

Welcome to webinar & workshop: Requirements and expectations for making products' environmental footprints visible

How are Swedish companies affected by the EU's development
of the environmental footprints?

30 March, 9.00-11.00



Why we are here

Aims to create engagement in the project
Environmental Footprint in Sweden

Latest
development of
PEF

Current
situation of PEF
implementation

Focus areas for
deep dive
discussions

Networking and
learn from each
other

Agenda

- **Welcome and introduction** Sara Palander, Swedish Life Cycle Center
- **Overview of the Product Environmental Footprint (PEF) method** Karin Sanne, IVL
- **Ongoing development of the PEF method** Elin Eriksson, IVL
- **The EU PEF process, its actual and potential use** Björn Spak, Swedish EPA
- **Current situation of the PEF implementation** survey
- **About the project Environmental Footprint in Sweden** Sara Palander
- **Presentations of case studies**
 - **Steel product** Jonas Larsson, SSAB
 - **Paper product** Carina Larsson, Stora Enso
- **Group discussions**
- **Sum up and ways forward**

Who we are

The project management team:



Björn Spak
Swedish EPA



Karin Sanne
IVL



Katarina Lorentzon
RISE



Sara Palander
Swedish Life Cycle Center



*We aim for credible
& applied life cycle
thinking globally!*

CHALMERS

essity

ivl
SVENSKA
MILJÖINSTITUTET



Boverket

Jordbruks
verket
Swedish Board
of Agriculture

Konsument
verket • KO

TRAFIKVERKET

NATUR
VÄRDS
VERKET

Nouryon

RI
SE

SCANIA

NATUR
VÄRDS
VERKET

Swedish
Energy Agency

SGI
Statens
geotekniska
institut

Upphandlings
myndigheten

SKF

SLU

SWECO

VATTENFALL

Tillväxtanalys
Myndigheten för tillväxtpolitiska
utvärderingar och analyser

VOLVO



A partner driven center



Who you are



Good knowledge
in PEF!

House rules!

- Keep your microphone muted!
- Time for questions – use the chat function!
- If you have problems with the audio? – dial in!
- If you can't see the presentations, available for download (lifecyclecenter.se/calendar)
- This event is recorded!
- Your opinions and lessons are important!

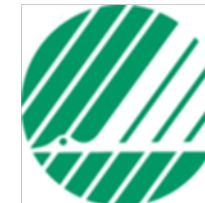
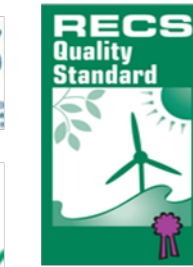
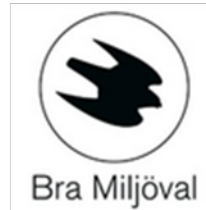
Overview of the Product Environmental Footprint (PEF) method – What is PEF?

Karin Sanne, IVL Swedish
Environmental Research Institute



DUBOKEUR

EPD



What is PEF and why did the EU Commission started PEF?

