

## What is Sustainability? vol.3 - Vision & Indicators

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## 4 Sessions

- My Goal:
  - What is sustainability? Explain it with your own terms.
  - Hold “World Summit on Sustainable Development” in this room, and you should be able to present your vision/strategies/policies for sustainability.
- Game Plan:

	Day1	Day 2	Day 3	Day 4
Lecture	What is Sustainability?	Power of Communication	Vision and Indicators	Full workshop
Workshop	Communication Breaking up into teams	World Summit - country briefing	World Summit - visions and indicators	World Summit - strategy/policy session
Prepare (Home Work)		3 Sustainability related-news	3 points for Sustainable XX in 2050	3 policy ideas in your fields

## Report

### <Mission>

Let's suppose the next World Summit on Sustainable Development will be held in 2007, and there each country is required to present its vision and indicators for 2050. We are just commissioned by Prime Minister to present a draft.

Please discuss the followings;

- 1) Definition : what is sustainability?
- 2) Choose one area (e.g. energy and global warming, resources productivity and waste), and describe your vision for 2050, targets, and strategies to achieve them.

### <Reference>

JFS Sustainability Indicator

<http://www.japanfs.org/en/view/index.html>

Sustainable Sweden 2020

<http://www.scb.se/statistik/MI/MI1103/2003M00/PrefaceIto52.pdf>

National Strategy for Sustainable Germany

[http://www.nachhaltigkeitsrat.de/service/download\\_e/pdf/Perspectives\\_for\\_Germany.pdf](http://www.nachhaltigkeitsrat.de/service/download_e/pdf/Perspectives_for_Germany.pdf)

## Today

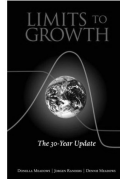
1. Country profile/Environmental Sustainability Indicators 20m
2. “Limits to Growth” – Overshoot 10m
3. Workshop – vision & indicators 60m  
✓Group work & discussion

# “Limits to Growth – The 30-Year Update”

## Some quotations

*“We worry that current policies will produce global overshoot and collapse through ineffective efforts to anticipate and cope with ecological limits.”*

*“Ecological overshoot seems to us to be a much more important concept in the 21<sup>st</sup> century than free trade But it is far behind in the fight for public attention and respect. This book is a new attempt to close that gap.”*



## Key points

1. **10 different pictures** of how the 21<sup>st</sup> century may evolve
2. Purpose is to **encourage learning, reflection, and personal choice.**
3. Report will be updated in 2012 – there will be abundant data to test the reality
4. “You have to form your own opinion about causes and consequences of growth in the human ecological foot print.”

## World 3 Model – looking at dynamic systems

- ✓ Sets of interconnected material and immaterial elements that change overtime
- ✓ Many elements of demography, economy, and the environment as one planetary system
  - Stocks and flows
  - feedback loops
  - sources & sinks
  - thresholds
  - Overshoot

=> See demo simulation soft “Stella”

## “Overshoot”

<daily examples>

hangover, driving on icy road, CFCs, stock market...

<Causes>

- Growth, acceleration, rapid change
- Limit, barrier
- Delay or mistake in the perceptions and the responses that strive to keep the systems within its limits

<Results>

- Crash of some kind
- Deliberate turnaround, correction, careful easing down

# World 3 Model - Lesson

• When do we start observing the effect of “overshoot”?

⇒ First decade of the 21<sup>st</sup> century will still be a period of growth.

⇒ It will take another decade before the consequences of overshoot are clearly observable and two decades before the overshoot is generally acknowledged.

# Workshop - Vision & Indicator

<Mission>

Let’s suppose the next World Summit on Sustainable Development will be held in 2007, and there each country is required to present its vision and indicators for 2050. We are just commissioned by Prime Minister to present a draft.

<Process>

- 5 persons \* 4 teams (Japan, China, Thai, Indonesia)
- Area: Energy (& global warming), food, waste, bio-diversity, resource-productivity, equity, satisfaction...
- Individual work (5 minutes) – Post It
- Group work (30 minutes) – Flip chart
- Presentation & Discussion (25 minutes)

# Workshop - Vision & Indicators

Presentation example

<Vision – Polestar>

CO2 emissions will be ...

Energy mix will be...



<Indicators>

Energy consumption per capita

% of nuclear energy for electricity



# Workshop - Vision & Indicators

<To start your thinking... >

1. Vision –

**In 2050, we want the situations concerning energy will be like this....**

When it comes to oil/nuclear energy, ...

When it comes to renewable energy, ...

The CO2 emissions level is where ...

One we achieve this vision, we will be able to ...

