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## **Opening Speech for the CEC14**

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Welcome to the Institute for Advanced Sustainability Studies, which is of course situated in Potsdam, but at least we are here at the Potsdamer Platz. Welcome especially to our Secretary of State of the Ministry for education and research, Dr. Georg Schütte. I am also happy to welcome the Chairman of our General Assembly, Professor Ernst Theodor Rietschel who is of course a well-known scientist in Germany and beyond. And of course John Schellnhuber, who does not need further introduction here.

The IASS is a young, really brand-new institute. It is the attempt to implement a brilliant idea of the German scientific family in the aftermath of the 4<sup>th</sup> IPCC report, to which the Federal Minister for Science and Education and the responsible ministry of the Land of Brandenburg echoed positively.

Having in mind the clear results of climate science there was underlined the call for a new interrelation and cooperation of science, policy and the society in the knowledge democracy. It was questioning the linear relation that science is delivering results, that civil society is echoing positively to those results and politics have to implement them. Therefore this institute tries to combine cutting edge scientific research with the integration of the society in the scientific process itself making it possible that politics linked with values can argue on the basis of alternatives for a democratic future.

In short: going out of the linearity, starting a recursive process. This is more and more globally on the agenda of science, societies and politics. It means: interdisciplinarity has to be combined with transdisciplinarity based on excellent science.

In IASS we want to prove this approach having in mind that we have entered the Anthropocene.

Some years ago, the political scientist Herfried Münkler from the Humboldt University of Berlin published an article in the highly relevant German weekly newsmagazine the SPIEGEL with the title “The foreseeable end of parliamentary democracy”.

To summarize his argumentation in short: the global economic architecture, the stock exchange, shadow banking, rating agencies, the hedgefunds and the like are dominating, are responsible for the speed going more and more to real-time decisions. In this way they are not only dominating the economy but by that also civil society altogether; they are the reason that there remains no time to discuss the future and the decision with regard to alternatives. The parliamentary democracy runs empty, something very close to what Ulrich Beck mentioned in his Second Modernity.

Already years ago the then foreign minister of Germany, Joschka Fischer, mentioned “nobody has the power to make politics against the markets.” To say it bluntly: against the markets gods themselves struggle in vain. You can come to the conclusion that the financial analysts and the anonymous person behind the market are guiding society through the world of economic and financial dominance: financial and economic engineering.

I have to mention, there is of course critical argumentation against this position with its consequences to democratic decision making, to develop a world we want. One recent critique comes from the cultural sociologist Thomas Wagner.

Maybe you are a little bit puzzled with this view on a political science topic in the opening speech of a large conference on climate engineering. But to some extent there are quite interesting interrelations to the quote of Paul Crutzen.

In this field we are also largely treading on *terra incognita*:

In his famous article in *Nature* in 2002 he stated: “[...] — mankind will remain a major environmental force for many millennia. A daunting task lies ahead for scientists and engineers to guide society towards environmentally sustainable management during the era of the Anthropocene. This will require appropriate human behaviour at all scales, and may well involve internationally accepted, large-scale geo-engineering projects, for instance to ‘optimize’ climate. At this stage, however, we are still largely treading on *terra incognita*.”

In both fields the financial system and the climate system we have created path dependencies linked with the decisions in the past and that we now seek to “engineer”.

The article has been written now 12 years ago, are we still on “*terra incognita*”? Some have arrived by now at the conclusion, that “Nature” actually “is over”, as was written by Bryan Walsh in the TIME Magazine in 2012. Or by Daniel Botkin: “Nature in the 21<sup>st</sup> century will be a nature that we make”.

But what are the consequences of that? Should the research agenda intensified in that respect? Is democratic decision making concerning alternatives for the future of societies over as well?

The responsibility of science is to carefully develop the map and test the routes to sustainable governance of this “*terra incognita*”, and this needs to be done together with society.

We have accumulated a wealth of knowledge and the last decades have seen a breathtaking acceleration of knowledge, but we seem not to have come very far in developing sustainable solutions for the challenges of the Anthropocene.

Is engineering the last response to climate change? Are we surrendering with regard to mitigation – changing energy technologies, changing behavior? What is the “appropriate human behavior” and who will decide and implement this in an open society? Beware of “TINA”! We should not interpret the Anthropocene as the age of the “TINA”-principle with regard to the single best and only solution. To do this would mean to give up freedom in the sense of Hannah Arendt. Who should decide which the most desirable status of the worlds’ climate is?

Sustainable solutions will always be based on the integration of science based knowledge and emotions, even irrationalities as there is not a singular solutions of any kind created by one group (politicians, scientists, engineers).

The famous German Jewish science philosopher Hans Jonas demanded an extension of the Kantian categorical imperative regarding the consequences of our actions on larger scale in time & space, that “our knowledge must be equal to the extent of the consequences of our actions”.

As already referred to before, the recognition of the Anthropocene and the responsibility of mankind to “repair” the damages of past actions, like we are successfully doing with the ozone layer, unavoidably leads to reflections on our capacity and knowledge to do so by means of “engineering”. Paul Crutzen already stated this in his almost legendary article in *Nature*. This is not only a task for scientists and engineers, the most relevant paradigm shift to a transdisciplinary research structure is a task where scientific knowledge and excellence play an outstanding role but always in societal context and where ideas and options are to be contested and debated in a wider socio-political setting with actors from civil society, politics and economy.

We need to broaden the debate from linearity to interaction and inclusive discussion supporting the choices to be taken in the search for climate change

mitigation and climate governance; these choices are always political and therefore need to be negotiated with those affected by them.