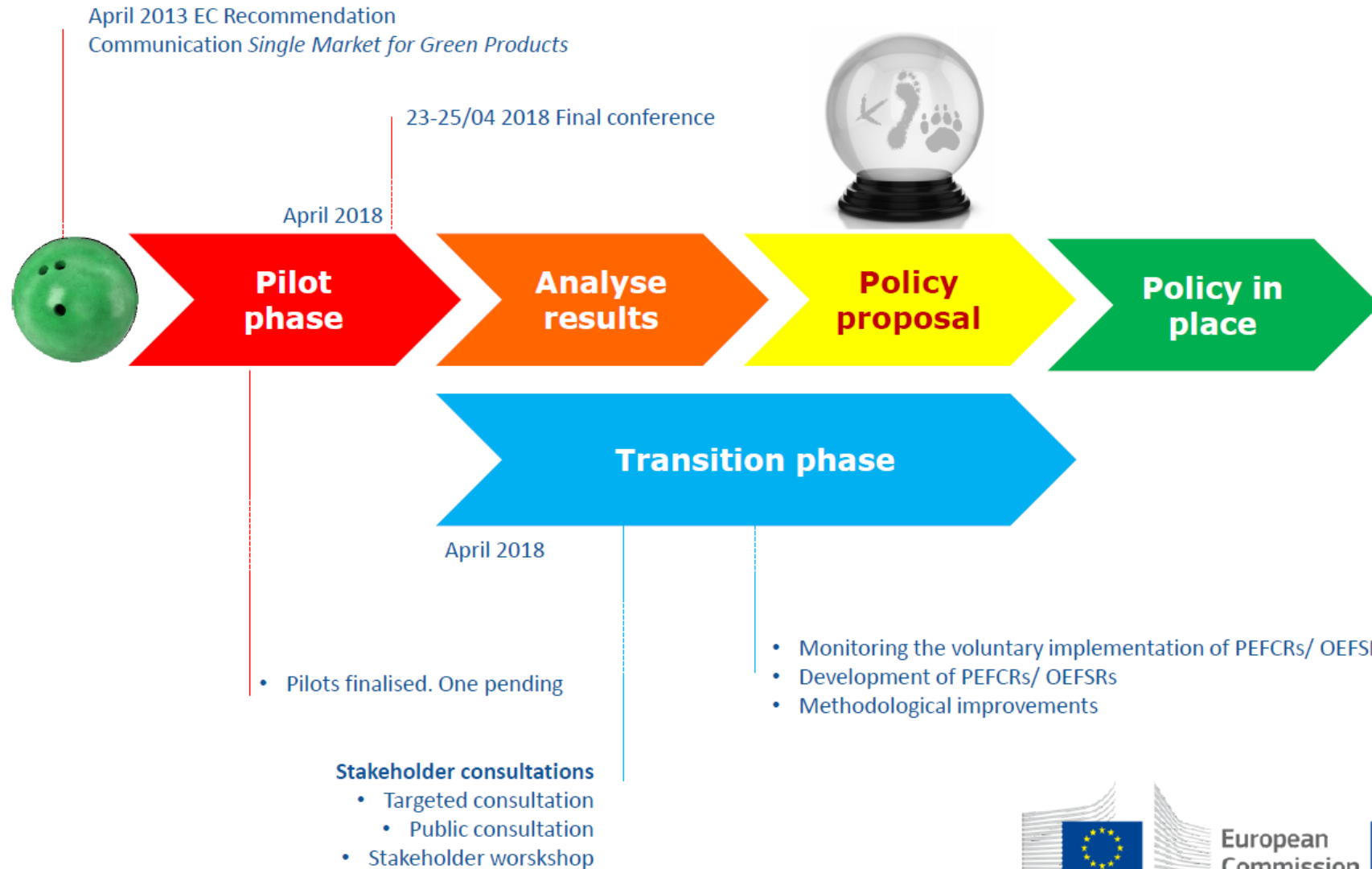
- Part of the European Commission's initiative "Single Market for Green Products", which aims to facilitate better information on the environmental performance of products and organizations.
- Create a common methodology for assessing, presenting and comparing environmental performance based on comprehensive environmental impact assessment in a life cycle perspective (environmental footprint)
- There are too many different eco-labels today and existing systems are not sufficient for policy development etc.

Single Market for Green products:

"The general objective of the EU action in this area is to contribute to improving the availability of clear, reliable and comparable information on the environmental performance of products and organisations to all relevant stakeholders, including to players along the entire supply chain."













http://ec.europa.eu/environment/eussd/smgp/policy_footprint.htm

Overview of activities



EF Pilots

Finalised in April 2018

-  Batteries and accumulators
-  Decorative paints
-  IT equipment
-  Leather
-  Thermal insulation
-  Beer
-  Dairy products
-  Feed
-  Pet food
-  Pasta
-  Wine
-  Packed water

