

What shall be presented?

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Why do we want to visualize?

- ❖ To understand the data
- ❖ To make better decisions for the future
- ❖ Change old ways of thinking
- ❖ To engage, to provoke
- ❖ To give a full picture
- ❖ To show what is the most important factor
(Example: time – for progress towards sustainability.
Time is an embedded dimension in sust. dev.)



What is the philosophical approach or mind-set when using indicators?

- ❖ If you can measure it, you can manage it!
- ❖ What gets measured, gets managed....
- ❖ And what gets measured, gets funded (!)
(Nancy MacPherson)



What is an indicator?

- ❖ No clear definition – and we have not discussed this here.
- ❖ Indicator vs. Data?
- ❖ In a general sense, an indicator is a sign.
- ❖ Definition:
A measure that summarizes information relevant to a particular phenomenon, or a reasonable proxy for such a measure.

(McQueen & Noak, 1998)



Functions of Indicators

- ❖ To assess conditions and trends
- ❖ To compare across places and situations
- ❖ To assess conditions and trends in relation to goals and targets
- ❖ To provide early warning information
- ❖ To anticipate future conditions and trends

(Gallopín, 1997)



An indicator is only as good as the data we've got

- ❖ All the fancy pictures and presentations cannot make up for poor data quality!
- ❖ Missing data skews the rankings.
(Kaia Oras)
- ❖ By visualizing we have still not gotten away from GIGO (Garbage in, Garbage out)



Indicators are political, involve processes

- ❖ Message (what):
What are we trying to communicate?
- ❖ Audience (who):
For whom are we making these indicators?
- ❖ Purpose (why):
For what purpose do we expect them to be used? For understanding or for action?



3 types of users:

- ❖ Tourist
See the sights
- ❖ Harvester
Reap the fruits of our statistical labors using ready-made tables and graphics
- ❖ Miner
Digs deep into the data



Dichotomy... problem that has no easy solution where there are 2 options

- ❖ Summarizing all information into a single graphic is not always possible but yet there is too much information so there needs to be some way to get an overview.

(Heinz Rütter)



- ❖ What is the main message or idea that you are trying to communicate?
- ❖ Can I see the forest for the trees?



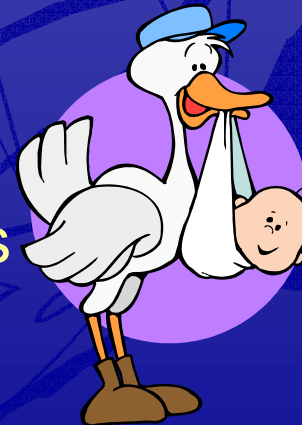
To aggregate or not to aggregate? That is the question...

- ❖ Profiles
 - ❖ List of indicators
 - ❖ Mixed signals
 - ❖ Disaggregated information
 - ❖ Expects the reader/user to put it together by herself
 - ❖ Not user friendly
- vs.
- ❖ Indexes (aggregates)
 - ❖ Weighting, scaling, vectors, aggregation issues
 - ❖ Only controversial among data experts (Alan Atkisson, Nancy MacPherson)
 - ❖ Users want something they can use!
- Example: Egg of Wellbeing, Country scorecards, Dashboards

