

Science & the Creation



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Outline



- Long journey in a few minutes
- Interplay of science, the creation and truth
- Our responsibility, our choices
- Climate system and life
- *Discussion*

Our present challenge



- How to reintegrate
all that we know and understand
 - given the deep interconnectedness
of life & climate on Earth



- **Strengths of science:**

- integrity, honesty and communication
- *particularly valuable in a society lost in ignorance and deceit*

- **Limits of science:**

- tangible, measurable and communicable
- *hard to deal with the complexity and interconnectedness of the living natural world*

Does the distinction between the human-made world and the ‘Creation’ matter?

- We understand the human-made world, the world of computers & technology – because we made it - it is more or less predictable.
- The same is not true of the natural world – which is far more complex and alive. We struggle to understand it and predict it.
- *E. F. Schumacher* called it the ‘created’ world.

Perspective for the 21st century

- Much of western theology formed when humanity had a limited understanding of its place in the creation; but the structures of belief didn't matter too much *because our impact was small.*
- All this started to change with the industrial revolution powered by fossil fuels. Now humanity has a *global impact on the natural world*, and understanding our place in it is paramount.
- *Science and technology created this situation*, and must help us find a way out, by helping us understand the earth as a global system, now out-of-balance.

But science has become ‘valueless’

- Centuries-old split of science from ethics/religion
- Science preserved its factual integrity, but makes no value choices
- Theology (& political society) feel free to choose doctrine over understanding ‘reality’
- *No-one accepts responsibility for the Earth*
- *So collapse of our ‘human system’ is possible*

Consider

“Thy will be done on earth”

requires that people of faith have a deep understanding of the Earth and the whole Creation, so that acceptance of our responsibility for stewardship is possible.

- The laws of science and the laws of the creation are not separate: they show us the paths ahead. There is only one world and one reality:
 - *it is our understanding that is partial*
- We try to understand it with all the tools we have, because with understanding we get a clearer picture of what is truth:
 - *in all its paradox and complexity, richness and tragedy*
- For it is the truth that connects & sets us free:
 - *to face our responsibilities to each other and to this world*

The truth is critical: it takes honesty and understanding

- Industrialization, powered by fossil fuels
has pushed the Earth out of balance
and its time-scales are long
- It is more profitable in the short-term to spread
uncertainty, confusion and delay
than face the truth

Climate change has lots of details & complexity



- Energy, water, CO₂ and life are interwoven everywhere with climate
- Take Fall as example

The Fall transition



- Water - evaporation - clouds – greenhouse reduces cooling
- Trees delay frost as long as possible
- With frost, leaves fall, evaporation shuts down, and earth cools to space
- humanity is now largely outside this web of life

