

Using ecological footprint to illustrate the inadequacy of eco-efficiency as a strategy for achieving a sustainable development: the Norwegian case

Dr. Carlo Aall and Idun A. Husabø

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WESTERN NORWAY RESEARCH INSTITUTE
VESTLANDSFORSKING
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In short

- Eco-efficiency in production is not sufficient for achieving sustainable development
- Why? Rising consumption is eliminating the bonus of eco-efficiency in production
- To show this, we compared the environmental impact of Norwegian consumption and production
- Method applied: (an adapted form of) ecological footprinting and standard environmental indicators to measure environmental impacts from consumption and production respectively

Background

- A government-commissioned project for the Ministry of Children and Equality and the Ministry of the Environment (2007)
- The ministries wished to question a recommendation by the *Commission on Low Emissions*:

“A radical shift in the Norwegian way of life in a more climate-friendly direction could deliver major reductions in future GHG emissions. The commission has, nevertheless, chosen **not** to recommend such a strategy, because, among other things, we believe it would be **politically impossible** to put into effect”.

(Norwegian Official Report 2006:5)

Background (cont.)

“Showing consideration for the environment and climate should also have consequences for consumption. So far, the environmental aspect of consumption has not been subject to debate in Norway, and policy measures have mainly targeted production. Now it is time to focus on consumption too”. (Press release from the ministries, March 2008)

- In 2008, various ministries discussed a “Commission on Low Consumption”. The outcome was negative.
- Why? Fear of the right-wing populist Progress Party in upcoming elections

Research Questions

- **RQ 1:** How has the environmental impact of production and consumption in Norway developed in the period 1987-2007?
- **RQ 2:** How could Norway's environmental policy be reshaped in light of the answer to research question 1?

Definitions

- **Norwegian production:**

- All production that takes place in Norway
 - ...and Norwegian shipping abroad

- **Norwegian consumption:**

- All consumption by Norwegians taking place in Norway
 - ...and consumption by Norwegian tourists abroad

Calculation methods

- **Consumption**
 - 6 calculation steps
 - 1 indicator: ecological footprint (related to the global bioproducing area)
 - Data sources: biannual national survey of consumer expenditure, National Travel Survey, import and export statistics
 - **Production**
 - 8 indicators
 - Data sources: the National Accounts Matrix including Environmental Accounts (NAMEA)
- **Comparison of change (in index) over the time period in question**

Results

- A reduction in the environmental pressure from production in Norway has been outweighed by an increase in consumption
- Indexes of the environmental impact of Norwegian production and consumption
 - Figure 1: environmental impact intensity
 - Figure 2: total environmental impact

Environmental impact intensity

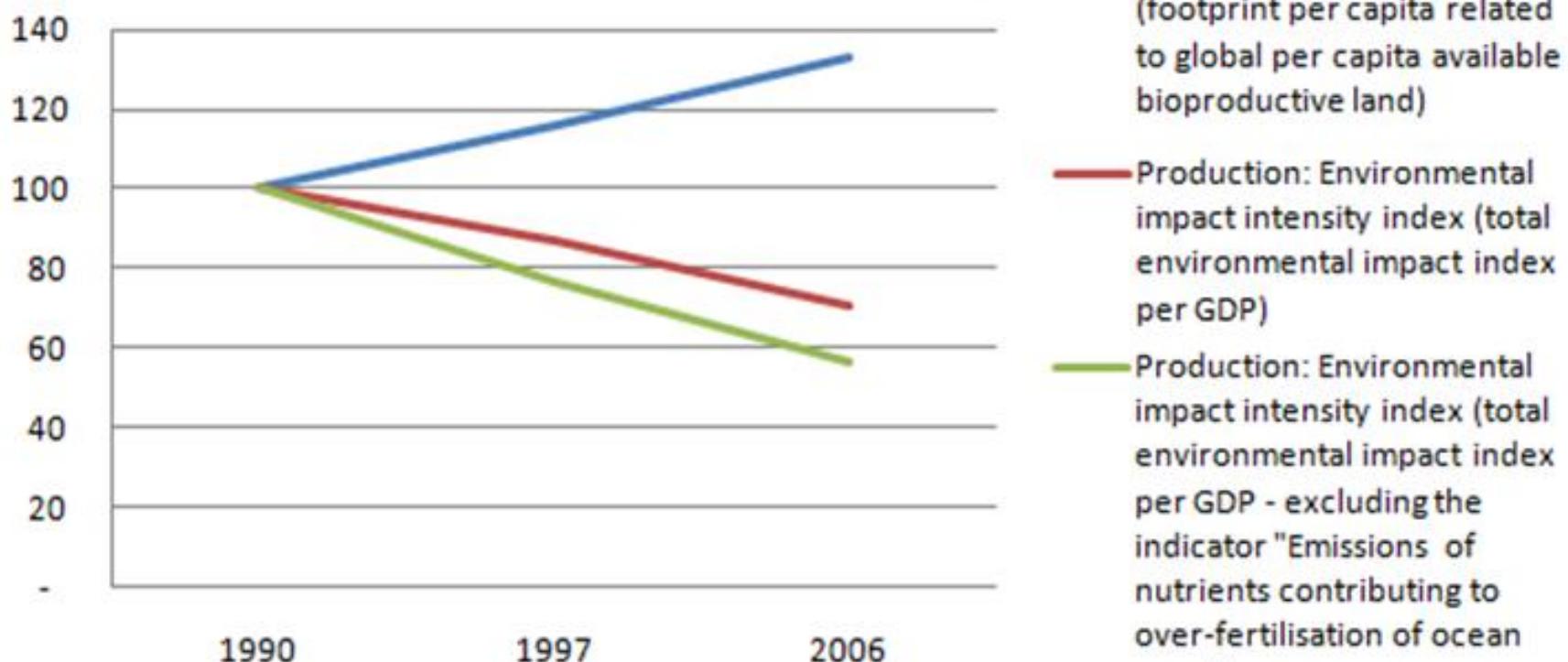


Figure 1: Environmental impact intensity of Norwegian production and consumption 1990-2006