Finalised OEFSRs



Retail sector



Copper sector

Finalised in November 2018



Hot & cold water pipe systems



Liquid household detergents



Metal sheets



Photovoltaic electricity generation



Intermediate paper products



T-shirts

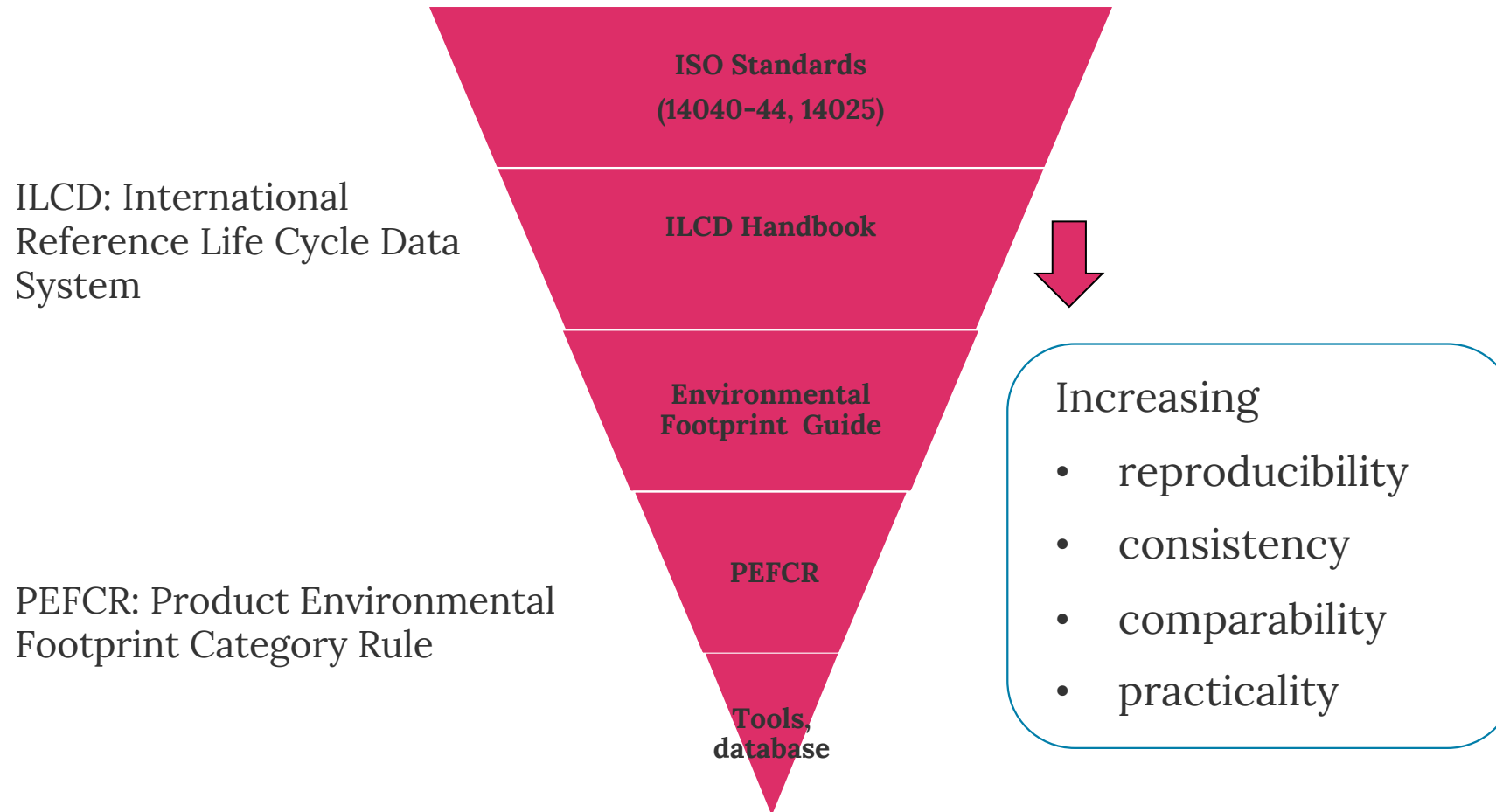


Uninterrupted power supplies



Olive oil (pending)

PEF – based on LCA standards but with more specific requirements



PEF – What has really been developed?



