



ECOREG

International Workshop on LCI-Quality 2003
Karlsruhe 20. - 21.10. 2003

USE OF LCI DATA IN THE CONSTRUCTION OF ECOLOGICAL INDICATORS FOR REGIONS

Sirkka Koskela, Jyri Seppälä, Matti Melanen and Marja-Riitta Hiltunen
Finnish Environment Institute

e-mail:sirkka.koskela@ymparisto.fi

<http://www.ymparisto.fi/eng/research/euproj/ecoreg/ecoreg.htm>



S Y K E

CONTENTS OF THE PRESENTATION

- aims of the ECOREG project
- regional metabolism
- assessing ecological indicators
- LCI data in the regional environmental analysis
- data quality issues

ECOREG PROJECT

“The Eco-efficiency of regions – case Kymenlaakso”

- started in the autumn 2002, finished in the end of 2004

Main aims of the project:

- to demonstrate the concept of eco-efficiency and its practical implementation at the regional level by using the Finnish Kymenlaakso region as a case study
- to define economic, ecological and social & cultural indicators for assessing the development of regional eco-efficiency in general and especially in Kymenlaakso



Regional metabolism

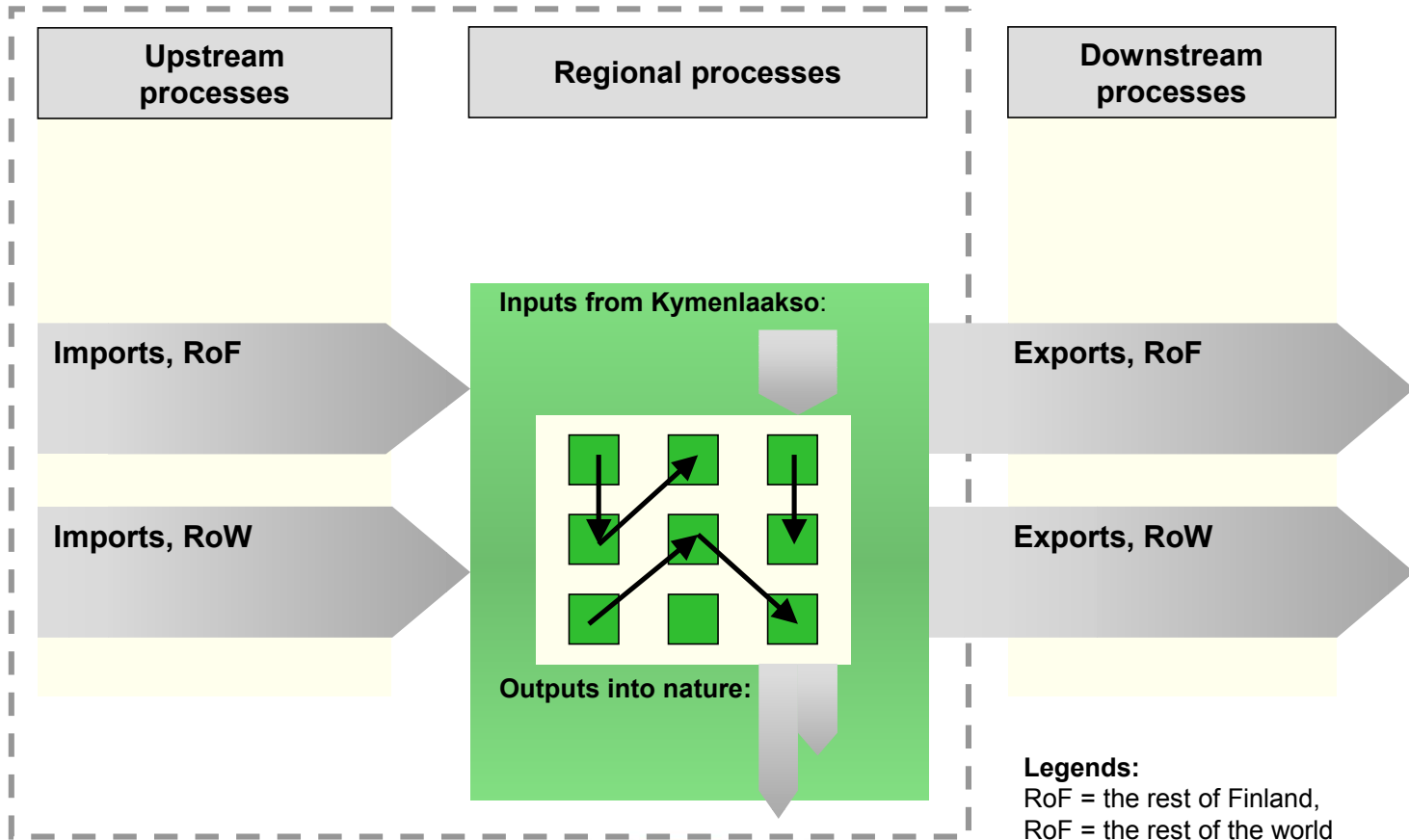


Figure: Matti Melanen & Tuuli Myllymaa

29.10.2003

Regional metabolism

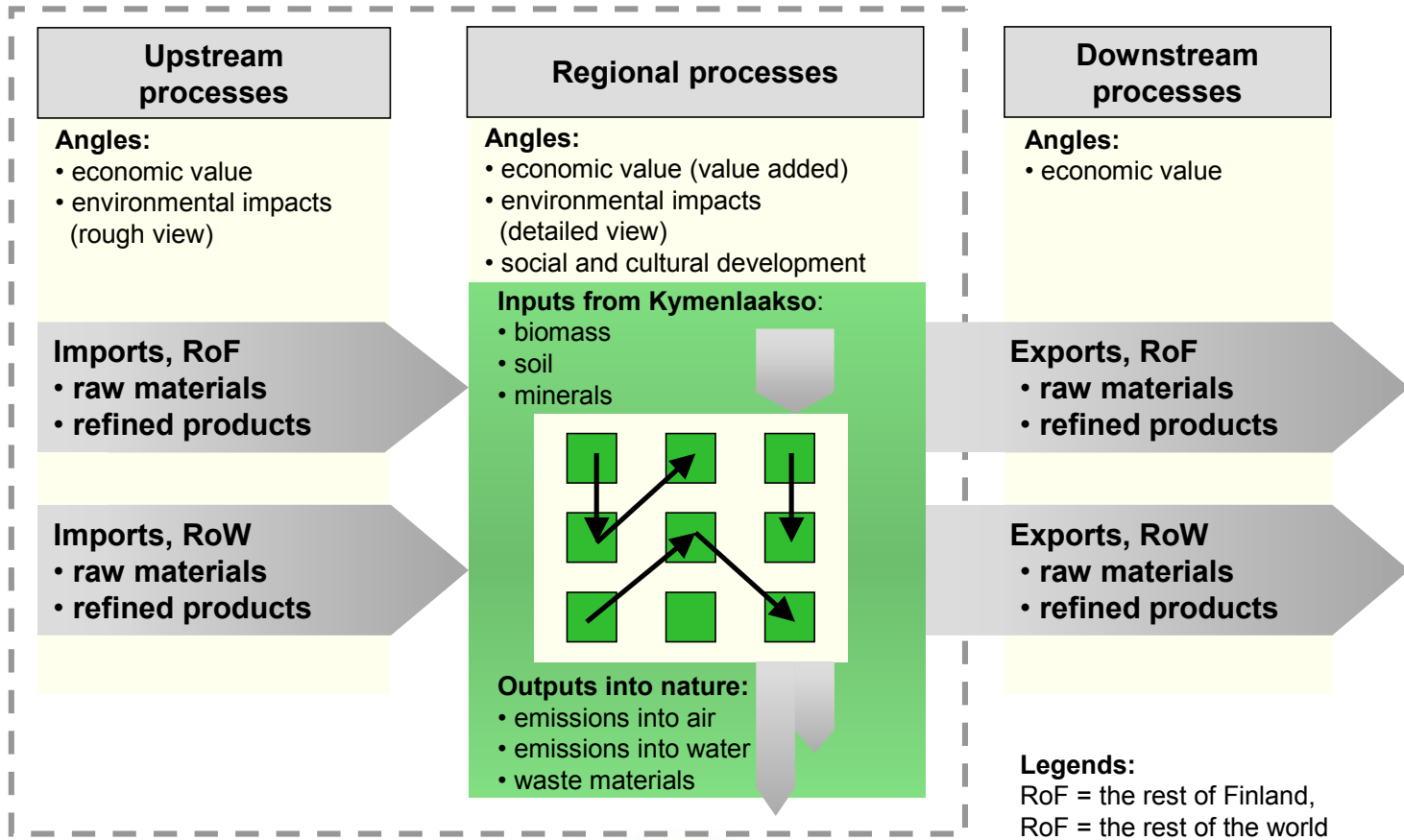
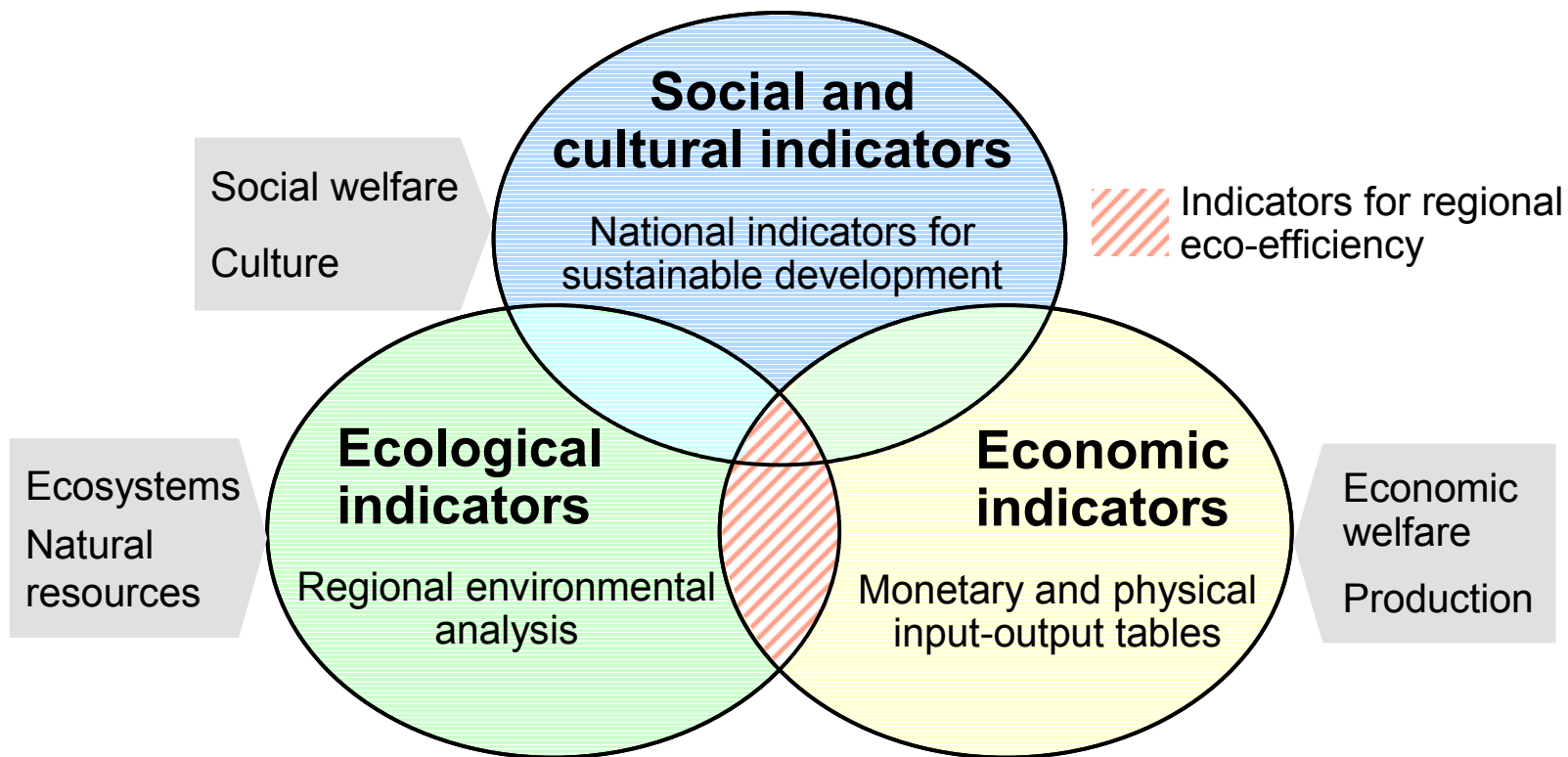


