## Union Session opening remarks

We sometimes find on TV, in newspapers or political statements, and discussions on social media "newest scientific results," which show this-and-that. In particular, with politically charged fields of science, this wording is used to underline the significance of new results, which purportedly carry important implications for certain political decisions. A prominent case is climate science. This practice is quite common with highly visible journals, which are regularly read by administrators and journalists.

However, newest results are not necessarily particularly good results but first of all results which have not been subject to attempts of falsification. All results are sometimes new, and after having been for a while in the arena of scientific and public attention, it will be sufficiently examined, challenged and tested so that it may enter the body of mature science. Possibly after some revisions. Obviously, some fail to do so and are found to be not convincing and need major revision.

When the field is of minor public interest, this process of vetting, revision, adding and deleting facets goes on only without much attention. But in fields in the limelight of public and political attention, in particular but not only climate science, "newest results" lead sometimes to battles documented in newspapers such as the New York Times.

This was likely one of the reasons why the IPCC was set-up to assess the state of knowledge about climate change and impact. Which knowledge claims are raised, which of them are consensual, which are still discussed, which are clearly controversial. At the same time, where are the knowledge gaps? One has to note that the IPCC is not presenting what some claim to be best knowledge, but the topology of knowledge, its consistency and plausibility.

At the regional level, similar efforts have been implemented – examples are the region of the Baltic Sea, the North Sea and the metropolitan region of Hamburg. These reports are assessments of knowledge about climate -- subtly different from an assessment of the state of climate change. Other efforts to this end are research encyclopedias, which try to assemble this knowledge. After we have heard talks about such efforts, we invite the audience and the speakers to discuss aspects of the maturing process.