- Increased knowledge about LCA and details in LCA methodology in many sectors.
- A lot of communication within and between sectors.

PEF vs Environmental Product Declaration EPD

	PEF	EPD
History	Initiated ~2013 Now in transition phase	Start ~1998 Now fully operational and globally recognised
Application	Primarily: Policy making Other uses are being discussed	Primarily: Business-to-business communication but also e.g. public procurement, ecodesign
Independently verified	Yes	Yes
Rules	PEF guide, PEFCRs	ISO 14025, GPI, PCRs
Generic datasets	Specific datasets, to be used only for PEF	Any data that fulfils the data quality rules
Benchmarking	Yes, ranking is part of the PEF	No, ranking is <i>not</i> part of the EPD

PEF and EPD

- Three Similarities

1. Purpose
2. Comparability
3. Product perspective and several product groups

=

- Three differences

1. Underlying framework
2. Communication format
3. Technical details in methods

≠

Focus of this project

- Increase knowledge about PEF
- Influence and impact development of PEF
- Learnings from 2 case studies where different PEF methodology aspects are tested

Ongoing development of the PEF method

Elin Eriksson, IVL Swedish
Environmental Research Institute

Working groups and example of activities

Data working group

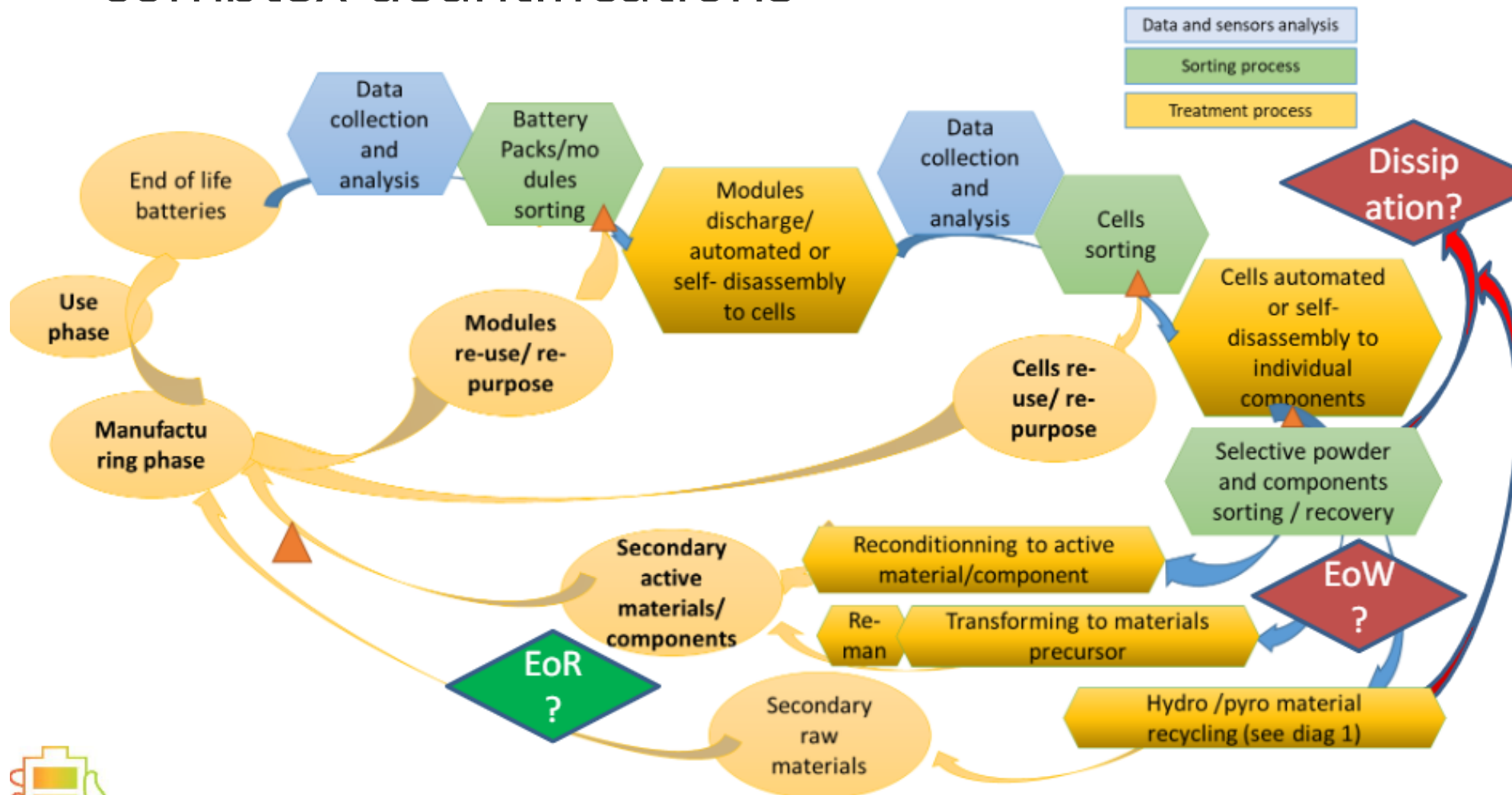
- EF reference package released
- Minimum requirements of software to be “EF ready”
- Agree on data quality review procedure (ongoing)
- Further developed and improved information exchange, upgrades etc

