

**Your Royal Highness,
Your Excellencies
Ladies and Gentlemen
Friends and Colleagues**

The Planet we live on is now almost 5 billion years old

But our own species has only existed on Earth for a very small part of that time.

It is believed that modern Homo sapiens – our own species – only evolved in the last 100 to 200000 years.

For the sake of argument, let's assume that this happened about 100.000 years ago and that a generation time of our species is 25 years.

That would mean that there have been on the order of 4000 generations of our species.

It is probably worth noting here, that nearly all of these generations lived in caves.

Somewhere around 12,000 years ago – or on the order of 500 generations ago – and at several different places on this Planet -

some of our more innovative ancestors discovered that it was possible to control what plants grew where.

With this discovery and its resulting empowerment of Homo sapiens to control the amount of food available to them - the relationship between our species and the Planet Earth changed dramatically.

It was now possible for many more of us to thrive simultaneously on this planet than would ever be possible if we all had to rely on nature alone to supply us with food.

And, certainly, we would never be the 6 billion people we are on this planet today

-or the 9 billion we expect to be in 2050-

if we all were competing to collect the same berries!

At the time when our ancestors developed the practice of agriculture, it seems likely that anyone who could be bothered to

remove the native vegetation

prepare the soil and

plant the seeds they had gathered

could do it anywhere they wanted to.

Presumably, none of them ever dreamed that it one day would be necessary for society to regulate where and how agriculture could be carried out.

It wasn't until many hundred generations later - and when the number of individuals of our species had climbed well over a billion, that society became aware of the common costs of uncontrolled agricultural development.

The recognition that unchecked agricultural practice and development could actually be harmful for society as a whole led to creation of rules governing how and where agriculture could be carried out.

So, we know our ancestors discovered agriculture – a huge advantage for our species and a benefit to our society–

and, later, thanks to the growing knowledge relating to how this practice interacts with the Planet Earth and, ultimately, makes this planet a less amenable place for our species to live, developed rules to regulate how and where agriculture takes place.

Another thing we know about our ancestors is that, as long as our species has been on the Earth, we have used the atmosphere and the ocean as a places to throw our waste –

In the beginning, our human waste was simple and comprised primarily of smoke from our cooking fires, scraps from eating sites and products of our digestive processes.

Later, our waste products became more sophisticated but we still used the ocean, atmosphere and “empty” land for their disposal.

And as we became more individuals of our species the sheer volume of our simple waste products made their presence in the air and water a problem.

As in the case of agriculture, the idea that society might have to step in and regulate the dumping of waste simply did not occur to our ancestors.

In fact, it is only within the last 1-2 generations that our society developed rules to govern our species use of the atmosphere and the ocean as a garbage dump.

As in the case of agriculture, these rules were first developed when society acquired the knowledge that a continued state of non-regulation would lead to unacceptable costs to society.

There are, of course, analogies that can be drawn here to our present concern regarding climate change:

Something like 8 generations ago, our ancestors began to power their activities with machines rather than by animal power and only about 4 generations ago, did our great great grandfathers begin to mass produce automobiles.

Over these past 8 generations, fossil fuels have become an increasingly important energy source for meeting all of our energy needs.

At the time when our relatives traded animal power for machines or put the Model T on the road, no one ever dreamed that it would one day be necessary for society to regulate these activities.

Today, and thanks to the research of many of you assembled here at this meeting, we have the knowledge that continued unchecked development of these activities will result in unacceptable costs to society.

As I have outlined, our society has - at least until now - always reacted to the knowledge that a particular activity was changing this Planet in such a manner as to be threatening to our own species by creating rules to regulate those activities.

This historical fact gives me hope!

The rules may have come at the last minute and may not have been as comprehensive as some people would have liked

BUT they have been sufficient to allow society to continue its development – and over time, as new knowledge has been added, the rules and regulations governing these activities have been tightened.

Thus, the history of the relationship between our species and this planet gives us reason to hope that the politicians coming to the COP-15 Climate Meeting in Copenhagen in December will deliver at least some of the regulation necessary to allow the continued success of our species on Earth.

We are assembled here over the next three days to ensure that those politicians that come to Copenhagen – as well as interested citizens of the world - have available to them

the most up-to-date knowledge base possible when representatives of society meet in Copenhagen

Of course, these politicians already have an excellent knowledge base from which to work in the form of the 2007 IPCC Assessment Report # 4.

That document demonstrates beyond any shadow of a doubt the importance of research in influencing societal understanding and response to climate change.

As a product of the UN system, itself, it is the obvious and only starting point for the negotiations to take place at COP-15.

The societal importance of this document is reflected not least by the fact that it earned those who were responsible for its production the Nobel Peace Prize.

A decision that one can only applaud the Nobel Committee on being bold and wise enough to take.

The Congress we are starting here today has attracted considerable attention from the media and to each of you here today representing this important component of our society I extend a warm welcome.

