

# BioInnovation

## - Produktkategoriregler (PCR) Basic products from forestry

- Inventering, analys och förankring inför framtagande av produktkategoriregler (PCR)
- Utveckling av produktkategoriregler (PCR)
- Framtagande av uppdaterade data om prestanda/miljöpåverkan





# Introduktion till produktkategoriregler och utvecklingsprocessen

Sebastian Welling, Teamledare Life Cycle Management, IVL Svenska Miljöinstitutet

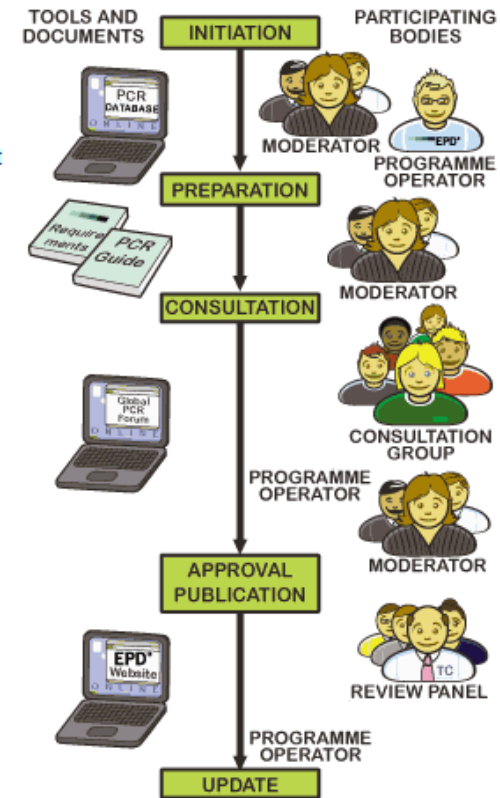
# Produktkategoriregler (PCR) - Bakgrund

- Innehåller instruktioner som beskriver
  - LCA-metoder som ska användas
  - Särskilda krav på datakällor och deras kvalitet
  - Föreskrivna miljöeffektkategorier och indikatorer
  - Principer för hur redovisning av informationen ska ske



# Framtagande av PCR

- Utarbetandet av PCR följer vedertagna principer som framgår i ISO/TS 14027 (PCR-utveckling). Standarden delar in PCR-utveckling i följande faser.
  - Initiering
  - Förberedelser
  - Konsultation
  - Godkännande och offentliggörande
  - (Uppdatering)
- För säkerställande av internationellt deltagande ges möjligheter för relevanta internationella aktörer att ge synpunkter på framkomna PCR-förslag genom en "open international consultation".



# BioInnovation - Delprojekt LCA & PCR

## Steg 1: Inventering, analys och förankring inför framtagande av PCR

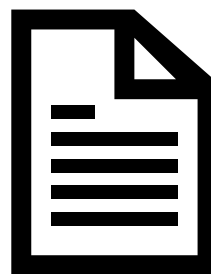
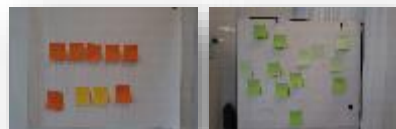
- Genomgång av befintliga PCRer/metoddokument med koppling till bioekonomi och skogsbruk
- Presentation och genomgång av relevanta metoder i samband med en intern workshop
- Sammanställning av relevanta metoder/områden som bör belysas inom ramen för PCR-utvecklingen

## Steg 2: Utveckling av PCR

- Belysning av relevanta metoder/områden som identifierades under steg 1
- Harmonisering vad avser metodikfrågor och tillämpning av PCR och resulterande EPD
- Utarbeta dokumentation, konsultation och publicering av PCR

### Identifierade och utvalda områden

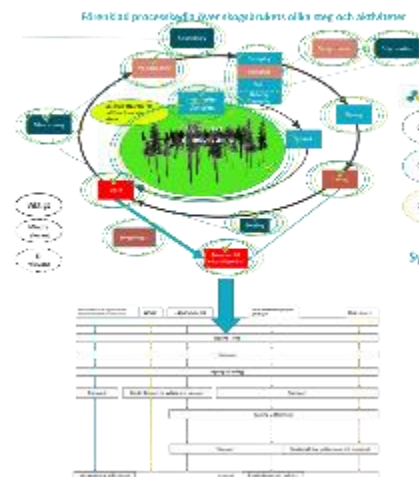
- Skogsbruk
- Industri
- Transport
- Avfall
- Vatten
- Luft
- Mark
- Klimat
- Miljö
- Samhälle
- Ekonomi
- Kultur
- Värde
- Etik
- Kommunikation