Total environmental impact

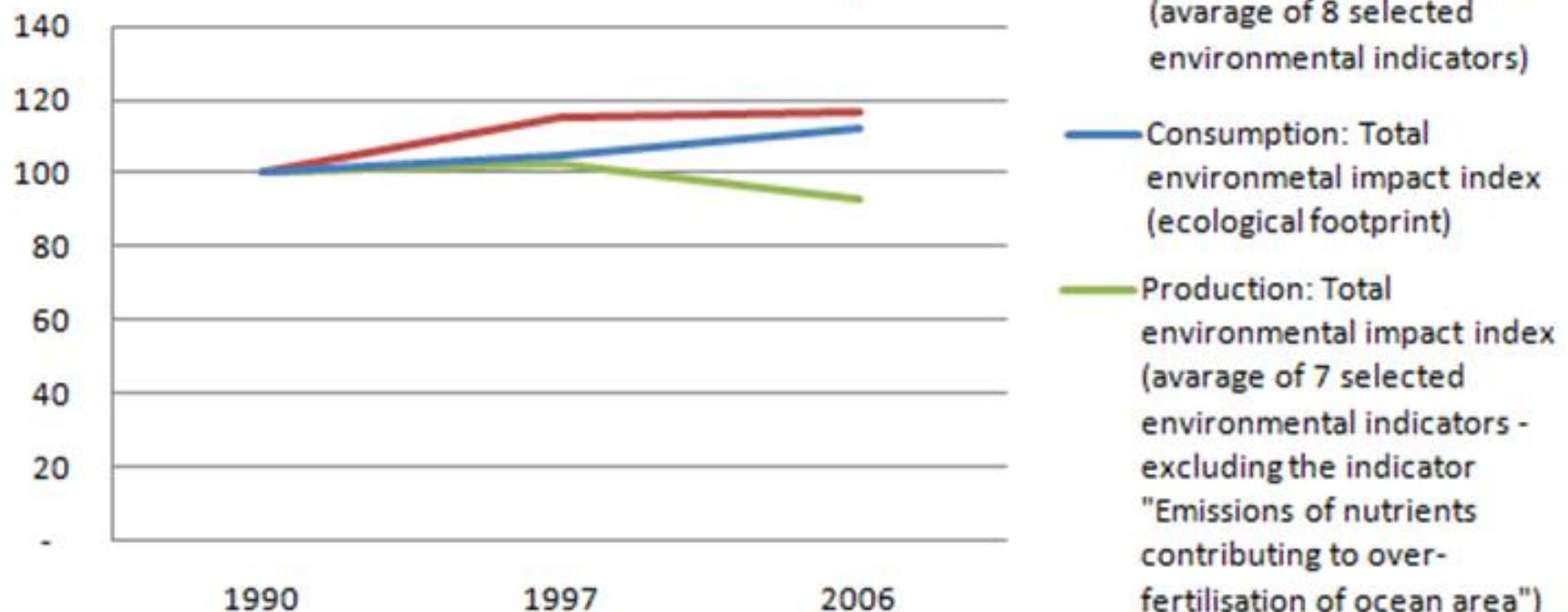


Figure 1: Total environmental impact of Norwegian production and consumption 1990-2006

The big picture

- Reduced environmental pressure from production, and **increased environmental pressure from consumption**
- A situation typical of countries like Norway – even more clear in countries where deindustrialisation has come further

2 drivers and 1 barrier

- **Mobility increase**
 - The volume of transport must be reduced
- **“Size matters”**
- **Limits to eco-efficiency**

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A consumption-oriented environmental policy

- **The environmental impact of consumption should also be monitored, e.g. by calculating the ecological footprint**
 - turned down by Ministry of Finance - method weaknesses
- **It is important to develop a stronger consumption focus in environmental policy**
 - prioritise categories with the largest footprint (volume) and the most negative development (change)

Lack of political will?



Photo: Ministry of Labour

“By 2050 we must achieve zero-emissions – and I believe we must recognise that it is foolhardy to expect society to cut off the very limb on which they stand.

We will not be able to convince society to stop consuming”.

Hanne Bjurstrøm, Minister of Labour and Norway’s chief negotiator under the United Nations climate change negotiations

Report:

Hille, J., Storm, H.N., Aall, C., Sataøen, H.L. (2008):
*Environmental pressure from Norwegian consumption
and production 1987-2007*, VF-report 2/08, Sogndal,
Vestlandsforskning (in Norwegian with English summary)

Contact details:

Idun A. Husabø - iah@vestforsk.no

Dr. Carlo Aall - caa@vestforsk.no