Powerful but foolish

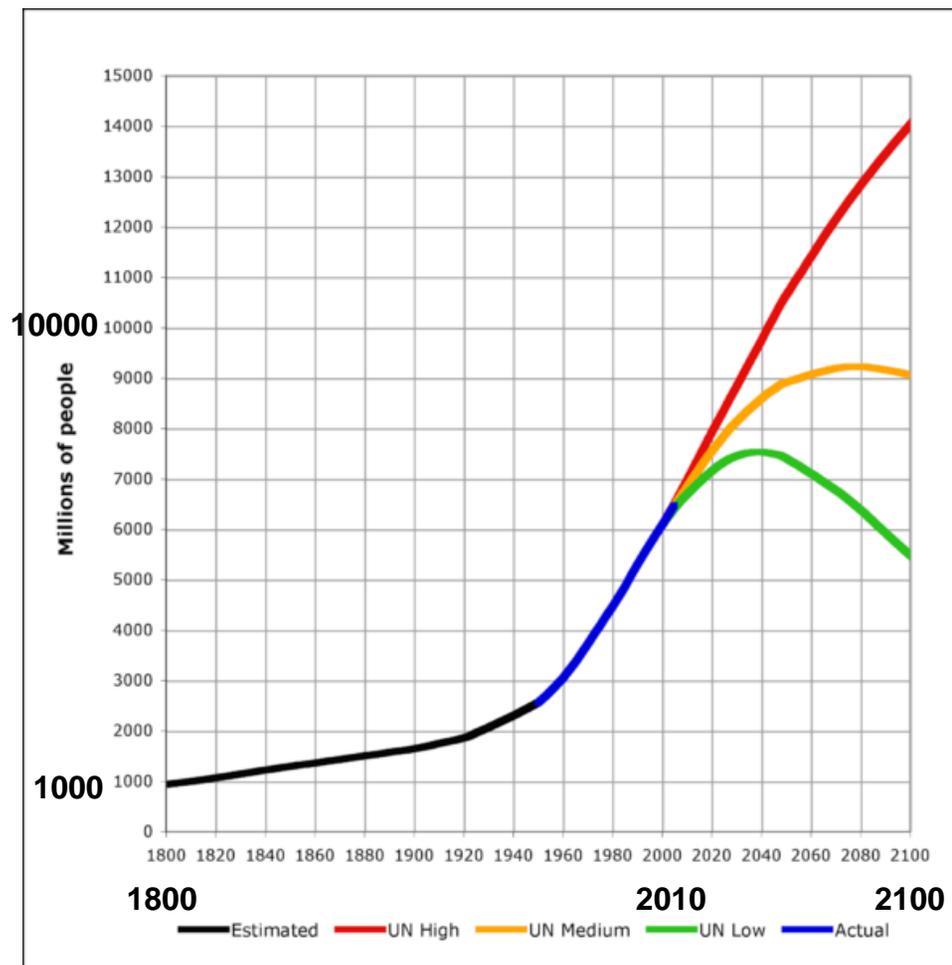


- In just 2 centuries, technology & fossil fuels have given us great power; and at first freedom from the mercy of the elements
- But with power has come *arrogance* and doctrinal beliefs that are incompatible with a sustainable Earth