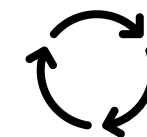
PCR

### Diskussionsfrågor

- Vilka aspekter är särskilt viktiga att lyfta och definiera i beskrivningen av de olika delarna i systembeskrivningen?
- Rapportering av transport till Industri I EPD:
  - Chiffren eller volym?
- Kan vi utvärdera Emisioner Emisioner epd-emissionerna, samt tillägg för transport till Industri?
- Finns det ett behov för att definiera "Industri"?



### Systembeskrivning



# Öppen konsultation är avslutad

The screenshot shows the EPD website interface. At the top, there is a navigation menu with options: 'Using EPD', 'Creating EPD', 'Product Category Rules', and 'Contact'. Below the menu, there are links for 'What are PCR?', 'Search the PCR database', 'PCR development', and 'Global PCR harmonization'. A search bar is located on the right side of the navigation bar. The main content area is titled 'Product Category Rules \ PCR Detail' and features a 'SEARCH PCR' button. A prominent banner reads 'UNDER DEVELOPMENT - BASIC PRODUCTS FROM FORESTRY'. Below this, a timeline shows the project's progress: 'INITIATED 2020-02-14', 'Start open consultation 2020-03-24', 'Deadline open consultation 2020-05-24', 'PCR review and approval 2020-08-01', and 'Publication 2020-10-01'. The 'PCR INFORMATION' section contains the following text: 'This draft PCR is available for open consultation until 2020-05-24. Any stakeholder is invited to send comments or feedback to the PCR Moderator or post them on the PCR Forum on this page. Please indicate if you would like to be listed as a contributor in the document and on <http://www.environdec.com> for this PCR.' It also states: 'The draft PCR document may be downloaded in PDF format on the right side of this page. The free registration will also enable you to post comments on the PCR Forum.' and 'Dates are preliminary and subject to change.' The 'PCR DOCUMENTS' section lists: 'Template for providing comments on draft PCR', 'FAQ about PCR development', and 'PCR Basic: products from forestry (draft 1.0 for open consultation)'. The 'COMMENTS ON THIS PCR' section includes the text: 'Be the first discussing this PCR' and a button 'Start a discussion'.

- Start öppen konsultation: 2020-03-24
- Öppen konsultation klar: 2020-05-24
- Granskning av tekniska kommittén genomförd och godkänd: 2020-09-09
- Publicering: 2020-11-01

<https://www.environdec.com/PCR/Detail/?Pcr=17807>



# Grundläggande metodval

Diego Peñaloza, projektledare, IVL Svenska Miljöinstitutet

## Declared unit

“The declared unit shall be **1000 kg in dry matter of basic products from forestry delivered to primary mill or terminal gate**. The declared unit shall be supplemented with additional information including density, moisture content and carbon content, all related to dry matter. The declared unit shall also be supplemented with information regarding the bark weight for those products where it is not included. This supplementary information shall be given for both wood and bark, and can be given as an interval, but the exact density and moisture content used in the calculations of the EPD must be specified.”



# System boundaries and diagram



## UPSTREAM

Production of plants, seeds or cuttings for cultivation

Production of electricity and fuels used in upstream module

Production of electricity and fuels used in core module

Production of fertilizers and pesticides used in forestry

Production of auxiliary substances used in forestry

Production of auxiliary materials used in the forestry, e.g. barriers, straps, sacks

Transport of input materials from the upstream processes to the core processes

## CORE

Maintenance of machinery and equipment (e.g. forwarders) dedicated to forestry

Forestry activities using energy wares such as:

- soil preparation,
- forest regeneration activities (planting, seed sowing, natural regeneration),
- thinning (and pre-commercial thinning),
- application of fertilizers,
- crop protection (herbicide, pesticides, barriers),
- felling and harvesting,
- post-felling processes e.g. reprocessing of biomass at the side of the forest road, chipping in forest
- forwarding and loading onto trucks,

