Our Ice Dependent World
The 6th Open Assembly of the Northern Research Forum
Hótel Örk, Hveragerdi, Iceland
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Open Assembly Panel: Can we imagine a world without Ice?
Economic, social and political consequences

The «State» of the Arctic or who will save the climate? ... changed given the circumstances

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Structure of presentation

- Can we imagine a world without ice?
- What should be done
- Why is it not done?
- The example of the Arctic ocean
- The challenges of industrial society
- What happens now?

Can we imagine a world without ice?

- Yes we can … but we don't want to: a world without ice is a world of accelerating climate change
- UNEP factsheets on the societal consequences of climate change (1986)
  → a future under climate change will be unpleasant; undesirable; mostly losers
- We know enough to act:
  → further research cannot be taken as an excuse not to act
- We also know we must act now:
  → waiting will make things worse
  → we should be using the time, money, and energy to develop "alternatives"
  → instead, we are using most of the resources (time, money, fossil fuels, minerals) for the wrong priorities; or already for reactive purposes; or simply to buy more time (declining EROI), incl. efficiency measures

→ This is not likely to change, rather the opposite will be the case:
  → we will have less and less time, money, minerals and energy for alternatives
  → the reaction vis-à-vis climate change will become less and less rational: (if you can deny evolution you can also deny climate change)
  → active manipulation

What should be done

- What should be done is actually quite obvious::
  → slow down the current dynamics of exponential industrial development
  → travel less, transport less
  → consume less (resources), especially fossil fuels
  → "leave-it-in-the-ground"
  → "de-growth"
- This must be done on a global scale and in a socially and politically acceptable way
  → "Democratize" de-growth

→ We should use the resources (time, energy, especially fossil fuels, minerals, money) that we still have to do all this
→ this is obviously not the case

Why is it not done? Why is it, we cannot act?

- Overall, we do not act because our institutions (i.e., rules of the game which incentivize the actors) prevent us from acting
- More precisely, we do not act because the institutions we have created over time do not integrate the limits (to growth)
- Economic institutions: the growth imperative
- Scientific institutions: specialization, fragmentation, uni-disciplinarity
- Technological institutions: commercialization of piece-meal innovation
- Cultural institutions: individualism, consumerism
- … and the only institution that we actually have to solve collective problems, the nation-State, is least capable to deal with limits:
  → it is a development agency: all it can do is promote growth and it needs growth for its own survival
  → it is of military origin, and thus defines challenges in terms of threats to its security
  → it prevents alternatives from emerging
- So, what does this mean in the case of the Arctic?

The example of the Arctic ocean

- Arctic States, like all other States, will extract their minerals and fossil fuels to the end; they will use the shipping opportunities (if they can)
- But how about extraction and shipping in areas outside of territorial claims of nation-states? Example of the arctic ocean
- Paradox of the Arctic: the ice will have melted sufficiently at a time when the negative effects of peak-oil will be felt → pressure mounting
- Local local – global issue: local action has global consequences; global dynamics shapes local action → the Arctic is global
- My original presentation on the "State" of the Arctic:
  - oil and gas will be exploited in the Arctic ocean; shipping will happen
  - States will be the key players in this: privates will act by authorization of States
  - where the State and business can join hands, exploration will be even more "efficient": e.g., SOEs: Statoil/Norway, Gazprom/Russia
  - when the security argument can be used, we can go "fastest" & "furthest"
  - indigenous peoples , the only possible dissenting voice, will be silenced or instrumentalized

→ As long as States will be in charge in the Arctic, oil and gas will be exploited, shipping routes will be developed → there are no alternative institutions

Challenges for industrial society over time

	Phase I: planification	**Pase II: globalization**	**Phase III: limits**
The **input** challenge	SOEs; bilateral agreements	Markets	Rationing
The **transit** challenge	Bilateral agreements	Third-party access Free market	Military security
The **investment** challenge	Public financing	PPPs, regulation	Free market
The **control** challenge	Nationalization; regulation	Regulation of firms and industries	TNCS, SOEs
The **output** challenge	Command and control	Voluntarism and regulation	Geo-engineering

What happens now?

