

SIK Sustainable Food Productions & Ecoinvent

-LCA practise at SIK

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SIK, The Swedish Institute
for Food and Biotechnology,
Sustainable Food Productions

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I. SIK sustainable Food Productions

II. Reflections about SIK database

demands (**adaptations, documentation, LCIA**)

III. Reflections about SIK existing datasets

- **The missing FISH, Refrigerated transports**



Me. Consultant (Transports) / Ind. PhD student (Seafood LCA). (20/80%)

**“An industrial research institute
with the task of reinforcing client
company competitiveness”**

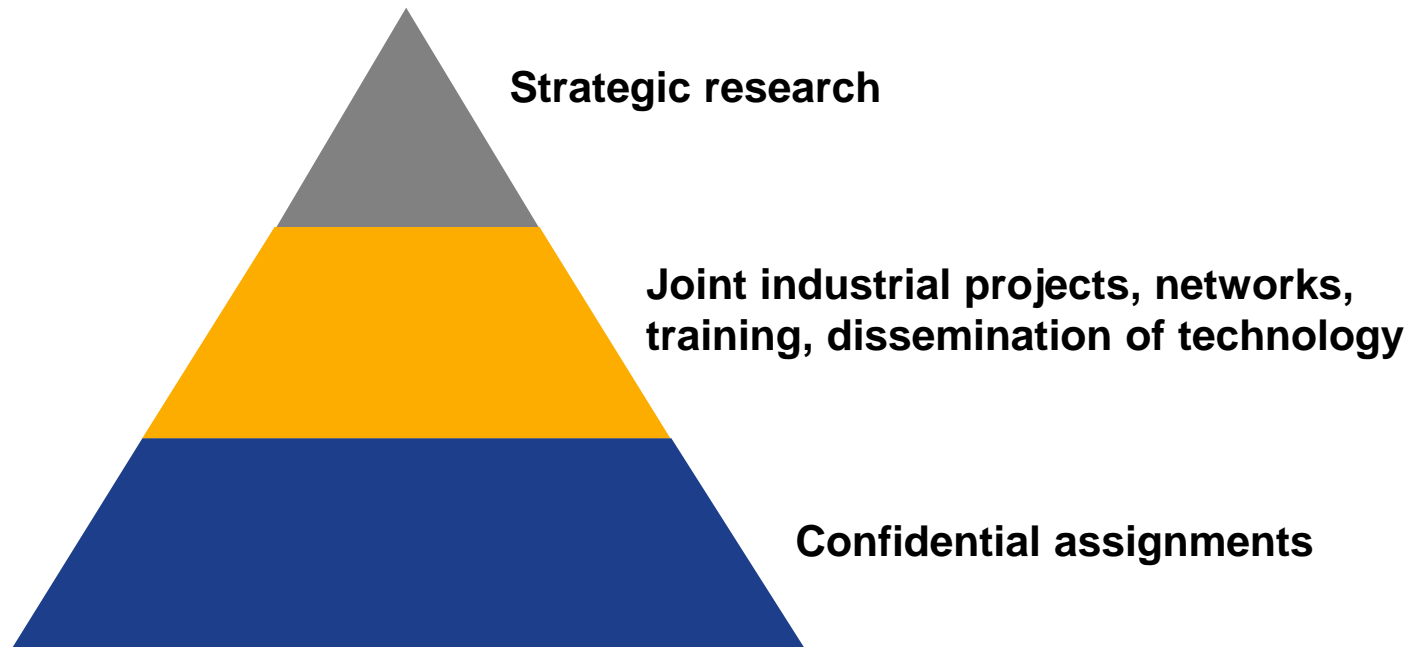


Founded 1946
100 scientist/consultants
SP-group



THE SWEDISH INSTITUTE FOR FOOD AND BIOTECHNOLOGY

Our different ways of working



~50 % research (national and international incl EU funding),
50 % consultancy (national and international funding)

Sustainable Food Productions

ingår i SP-koncernen 

LCA focus since 1993, today 25 persons working with LCA research and consultancy activities.

5 PhD theses since 1998

Arranged two international conferences on "LCA in Foods" (2001 and 2007)

~60 peer reviewed articles since 1998

Fastest expanding unit at SIK .
RECRUITING LCA Scientists PhD
Degree + post. Grad. Stud.



Adaptation "Sweden = Switzerland"

- Cut off Catch 22: The barge tanker - fishingboat
- Roadtransports based on Ecoinvent LC + NTM key input flows
- Robust well documented models to modify! (not local extrapolations without transparency)
- VALIDATION, VERIFICATION



Productform mär i SP-koncernen 
Palletweight 
functionalunits / emissions

Infrastructure

Leakage of coolants
(GWP aprx. 4000)

Weight of Goods

Combustion for
propulsion

Combustion for
cooling

Transport packaging

Diesel life cycle

Productform

Documentation - Transparency

- 1. Revised extensive backgrounddatabase** (Pdf's).
Complementary datasets.
Webplattform?
- 2. Key figures** (in software), loadfactors,
recycling rates, critical assumptions

SIK Food Database

SIK FOOD DATABASE
Aprox 300 unique models

Default: Open Access:
background reports www.sik.se

Exportable? Internal cost
of exporting...

Generalizable datasets

Feed database

Swedish vegetables

Swedish meat production

European Commercial Fisheries

Wasted Potential Yield 2010



Cod	Haddock	Herring	Sole
42.9	2.4	0.7	1.0
7.1	1.1	0.3	0.5
2.5	0.2	0.3	0.2
1.3	0.1	0.2	0.2
0.7	0.0	0.2	0.1
0.4	0.0	0.0	0.0
0.3	0.0	0.0	
		-0.1	

Average	7.9	0.6	0.2	0.3
SD	15.6	0.9	0.2	0.4

kg WPY lost per kg landed

European LCA Fishdatabase?

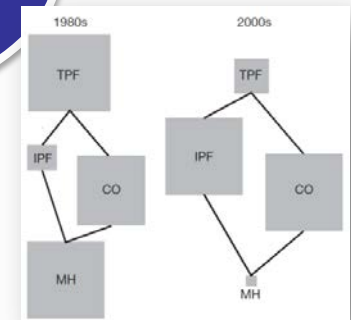
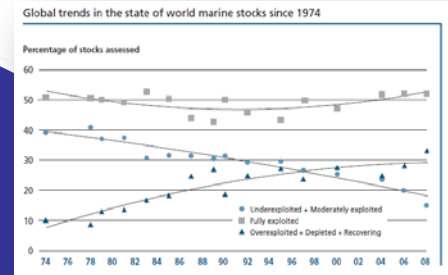


Fuel (EU national gear/size specific)

Stock Assessment (stock specific)

Bycatch (FAO gear specific)

Species specific life traits (Fishbase)



Take home message:

Adaptation

Transperancy

Routines for sharing data

New impact categories

*“Essentially, all ~~models~~
databases are wrong, but some
are useful”*

George E. P. Box, Empirical Model-Building and Response Surfaces (1987)