Agricultural working group

- Pesticide modeling
- Fertilizer modeling
- Models for Methane and Nitrogen flows
- Water modeling
- Biodiversity

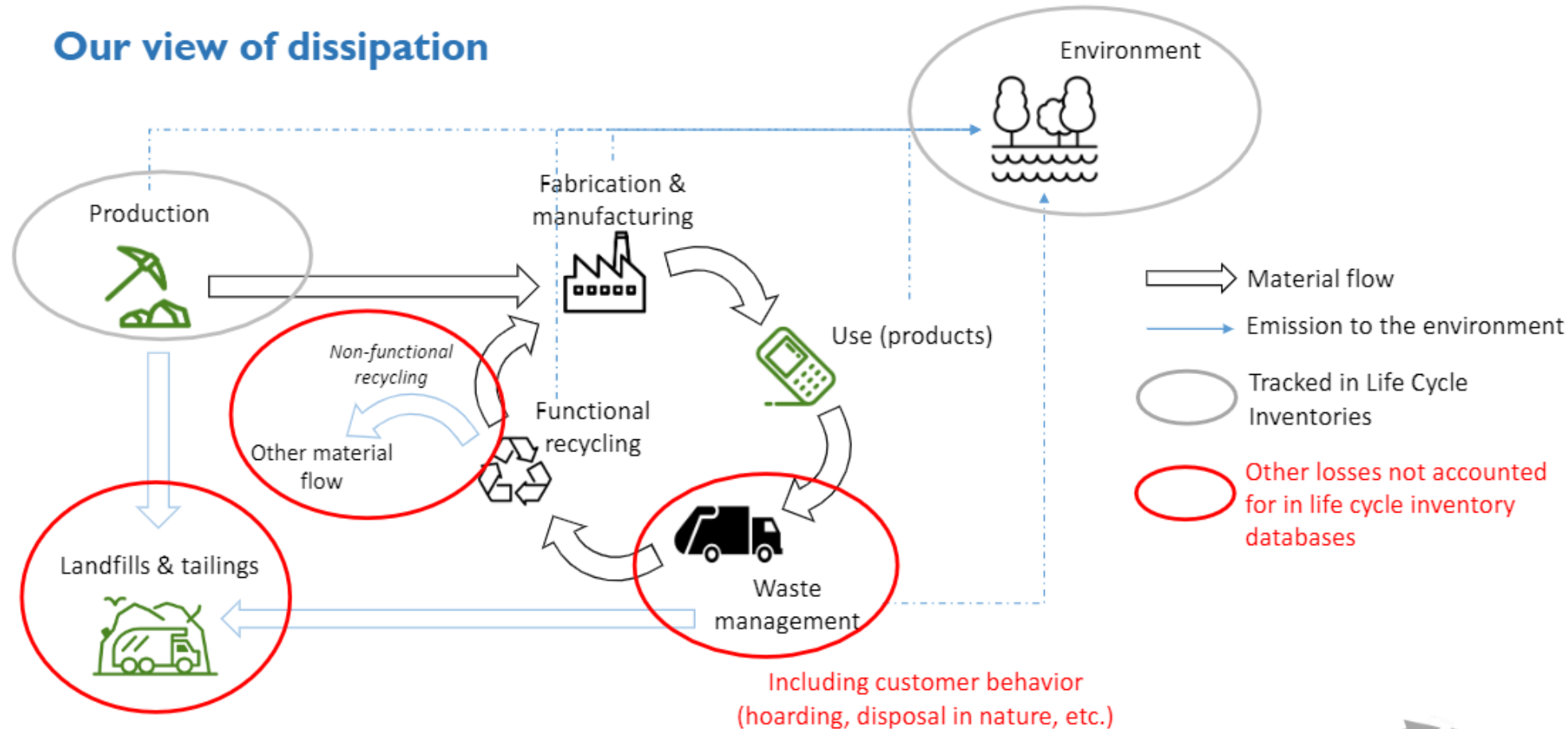
Resource depletion methodology

Example Battery recycling – complex systems and complex quantifications



Example on method to quantify dissipation at all relevant stages

Our view of dissipation



Pilots being developed

- Apparel and footwear
- Cut flowers and potted plants
- Flexible packaging
- Marine Fish
- Synthetic Turf



Developments/decisions still needed

- Circular footprint formula
 - Fair? Science based? Compatible with ISO standards?
- Critical review process?
- Administration of the PEFCRs?
- Administration of PEF in long term/"programme owners"?
- Relation to EPDs?
- The role of the EU Commission?
- Communication to consumer, benchmark

The EU PEF process: its' actual and potential use

Björn Spak, Swedish Environmental Protection Agency

PEF in EU CEAP

- As part of the EU Green Deal, the Circular Economy Action Plan was released 2020-03-11
- The CEAP mentions EF-methodology for
 - Design of **sustainable products**
 - Review of the Ecodesign Directive
 - Empowering the consumers
 - **Green claims**
- The CEAP mentions new legislation for batteries
 - Sustainability and transparency requirements for batteries
 - The proposed Battery regulation stipulates EF rules for mandatory carbon footprint calculations and limits

Progress of green claims and sustainable products initiatives

- Green claims
 - Public consultation 2020-08-27 to 2020-12-03
 - Legislative proposal Q2 2021
- Sustainable Products Initiative
 - Public consultation (2021-03-17 to 2021-06-09)