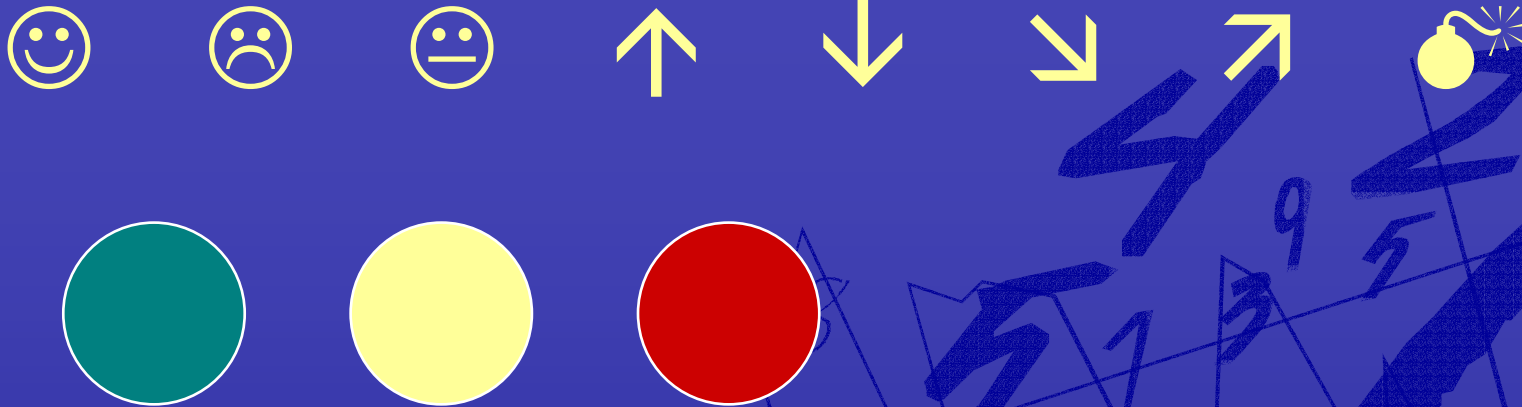


Inter-linkages or spurious correlations?

- ❖ Putting 2 variables together on a graph does not mean there is causality!
- ❖ Correlation but not necessarily causality
- ❖ Pressure – State – Response
Useful as a taxonomy but it does not imply causality.
- ❖ Switzerland:
Stork population and fertility rates



Value-laden symbols



- ❖ Ultimately all indicators are used normatively since they are selected to influence policy and decision making.
- ❖ “It gets very political very quickly.” (N. MacPherson)

Who gives meaning to the indicators?

❖ Ministries, consultants, NGOs

- ◆ Have a specific perspective and message that they want to communicate
- ◆ Present the message first!
(Rolf Hichert)