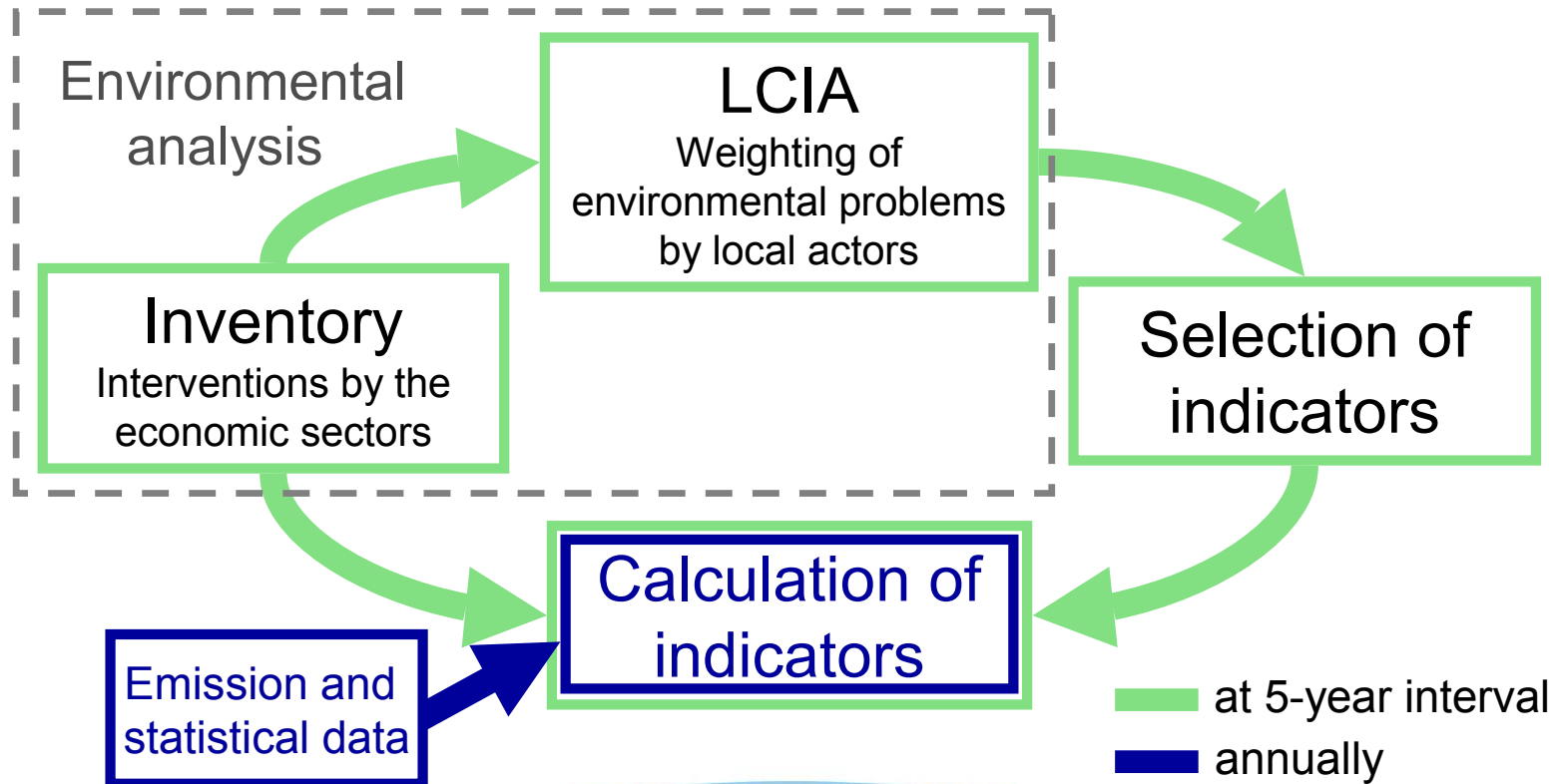
Figure: Matti Melanen & Tuuli Myllymaa

29.10.2003

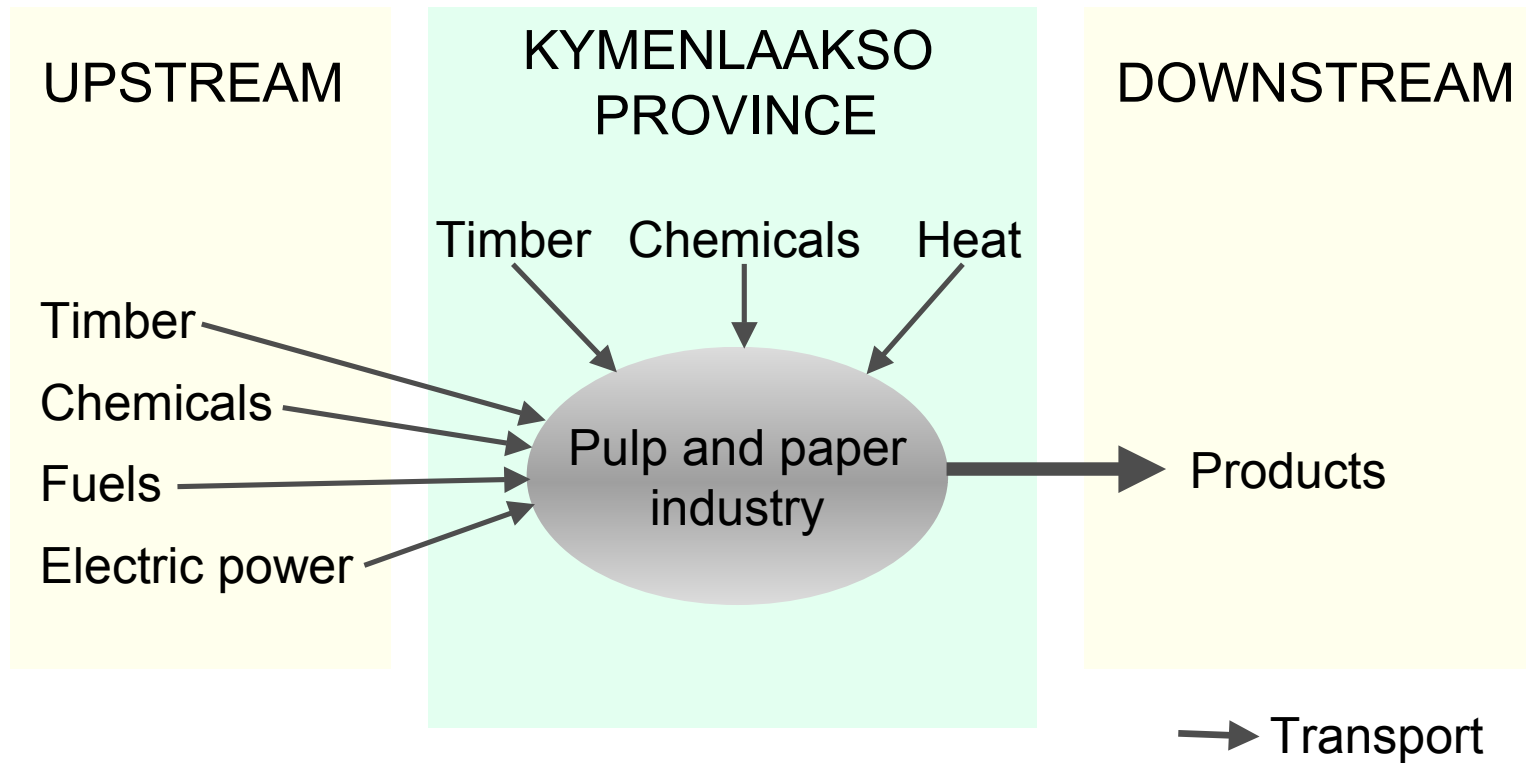
MEASURING INDICATORS FOR REGIONAL ECO-EFFICIENCY



ECOLOGICAL INDICATORS FOR REGIONS



AN EXAMPLE OF A PRODUCT CHAIN



LCI DATA IN THE ENVIRONMENTAL ANALYSIS

Regional processes

- data gathered per the **total annual production volume** of each economic sector: e.g., agriculture, forestry, industry, transportation, communities
- public statistics and databases maintained by environmental authorities
- site-specific and generic data

LCI DATA IN THE ENVIRONMENTAL ANALYSIS

Upstream processes

- Import: main products, raw materials or natural resources pertaining to economic sectors
- generic LCI data, diverse LCI databases
- Finnish average electricity model

DATA QUALITY ISSUES IN THE REGIONAL INVENTORY

- the data quality of the conventional emissions from point sources is good
- estimations of the emissions from diffuse sources, toxic pollutants and land use interventions include large uncertainties
- all regional LCI results will be verifiable and reproducible
- documentation will be transparent, updating the regional inventory will be possible

ISSUES TO BE STUDIED IN THE FUTURE

- available international databases
- data quality assessment

Thank you for your attention !