 - Legislative proposal Q4 2021
- Next meeting in IPP/SCP-RE in late May

Progress Battery regulation

- The proposed Battery regulation
 - Proposed 2020-12-10 to entry in force 2022-01-01
 - If negotiations finished by 2021-10
 - Delegated act for carbon footprint reporting 2023-07-01
 - Carbon footprint reporting in force 2024-07-01
 - Delegated act for performance classes 2024-12-31
 - Performance classes in force 2026-01-01
 - Delegated act for maximum levels 2026-07-01
 - Maximum levels in force 2027-07-01

Reference to EF in Battery regulation

6. Carbon footprint impact assessment

The carbon footprint of the battery shall be calculated using the “climate change” life cycle impact assessment method recommended in the 2019 Joint Research Centre (JRC) report available at https://eplca.jrc.ec.europa.eu/permalink/PEF_method.pdf.

The results shall be provided as characterised results (without normalisation and weighting). The list of characterization factors to be used is available at <https://eplca.jrc.ec.europa.eu/EnvironmentalFootprint.html>.

[COM\(2020\)798/F1 – EN \(annex\) \(europa.eu\)](#)

Reference to EF in GPP criteria

- EU GPP Criteria for:
 - Office Building Design, Construction and Management (2016)
 - Road Design, Construction and Maintenance (2016)

The critical review will be carried out with reference to ISO 14044, section 6, and the following sections of the European Commission's Product Environmental Footprint (PEF) Recommendation (2013/179/EU):

- Critical review (section 9, p-68)
- Data collection checklist (Annex III)
- Data quality requirements (section 5.6, p-36)
- Interpretation of results (section 7, p-61).

