

Sustainability in the agrofood sector

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How to Determine Sustainability?

- Introduction, what is it?
- Methodology, how to determine it?
- Results
- Conclusions

Sustainability

- ‘...Meeting the needs of the presents without endanger the needs of future generations...’
- Social Corporate Responsibility (SCR)
- Sustainability has 3 dimensions
 - Environment, planet
 - Social, people
 - Economic, profit

LEI/AKK Sustainability Checklist

- Checklist designed to judge project proposal for the Agro Chain Knowledge (AKK) program “Sustainable Food Chains”
- Awareness

LEI/AKK Sustainability Checklist

- Attention for 3 P
- Focus on food and agricultural chains
- Indicators
- Scope at companies

Example of the Checklist (1)

Category	Aspect	Explanation	Effect on chain			
			+	0	-	?
Energy	Energy saving	Less energy use				
	Sustainable energy	Use of sustainable energy instead of fossil energy				
Water	Reduction water use	Less water use				
	Quality surface water	Reduction emissions of compounds to surface water (lakes, rivers, etc)				
	Water-table	Prevent lowering water-table				

Indicators for Sustainability

- A major selection criteria for sustainability aspects; can it be determined?
- Important issue: availability of data

Some indicators for sustainability

- Planet (LCA-themes)
 - Energy use
 - Toxic emissions
 - Waste
- Profit
 - Financial results
 - Investments
 - Certification
- People
 - Education
 - Local communities
 - Human rights