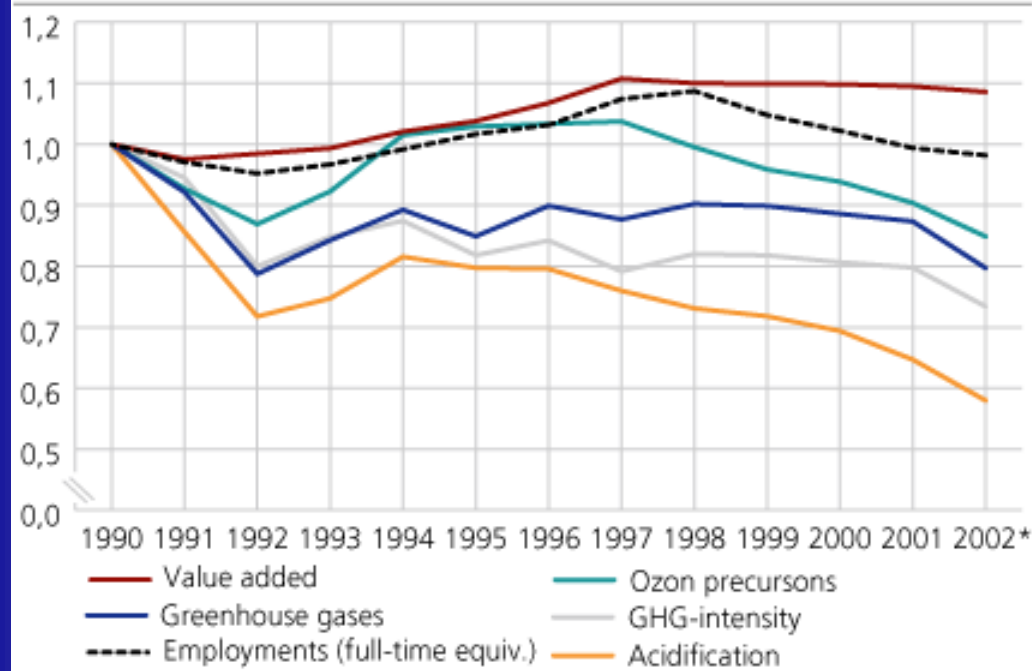
❖ National statistical institutes

- ◆ Need to be neutral, unbiased
- ◆ Can have mixed messages
Good for environment, bad for industry, devastating for local communities
- ◆ Lies, damn lies and statistics (NL graph game)



Norwegian example

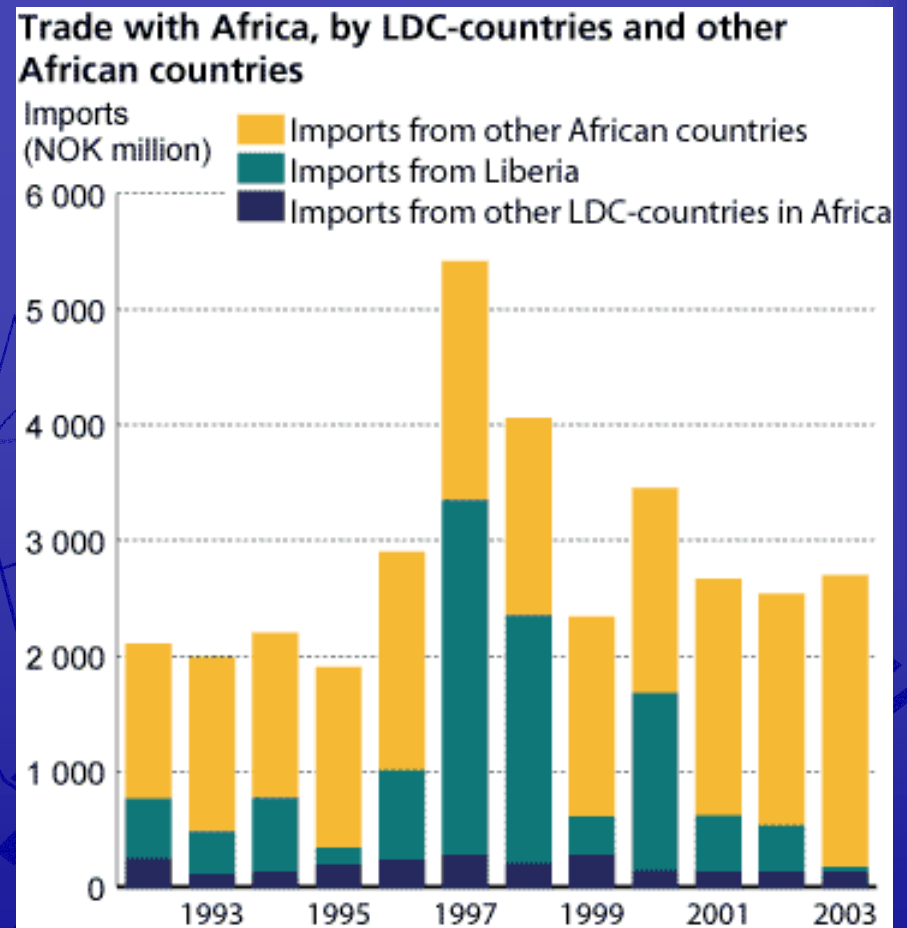
Economic, air emissions and GHG-intensity trends for manufacturing industries. 1990-2002*. (index: 1990=1)



- ❖ If the picture shows an increasing or decreasing trend... what does it mean?
- ❖ Who gives the interpretation or meaning to the indicators?