- As limits are passed, *either we change* or we will be ‘managed’ by disasters.

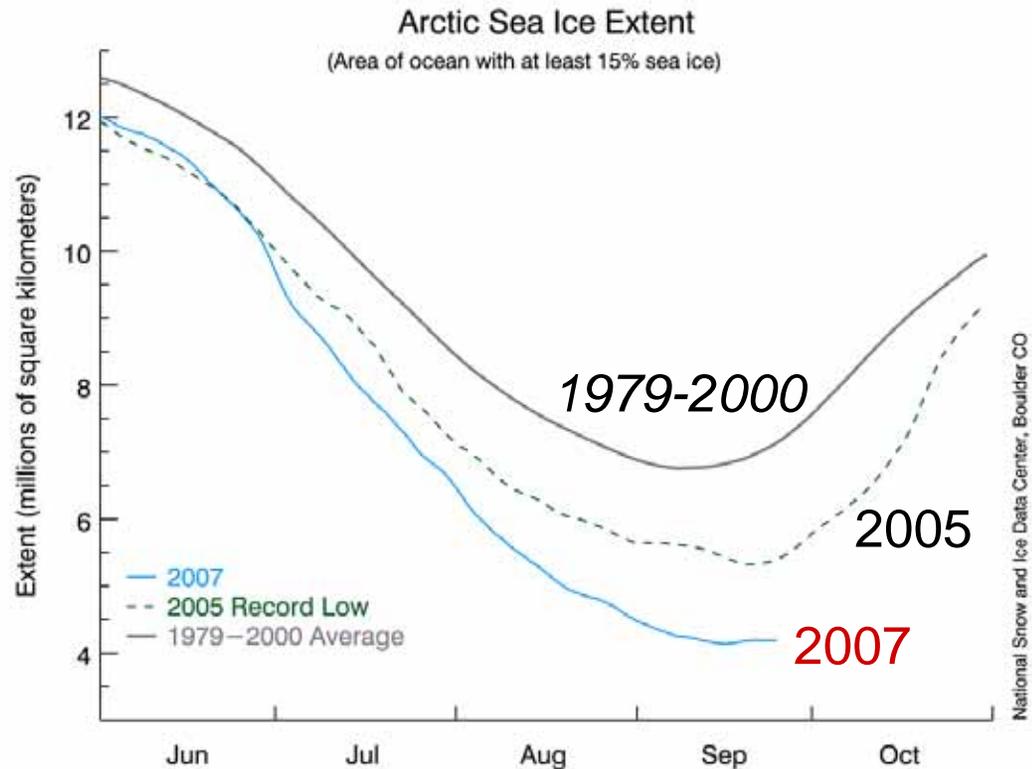
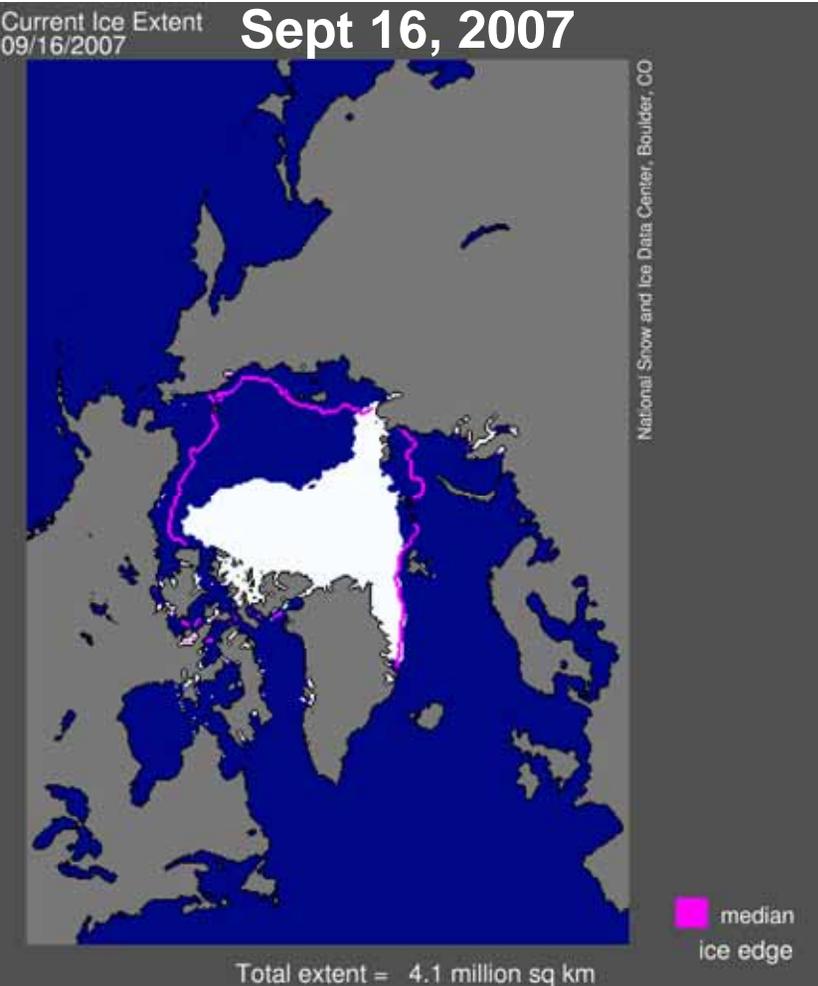
We passed the carrying capacity of the Earth in the 1980s