As climate scientists, our relationship with the media is not uncomplicated!

We recognise the requirement of journalists to tell both sides of the story but many of us have felt deep frustration when we seeing pictures of a melting ice cap released to the press –

pictures that we expected to find with accompanying texts explaining what this ice melt means in terms of changes in planet system function and the profound repercussions that these changes can have for future generations of our species.

But pictures that more often accompanied by headlines announcing a new – and economically rewarding shipping route - to China and a whole new frontier opening up for oil exploration!

Ironically, such experiences make us want to get to know you better! We want you to understand what we really know about climate change and its potential consequences -and what we can do about it! -so that you can make this knowledge available to society!

We are not always good at talking to you and explaining ourselves in a non-technical language but we WANT to talk to you – so if you don't understand! Please ask!

The question I have met most often in talking to the media in the run-up to this meeting is why we feel there is a need for a meeting like this when we have the IPCC.

Many of these journalists are, of course, hunting for dissent – that always makes a good story

Are we trying to tell another story than the IPCC?

or do we (I feel them willing me to say yes!) in some way disagree with the IPCC Report?

I can assure you that nothing could be further from the truth or the intention of this Congress.

As I have indicated, the last IPCC Report is probably one of the most important and politically influential scientific documents ever produced.

However, the last IPCC report came out two years ago and the time required by its production process necessitates that the conclusions it reaches are based on scientific results that now are on the order of 4 or 5 years old.

It would be a mockery of the academic system and of the work carried out by thousands of researchers the world over to argue that research has not improved and extended our knowledge base during the past 4 to 5 years!

It was the conviction that both decision makers and society at large have a right to as “up-to-date” knowledge on climate change and its implications as possible before the COP-15 in Copenhagen

that prompted the International Alliance of Research Universities IARU to arrange this conference.

Thus, it is in the firm belief that non-scientists – including negotiators having to design the global response to climate change –

WANT to be in possession of the newest knowledge concerning climate change and its associated threats and opportunities that we meet together here.

That is also why we will from this Congress be producing two products:

1. A book designed for an academic audience to be published by CUP in 2010 summing up and documenting the major messages from the Congress and

2. a short (max 30 page) summary report in a language that is accessible to the non-scientist and which will be published by June 2009.

It is this latter document that will be made available for all official participants in COP-15 as well as the global media.

Making it available, of course, doesn't mean it will be read. “You can lead a horse to water but you can't make him drink”

However, in recent months, I have become convinced both politicians and society are thirsty for up-to-date climate change knowledge.

Last week, for example, I attended a meeting dealing with the economics of climate change held in the US Senate in Washington.

A key speaker was Todd Stern, President Obama's chief negotiator on climate. He held a most inspiring speech

- not only because he clearly and unequivocally assured the assembled audience that the US is back on the climate scene and willing to take a leadership roll on the climate change issue**
- But also because he listed 10 guidelines for how he believes society should respond to climate change.**

Number 1 on his list was (and I quote):

“Let us be guided by the science” He called for frequent updates and that we as often as possible “look at the numbers” and measure actual development in the climate system against predictions.

The last IPCC Report identified possible scenarios – trajectories or predictions if you will – for how the climate system will develop in the future.

Several years on in the data collection from the IPCC report, we are now in a position to identify how actual current climate system development compares to the predictions made by the IPCC.

This, I believe, will be just one of the major contributions we can make from this congress.

I will be honest and say, I have read all of the abstracts submitted to this congress and I can tell you that in the presentations relating to the development of the Climate system as a whole, there is not a lot – if any – good news that will be presented in the coming days.

However, if you are here looking for good news, then look to the sessions on the social sciences and the humanities

The message emerging there is that we already have many tools at our disposal that can be immediately enlisted in the battle against climate change and its consequences.

Thus, there are no good excuses for postponing action to control and minimise our species' impact on the climate system.

I will close by returning to the lessons that can be learned from the history of the relationship between our species and the planet Earth.

Remember that – until now – when our society had accumulated the knowledge that certain of our activities were harmful and, thus,

threatened the continued development of society as a whole,

regulation was developed to restrict or abolish those activities.

And then let us remind ourselves that we are, in fact, the first of the approximately 4000 generations of our species on Earth that - thanks to the research community –

Actually has the understanding of how our own activities are impacting the Earth System and influencing the climate.

That means that we are also the first generation that has the capacity to do something about it and to redefine our species' relationship with the planet.

I am convinced that we will do something about it and that we are in the process of redefining that relationship.

This Congress is part of that process.

We have an important job to do over the next three days

And we have a most impressive team assembled here to do it.

I thank you all for coming!

I hope you will enjoy your stay but

For now, it's time to roll up our sleeves and get to work.

And to get the ball rolling, it is a great privilege and honour for me to introduce

The Vice chancellor of The Australian National University

Professor Ian Chubb,

Who is President of the International Alliance of Research Universities