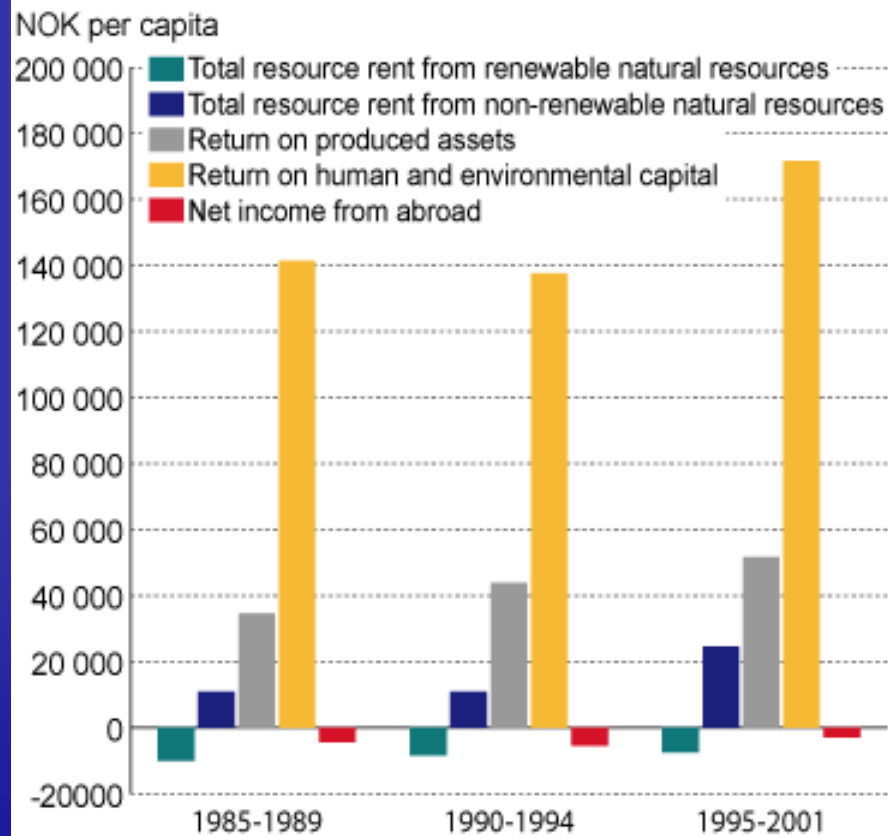
Does the indicator give clear signals

- ❖ Easy to interpret?
- ❖ Does it have a clear meaning?
- ❖ Is something going on that influences the trend? or is the main cause of variation?