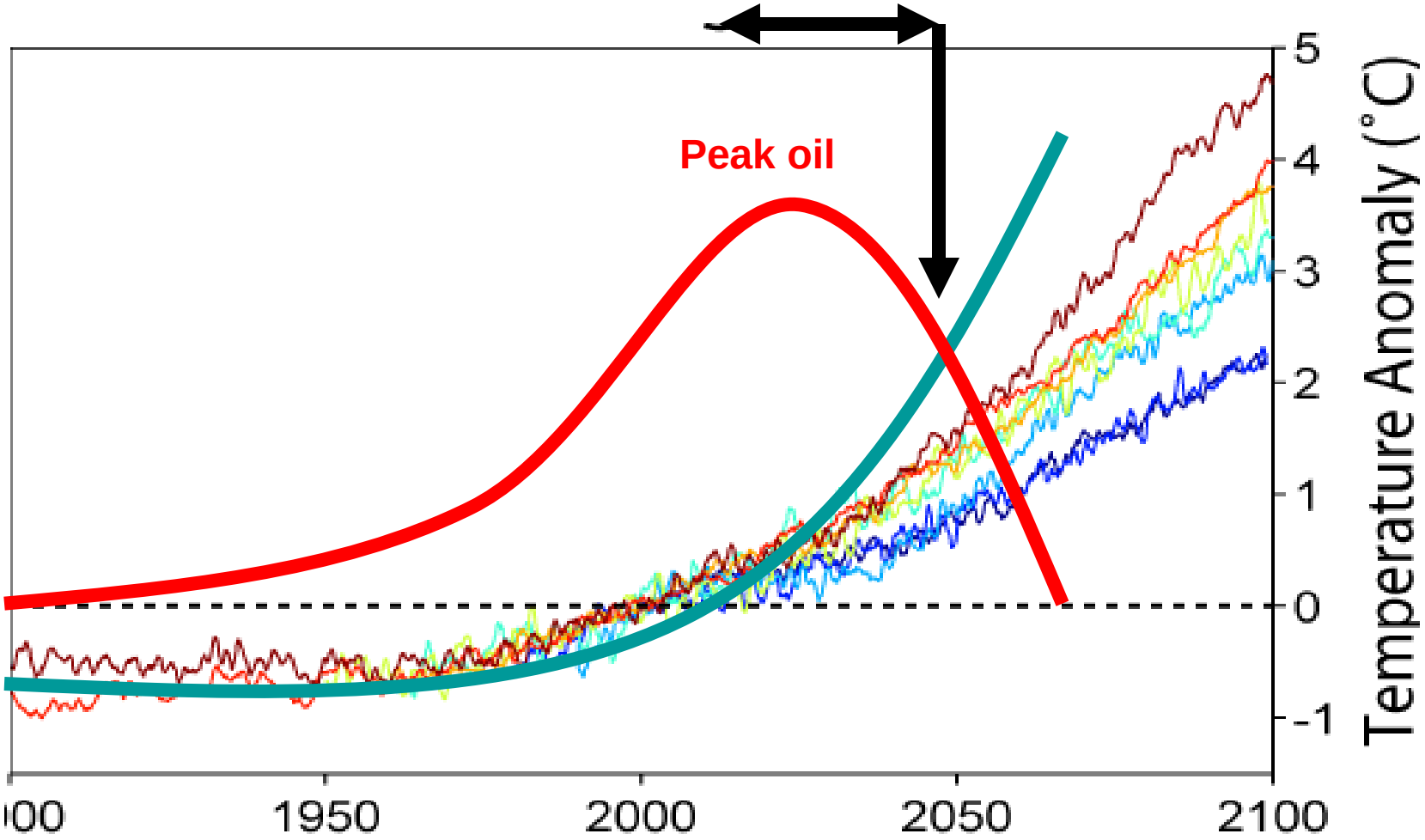
- We are now in Phase III: input and output limits
  - securitization of energy → rationing, control of transport routes
  - securitization of the environment → geo-engineering
- In terms of social, cultural, economic and political consequences, we can go back to the fact sheets, except that geo-engineering will be more unpleasant than climate change
  → more inequality: favoring the rich/haves, the North, the centers
  → more conflict: decisions will be conflictual, consequences will create conflicts
  → will destroy what is left of indigenous livelihoods and cultures (the only cultural alternative we would have had)
  → will lead to a graveyard spiral and will force us "to play God"

→ Back to the beginning: we know we must act now

→ We now also know that everyday we do not act will force us to become more reactive, there will be less options, control will be taken out of our hands

→ **We could start in the Arctic by "leaving-it-in-the-ground"**

Backup


Peak oil
5
4
3
2
1
0
-1
Temperature Anomaly (°C)
00
1950
2000
2050
2100