2. Indicator –

**We recommend YY as a indicator to measure our progress toward this vision.**

YY is...

It can tell us ....

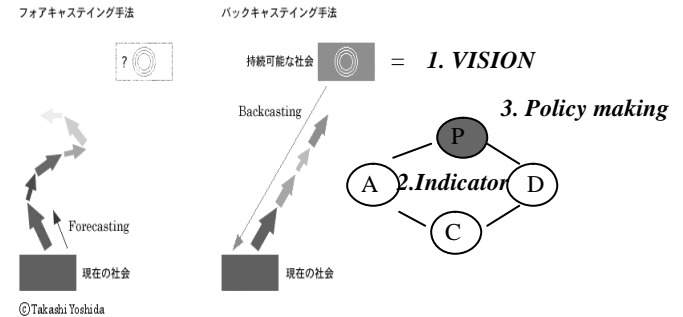
The reason why we think YY is better than ZZ is that....

Other possible indicators are...

## What is vision?

- Different from “forecast” / “prediction”
- “The Polestar”
- An ideal state
  - Where you want to go
- Guide us through the journey
- Inspire best brains

## Vision, Indicator, and Policy making



### Example:

#### The UK's “Headline Indicators”

INDICATOR	SINCE 1970	SINCE 1990	ANNUAL TREND	UPDATED
H1 Economic output	⊙	⊙	Improved	2000
H2 Investment	⊙	⊙		2000
H3 Employment	⊙	⊙		2004
H4 Poverty	⊙	⊙		2004
H5 Education	⊙	⊙	Improved	2000
H6 Health	⊙	⊙	No new data	1999
H7 Housing	⊙	⊙	No new data	1999
H8 Crime - Violent	⊙	⊙	Deteriorated	2000/2001
Violence, burglary	⊙	⊙	Improved	2000/2001
H9 Climate change	⊙	⊙	Improved	2000
H10 Air quality	⊙	⊙	Improved	2000
H11 Road traffic	⊙	⊙		2000
H12 River water quality	⊙	⊙	Improved	1999
H13 Wildlife (Farmland birds)	⊙	⊙	No new data	1999
H14 Land use	⊙	⊙	Deteriorated	2000
H15 Waste	⊙	⊙	No new data	2001/06

## Keys for ISD (Indicators for Sustainable Development)

- **Systemic**
  - sources, sinks, change rates, thresholds, feedback ...
- **Integrated**
  - environmental, economic, social, individual
- **Long-term**
  - minimum one generation

by Alan Atkisson

## ISD: DIFFERENT AT DIFFERENT SCALES

**Global:** CO2, Population, Food Production

**National:** GDP, HDI, ESI, Employment

**Regional:** Baltic Sea Fisheries & Industries

**Local:** Transit, Energy Use, Health Stats

**Neighborhood:** # of Abandoned Buildings

by Alan Atkisson

## Standards for assessment of progress for sustainable development

### The “Bellagio Principles”

<http://www.iisd.org/pdf/bellagio.pdf>

#### 1. Guiding Vision and Goals

(clarity about sustainability)

#### 6. Openness

(transparent methods and sources)

#### 2. Holistic Perspective

(systems and subsystems)

#### 7. Effective Communication

(simple, and audience focused)

#### 3. Essential Elements

(ecology, economics, social equity)

#### 8. Broad Participation

(diversity, completeness, link to policy)

#### 4. Adequate Scope

(temporal and spatial)

#### 9. Ongoing Assessment

(iterative, adaptive, learning-focused)

#### 5. Practical Focus

(clear standards, manageable tools)

#### 10. Institutional Capacity

(support, maintenance, development)

## What have we achieved?

- My Goal:
  - “What is Sustainability?”
  - Grasp a big picture / explain it in your own terms.

=> Explain it in your own terms to the person next to you.

## Report

<Mission>

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1. What is sustainability? Define it with your terms
2. Choose one area: Energy (& global warming), food, waste, bio-diversity, resource-productivity, equity, satisfaction...
3. Describe the vision for 2050 and your strategy to realize it.

<Reference>

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## Lessons from World3

- ✓ Change the “structure”
  - Change feedback structure/information links in the system
  - Change the content and timeliness of the data that actors in the system have to work with
  - Change the ideas, goals, incentives, costs, and feedbacks that motivates or constrain behavior
  - In time, system with a new information structure is likely to change its social and physical structures.
  - It may develop new laws, organizations, technologies, people with new skills, machines and buildings.
  - Such a transformation need not be directed centrally; it can be unplanned, natural, evolutionary, exciting, joyful.