- Population is still rising
- Consumption is still rising
- Fossil energy use is still rising
- *We still 'believe' in Growth*
- *Global poverty & suffering are still growing*



Arctic sea-ice loss is accelerating



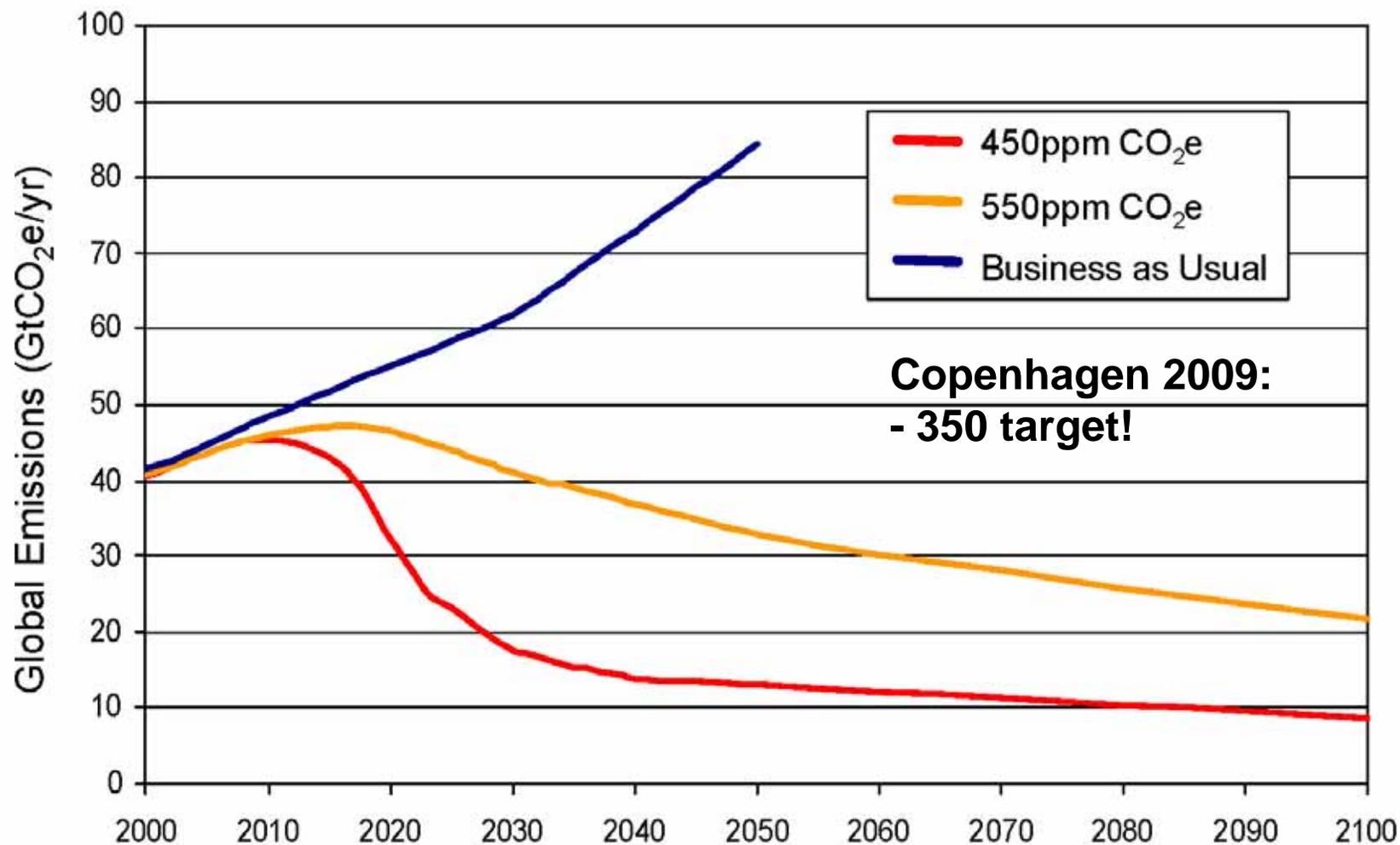
Double feedback: loss of reflective ice and increased water vapor greenhouse from more evaporation

(www.nsidc.org)

- 2007 saw new record ice-loss by huge margin
- 40% melted by September → warm Fall

How do we avoid 'Dangerous Climate Change'?

Emissions Paths to Stabilisation [Stern, 2006]



(Self)-deception is a deep issue

- *Three pillars of American dream are crumbling*
- “Economic growth” based on **fossil fuels, debt and consumerism** is **unsustainable**
 - and a disaster for the planet!
- **Individual “rights”** & needs of humanity must be balanced against the needs of the **earth’s ecosystem**
- **We have no workable paradigm to guide and manage technology** – so result is tremendous successes and catastrophic failures

These are all profound moral issues

- Yet the churches & society largely stick to their old doctrines & ideologies
- Is this “**Thy Will be done**” for the Creation?
- **This Lent, let us ask for guidance.**



Discussion



Synthesis

- To defend our world views, we all filter a lot out: *Seek and Ye shall find*
- Take the creation into your spiritual practice: in the wilderness or in the mind
- Try to reconcile the Earth/Creation and *Thy Will* with your life, the life of this church, with Burlington...

How do we manage the Earth?

(When there is so much we don't know)

- ***Long time horizon: generational to century***
- *All waste products must have short lifetime in biosphere [think CFCs, CO₂, Pu-239]*
- *Minimize use of raw materials by remanufacturing*
- *Maximize efficiency of use of energy and water*
- *Relocalize to regain control/responsibility and minimize transport*

What will this mean for you?

- *Society needs to rethink its relationship to the natural environment and its ecosystems in less than one generation*
- *Our 'lifestyle' is disconnected from what the earth can sustain*
- **The large inertia** of the earth system is masking the extent of the crisis we face
- **The cost of fossil fuels is spiraling**
- Individual can rethink priorities but **societal changes are needed** at all levels: from towns to global
- **Local food; local power; community solutions**
- **Ask: Is this an efficient and sustainable way of doing this?**
- **Ask: Is this 'Thy Will' for the Earth?**

The reality we face



- Competition for resources: water, food & energy.
- Fossil energy is transforming the earth and stressing its ecosystems: current path means loss of 30% of species and 100 millions of environmental refugees
- Efficient society, based on renewable energy is the only solution: huge transformation; but technically possible at reasonable cost
- It will take honesty, courage, compassion and decades of sustained effort, starting now