Ecodesign

- The Methodology for Ecodesign of Energy-related Products (MEErP) is an important part in current work under the Ecodesign directive
- The EcoReport tool is part of the MEErP.
- Revision of the EcoReport tool
 - “Relevance of the development of the **Product Environmental Footprint** method to the MEErP and the EcoReport tool for assessing life cycle impacts”
- First stakeholder meeting anticipated for June 2021

Identify the current situation of the PEF implementation

Survey (link in chat)



Time to stretch your body!

1 minute

A large yellow circle containing the text "Project within Swedish Life Cycle Center".

Project within
Swedish Life
Cycle Center

About the project Environmental Footprint in Sweden

Sara Palander, Swedish Life Cycle
Center

**Follow, understand
and influence the
PEF methodology**



Results

- Larger Swedish resource and competence base with increased knowledge about PEF
- Greater influence and impact on the development of PEF and its application
- Learnings from testing different PEF methodology aspects
- Increased visibility of PEF and a higher Swedish engagement in PEF activities

Volvo Cars, Nouryon, SKF, Vattenfall, Essity,
Jernkontoret, Swedish Forest industries,
Ericsson, IVL, RISE, Swedish EPA, Swedish
Energy Agency, Swedish Transport
Administration

Engagement

Project management and group of experts

Environmental footprint expert group

Swedish TAB representatives

Case studies

Competence development node

Communication & information activities

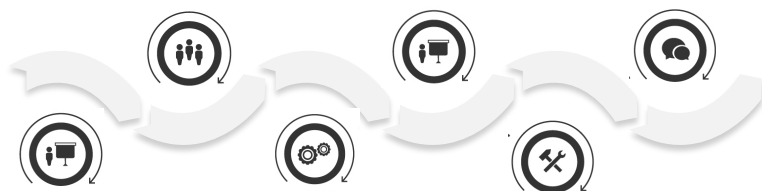
Related projects/results

TAB: Björn Spak, S EPA
Elin Eriksson, IVL
Gustav Sandin, EPD
International
Kristian Jelse, Greendesk
Sara Palander, Swedish
Life Cycle Center

SSAB (steel product)
Stora Enso Paper
(paper product)

INCEN
ICON
Mistra digital forest
etc.

Time plan



Feb-Mar:
Start up case
studies

30 Mar:
Webinar & workshop –
Identify current
situation & important
methodological
discussions

Mar-Apr:
Information
material

Jun: Results from
case studies

4 May:
EF Expert group
meeting (Swedish
Life Cycle Center)

2 x webinar &
workshops on
methodological
issues

XX
Public
webinar/seminar
– Results from
case studies etc.

...
EF Expert group
meeting (Swedish
Life Cycle Center)

10 Feb:
TAB meeting

23 Mar:
TAB meeting

19/20 May: TAB
meeting

...
TAB meetings

Project information

Time period: 2020-11-01 – 2021-12-31

Project budget: 1 MSEK

Funding agency: Vinnova, Sweden's innovation agency

Project management team: Björn Spak, S EPA, Karin Sanne, IVL, Katarina Lorentzon, RISE and Sara Palander, Swedish Life Cycle Center

Project group: Torun Hammar, RISE, Johan Nilsson, IVL, Elin Eriksson, IVL, Miguel Brandao, KTH, Gregory Peters, Chalmers

Webpage: <https://www.lifecyclecenter.se/projects/environmental-footprint-in-sweden-increased-competence-and-communication/>



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VINNOVA
Sweden's Innovation Agency

Presentation of case study on a steel product

Jonas Larsson, SSAB

Johan Nilsson, Lisa Hallberg, Karin Sanne
IVL Swedish Environmental Research
Institute