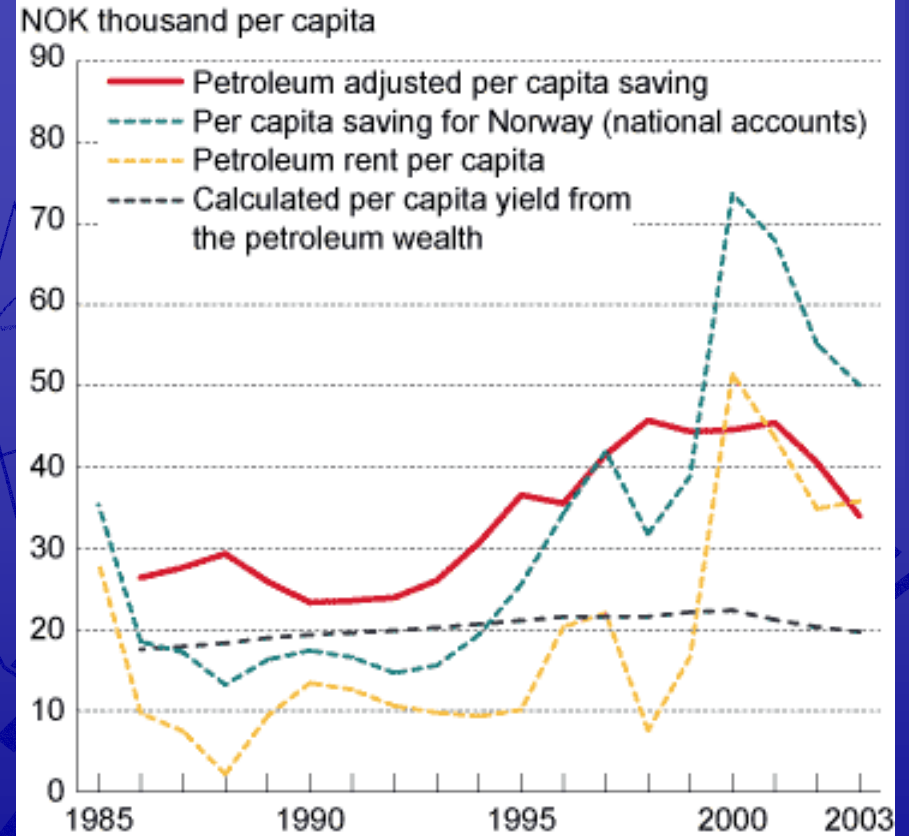


Norwegian examples: Clear signals?

Net national income per capita, by sources of income



Petroleum adjusted saving

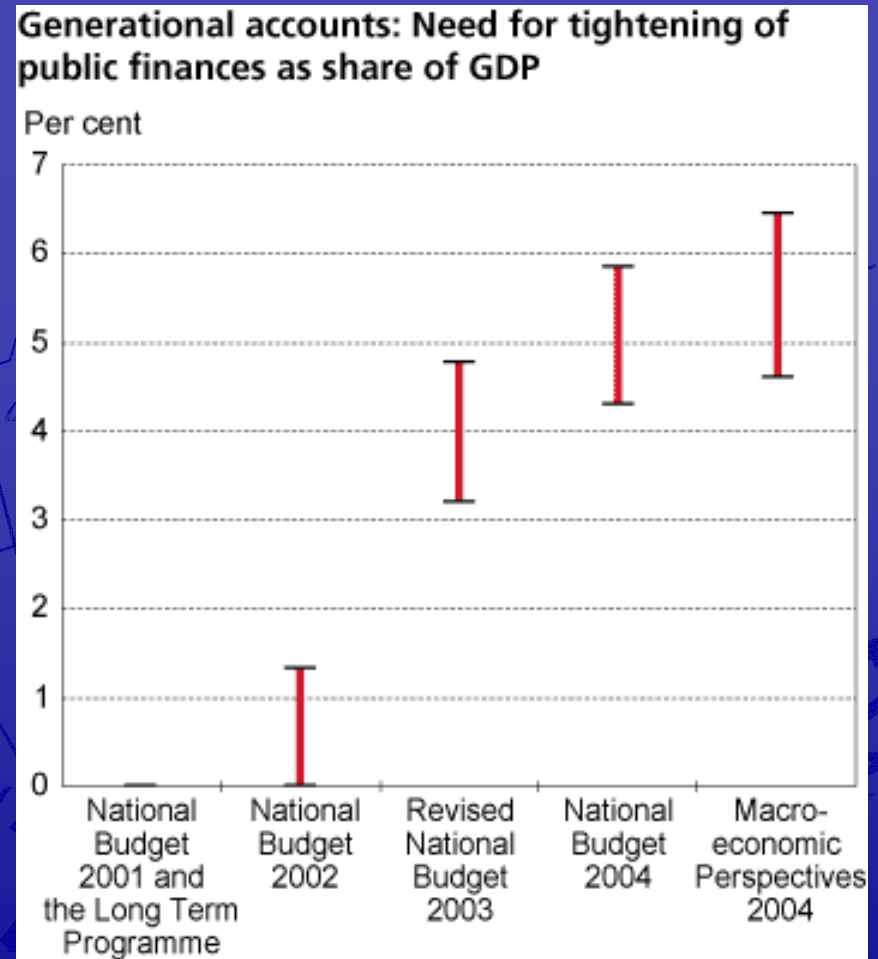


KISS!