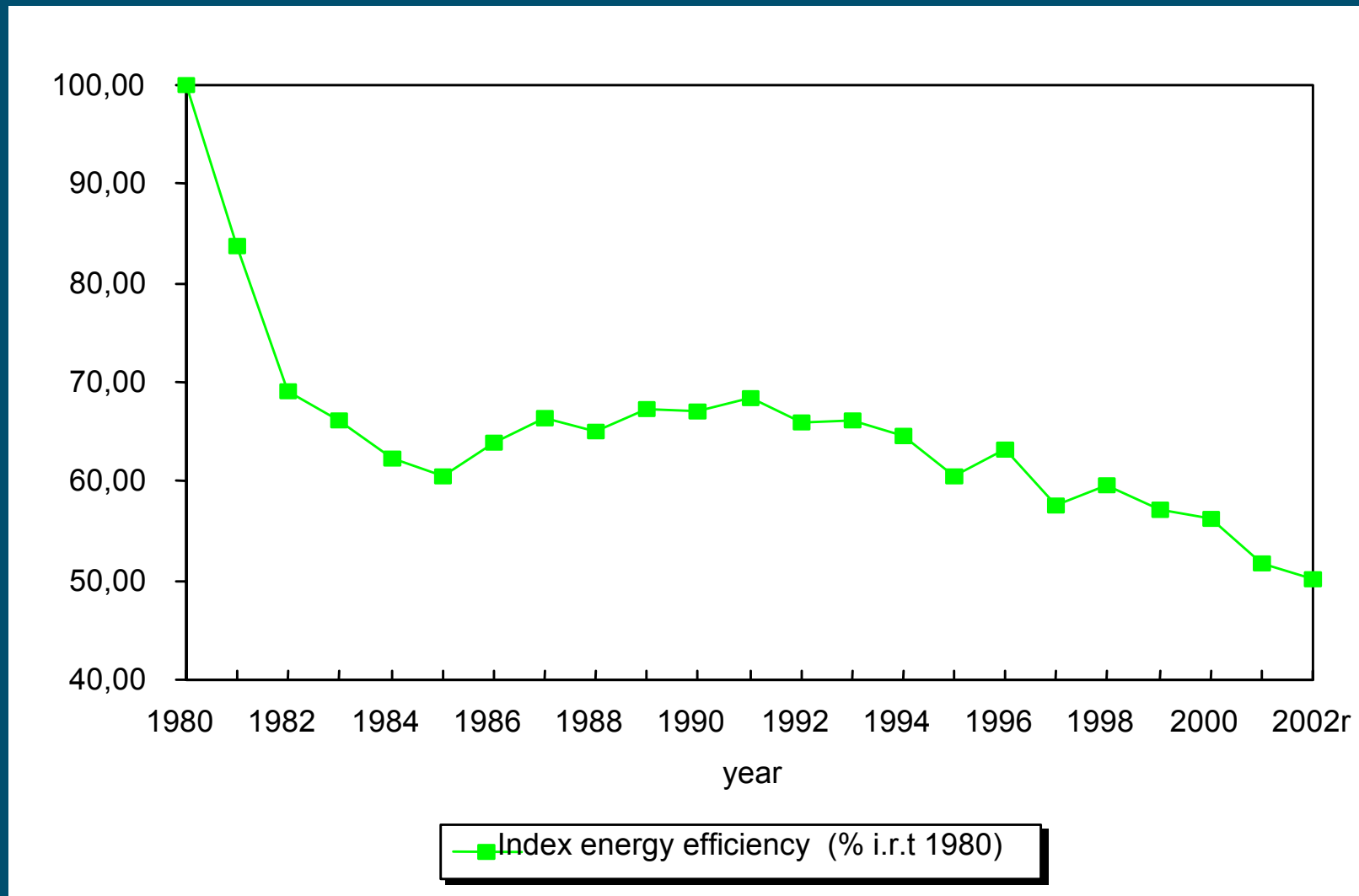
Application

- Social and environmental annual report of the Dutch horticultural sector

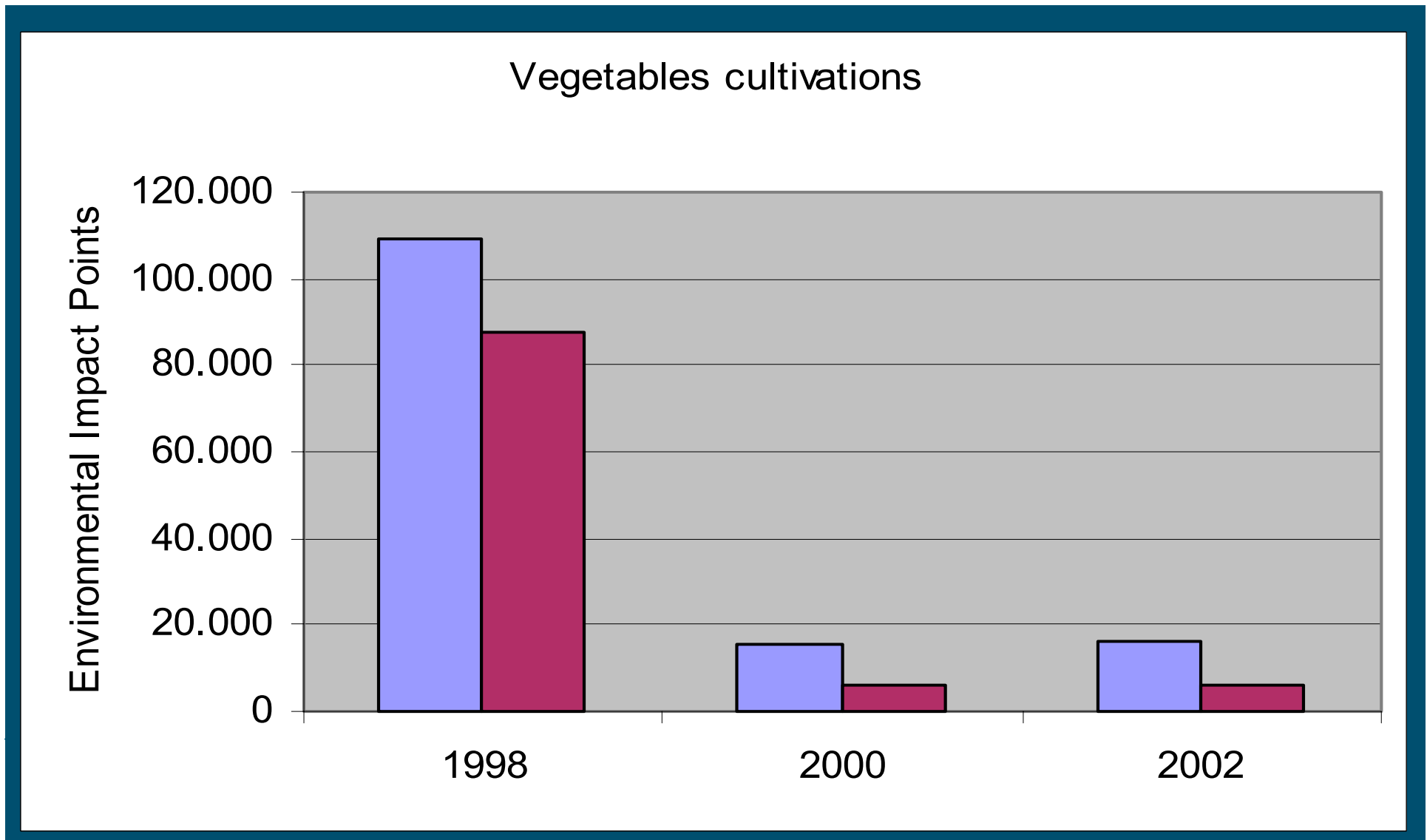
Social and environmental annual report, 2002