SSAB and EPD

- First in fossil-free steel
 - SSAB is a global steel company with a leading position in high-strength steels and related services
 - SSAB will be fossil-free as a company latest by 2045
 - SSAB will introduce fossil-free steel in the market already in 2026
- In 2020, new EPDs were developed
 - The EPDs cover the entire production system in the Nordics
 - You can find EPDs for all of SSAB's products distributed over a dozen or so declarations. There are, for example, EPDs for hot-rolled, cold-rolled, metal-coated and color-coated steel products
- EPDs validate sustainable production
 - SSAB EPDs comply with international standards, which provides objective data highlighting the low carbon footprint of SSAB products

Scope of the case study

- Review and analyze differences in some chosen methodology issues between EPD and PEF:
 - Environmental impacts, highest focus on GWP
 - Allocation methods for steel scrap (polluter pays principle vs circular footprint formula)
 - Generic vs specific data
- Existing EPD for an iron-ore based steel will be used



Expected results

Basics

- Increased understanding of PEF for steel manufactures

Methodology

- Understand and make visible how allocation of scrap influence the results

Data input

- Comparison between data requirements in PEF vs EPD

Results

- Highlight differences in the LCIA approach

Time plan and next step

- The case study will be carried out during Q2
- Results will be presented after summer
- Contact Sara Palander sara.palander@chalmers.se if you want to follow this case study

Presentation of case study on a paper product

Carina Larsson, Stora Enso Paper
Katarina Lorentzon, Torun Hammar,
RISE Research Institutes of Sweden

Stora Enso Paper Nymölla Mill



Established:
Pulp Mill 1962
Paper Mill 1972

Production capacity:
Pulp 340 000 tonnes/year
Paper 475 000 tonnes/year

Employees:
Approx. 540

Why participate?

- Stora Enso Sustainability Agenda comprises three components: Social agenda, Environmental agenda and Financial agenda. The Environmental Agenda entails that we use natural resources (materials, water, energy) with care, we fight global warming, and we respect the local environment.
- Prior experience of environmental declarations, highly appreciated by our customers:
 - Paper Profile
 - Carbon Footprint Ten Toes by CEPI
- Project fits well into our agenda and the learnings will be useful in our operations.

Goal and scope of case study

- Purpose of this case study is to test the Product environmental footprint category rules (PEFCR) for an intermediate paper product.
- The functional unit is set to one metric tonne of saleable paper at the mill gate.
- The system boundaries include upstream and core processes (*i.e.* cradle to gate), while downstream processes occurring after the paper mill gate are outside the system boundaries according to the category rules.

Focus aspects

- Climate change impact with focus on biogenic flows and flows due to land use and land use change (LULUC)
 - Land use impact category
 - Energy with focus on electricity
-
- The PEF calculating tool developed by CEPI will be used in the study.

Questions?

Interested in following the case studies? Contact
sara.palander@chalmers.se



Time to stretch your body!

1 minute

Introduction to Group discussion

- engagement in activities on methodological discussions



1. What does your organization want to gain from following the project Environmental footprint in Sweden?

2. What main focus areas would you like to see for webinars and discussions within the project Environmental footprint in Sweden? And why is it important?

If time, please prioritize

Group discussion – in “mural”

Outcomes from group discussion

Thank you!

Result from survey - current situation

**Sum up and ways
forward**



**The project team will stay
until 11.15 for networking
over a coffee!**

Course for professionals in Applied Life Cycle Thinking – April 20-21, Online (In Swedish)

9 out of 10
from
evaluation of
previous
course!

The life cycle perspective, understanding the environmental impacts of a product or service throughout the value chain, is gaining increased importance. In this popular two-day course, you will get a deeper understanding on how to apply life cycle thinking in your organization, through real cases and proven methods.

Course: Applied Life Cycle Thinking

Date: April 20-21, 2021

Location: Online

Price: 11 500 SEK ex. VAT (Partners get a 20% discount)

Make your registration today!

<https://www.lifecyclecenter.se/training/applied-life-cycle-thinking/>



Thank you!

The project management team:



Björn Spak
Swedish EPA



Karin Sanne
IVL



Katarina Lorentzon
RISE



Sara Palander
Swedish Life Cycle Center

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Thank you!

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