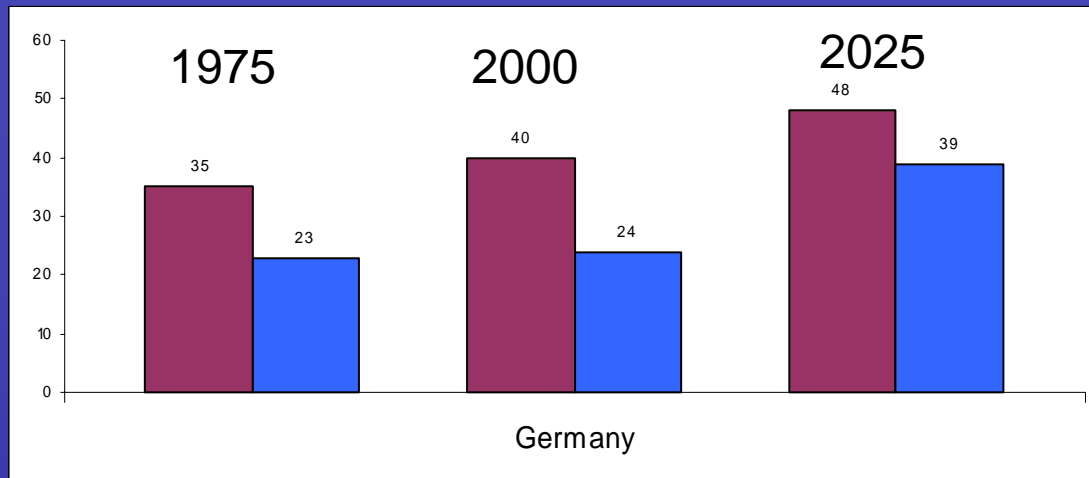


K.I.S.S. = Keep it simple, stupid!

- ❖ Norwegian example
- ❖ Generational accounts:
Need for tightening of
public finances as share
of GDP
- ❖ What is really the core,
important issue here?

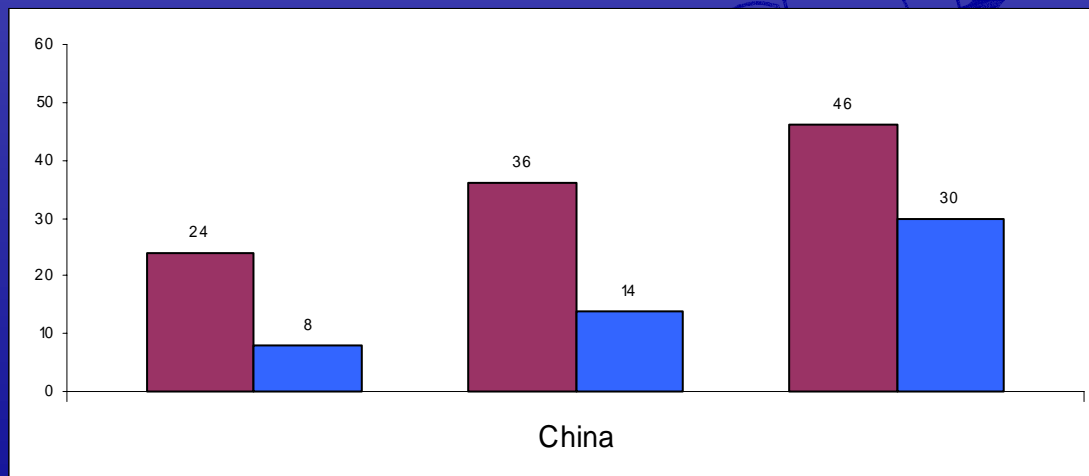


Aging workers will support more retirees



Median age

Retirees per
100 workers



Remember...

Indicators are only as good as the data we have (GIGO)

Indicators are part of a political process – development, use, meaning and interpretation

KISS! Keep it simple, stupid....

Clear meaning, easy interpretation