- Dutch greenhouse horticultural sector
- Environmental sustainability
 - Energy
 - Pesticides
 - Minerals
 - Waste
- Social sustainability
 - Number of employees
 - Labour circumstances
 - Education

Environment: horticultural energy use



Environmental impact pesticides use



Social: Education

	Vegetables	Flowers
Basic education	12	9
Lower secondary education	66	41
Higher secondary education	18	47
High school/university	4	3

Social: absence through illness

	1998	1999	2000	2001	2002
Netherlands	5,0	5,4	5,5	5,5	n.a
Agriculture	3,8	3,9	4,2	4,5	4,0
Greenhouse horticulture	n.b	3,7	3,9	4,2	3,6

Availability of Data, Chain Information Systems

- Information related to product
 - Environmental issues
 - Food safety
 - Economic issues

Combination with other data systems

- Linking with the Farm Accountancy Data Network (FADN)
 - Economic data (financial results, investments)
 - Environmental data (energy, pesticides, fertilizers)
 - Less ‘social data’
 - Good basis for determination of sustainability
 - Economic
 - Environmental
 - Use of LCA impact assesement

Chain information system, Groeinet

- Information system for mainly plant production
- Registration of:
 - Pesticide use
 - Fertilizer use
 - Energy use (glasshouse)
 - Yield

Microsoft Internet Explorer window: **Gt.net - Groeinet Informatiesystemen B.V. - Microsoft Internet Explorer**

Header: **Hoofdmenu** | **ORACLE** | **GroeINET INFORMATIESYSTEMEN**

Content: **Hoofdmenu van DEMO KPA 2002**

Invoeren	Overzichten
Gewasbescherming per teelt	KPA-GewasBedrijf(teler)
Gewasbescherming per bespuiting	
Kunstmest per teelt	
Blends per teelt	
Organische per teelt	
Kunstmest&organische mest per bemesting	
Bedrijfsgegevens	
Algemene teeltgegevens	
Zaaien, poten, planten	
Berekening	
Grondonderzoek	
N-onderzoek	

Afsluiten

Groeninet and sustainability

- Mainly environmental information
- Less information to determine social and economic sustainability
- For determination environmental impact: use of LCA impact assessment is necessary

Conclusions

- Sustainability:
 - 3P approach, increasing attentions social dimension
 - Possibilities for linkage with chain information systems:
 - Possibilities for environment: LCA
 - Assessing social sustainability requires additional research

Aim: sustainability in agrofood chains

- Indicators for sustainability
- Necessary information