

# Sustainability, Ethics and Technology



*Lecture 1 out of 2*

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# This lecture is about

A brief history of sustainability

The concept of sustainable development

Philosophical challenges to the notion of sustainability

# A potted history I

## *The Club of Rome: The Limits to Growth – 1972*

- Growth is not endless and depends on finite resources
- Ecological impacts of economic growth

## A potted history II

### *The Brundtland commission: Our Common Future - 1987*

- First systematic introduction of sustainable development
- ...“meets the needs of the present without compromising the ability of future generations to meet their own needs.”

# A potted history III

## *Earth summit in Rio de Janeiro – 1992*

- First impact on policy making: Precautionary Principle
- Agenda 21: a blueprint of actions on global national & local level
- A voluntary “non-binding” aim to reduce Greenhouse Gases

# A potted history IV

## *Intergovernmental Panel on Climate Change (IPCC)*

- Assessment 1996: “discernible human influence on climate”
- Assessment 2001: “stronger evidence that most of the warming ... is attributable to human activities”

# A potted history V

## *Kyoto as amendment to Rio Earth Summit– 1997*

- To reduce and stabilize GHG – voluntary commitments
- Emission trading was introduced

## *Kyoto lasted until 2012*

- Conference in Durban in November 2011
- Canada withdrew from Kyoto

# The growth dilemma

## *No-growth lobbyists and developing countries*

- The club of Rome retained that growth must be limited
- Dire need for growth in Southern countries

## *Brundtland attempts to offer a solution*

- It does imply limits but no absolute limits
- “limitations ... on environmental resources and by the ability of the biosphere to absorb the effects of human activities”



# The Brundtland definition

...“meets the needs of the present without compromising the ability of future generations to meet their own needs”

# Questions regarding the Brundtland definition

What does the notion of “need” entail?

- For the present and future generations

Can we simply coincide *our* and *their* needs?

- Tragedy of the commons – Garrett Hardin

Prisoner’s dilemma









- it is in the collective interest of all parties to cooperate, while it is in every party’s individual interest not to cooperate

# Tragedy of the Commons as a Prisoner's dilemma

## *Prisoners' dilemma*

To cooperate: to remain silent

To defect: to confess & to accuse the other one

		prisoner B	
		confess 	remain silent 
prisoner A	confess 	 5 years 5 years	 0 year 20 years
	remain silent 	 20 years 0 year	 1 year 1 year

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# Tragedy of the Commons as a Prisoner's dilemma

*The common of pasture Partiers are individual herdsmen*

To cooperate: to take as few as possible cattle

To defect: to take as many as possible cattle



*Beef cattle on Eefie\_Hill by:John Comloquoy*

# What are the commons?

*What are the important things held in common?*

- The non-renewable energy resources
- The environment (including the atmosphere)

*Tragedy of Commons say that we should accept limits*

- To our action and our freedom
- In order to maintain the commons for all

# Spatial and temporal aspects

*Tragedy of the commons primarily emphasizes spatial issues*

- But the same questions relate to all things we hold in common with future generations (a.k.a. *temporal* issues)

# Three (ethical) pillars of sustainability

*Social justice grounds sustainable development*

*Sustainability is supported by three main pillars*

1. Fair (spatial) distribution of well-being among contemporaries
  - *intragenerational justice*
  - Fair (temporal) distribution of well-being between generations
  - *intergenerational justice*
2. Sustainability also refers to the relation with nature

# Philosophical challenges to duties

*Sustainability assumes certain obligations to posterity*

- 2 challenges to these alleged ethical obligation

*The ignorance problem*

- We don't know what they need
- We don't even know who they are

*The distance problem*

- To which future people do we have obligations? To what extent?



## However...

*We can assume that*

- there will be future people whose interests can be affected by us
- They need – at least – clean air, water and a protected climate

*We all have access to same environment & resources*

- It is reasonable to consider limitations on our actions to protect their interest

# The question remains

*How far in the future should we care?*

- Should we make a distinction between different future people?

## In sum

Sustainability is a notion that relates to

- Fair (spatial) distribution of well-being
- Fair (temporal distribution) of well-being

Sustainable developments are developments that “meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Particularly, the (temporal) intergenerational aspects raise various philosophical challenges

# Thank you for your attention!