl.com/4ojme2f>>>).]