Construction of roads dedicated to forestry

Transportation from preparation to industry facility

Biogenic carbon dioxide emissions and removals to and from the atmosphere caused by changes in the forest carbon stocks during forest management activities

## DOWNSTREAM

Terminal management and activities related to logistics

Chipping of biomass, if relevant. In case it takes place directly after harvesting and outside the core modules, e.g. in terminals

# Cut-off rules



“Data for elementary flows to and from the product system contributing to a **minimum of 99% of the declared environmental impacts shall be included** (not including processes that are explicitly outside the system boundary as described in Section 4.3).

The check for cut-off rules in a satisfactory way is through the combination of expert judgment based on experience of similar product systems and a sensitivity analysis in which it is possible to understand how the un-investigated input or output could affect the final results.”

# Allocation



PROCESS	MAIN PRODUCT AND CO-PRODUCTS	ALLOCATION INSTRUCTION
Forestry	Sawlogs, pulp wood, fuelwood, branches and tops	The EPD shall report two sets of results; one using allocation based on weight (dry matter) and another based on economic value.

# Data quality requirements

As a general rule, **specific data shall always be used**, if available, after performing a data quality assessment. It is mandatory to use specific data for the core processes as defined above. For the upstream processes and downstream processes and infrastructure, **generic data may also be used if specific data are not available**.

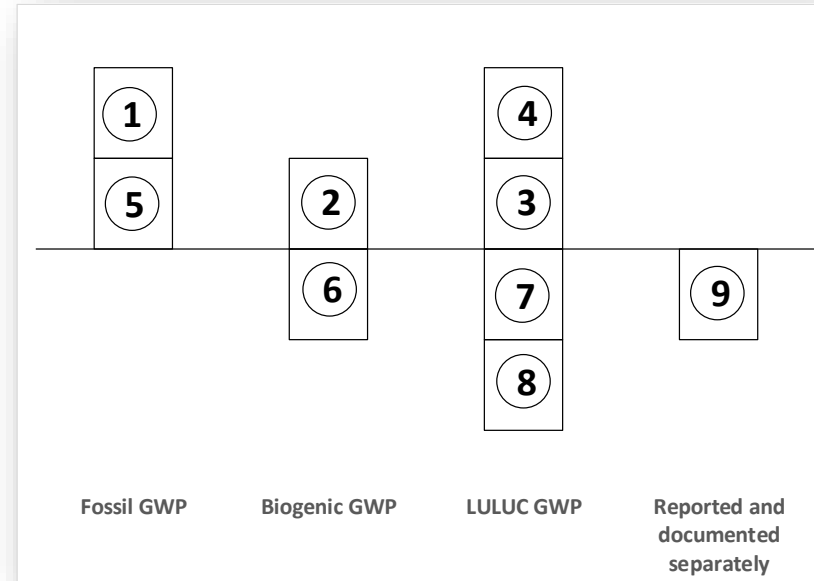
Any data used should preferably represent average values for a specific reference year, except for data the **changes in forest carbon stocks which may be an average of 4-5 years**. However, the way this data is generated could vary, e.g. over time. In such cases, this data should have the form of a representative annual average value for a specified reference period. Such deviations should be declared and clearly stated.

# Impact categories and impact assessment

The EPD shall declare the **default impact categories** as described in the General Programme Instructions. The characterisation models and factors to use for the default impact categories are available on [www.environdec.com](http://www.environdec.com) and shall be updated on a regular basis based on the latest developments in LCA methodology and ensuring the market stability of EPDs. The source and version of the characterisation models and the factors used shall be reported in the EPD. Alternative regional life cycle impact assessment methods and characterisation factors shall be calculated and displayed in addition to the default list. If so, the EPD shall contain an explanation of the difference between the different sets of indicators, as they may appear to the reader to display duplicate information.

# Other calculation rules and scenarios

- Land use
- Forest site productivity (yield)
- Global warming potential (GWP) – biogenic
- Biogenic carbon in the products
- Global warming potential (GWP) – land use and land use change (LULUC)
- Water scarcity footprint



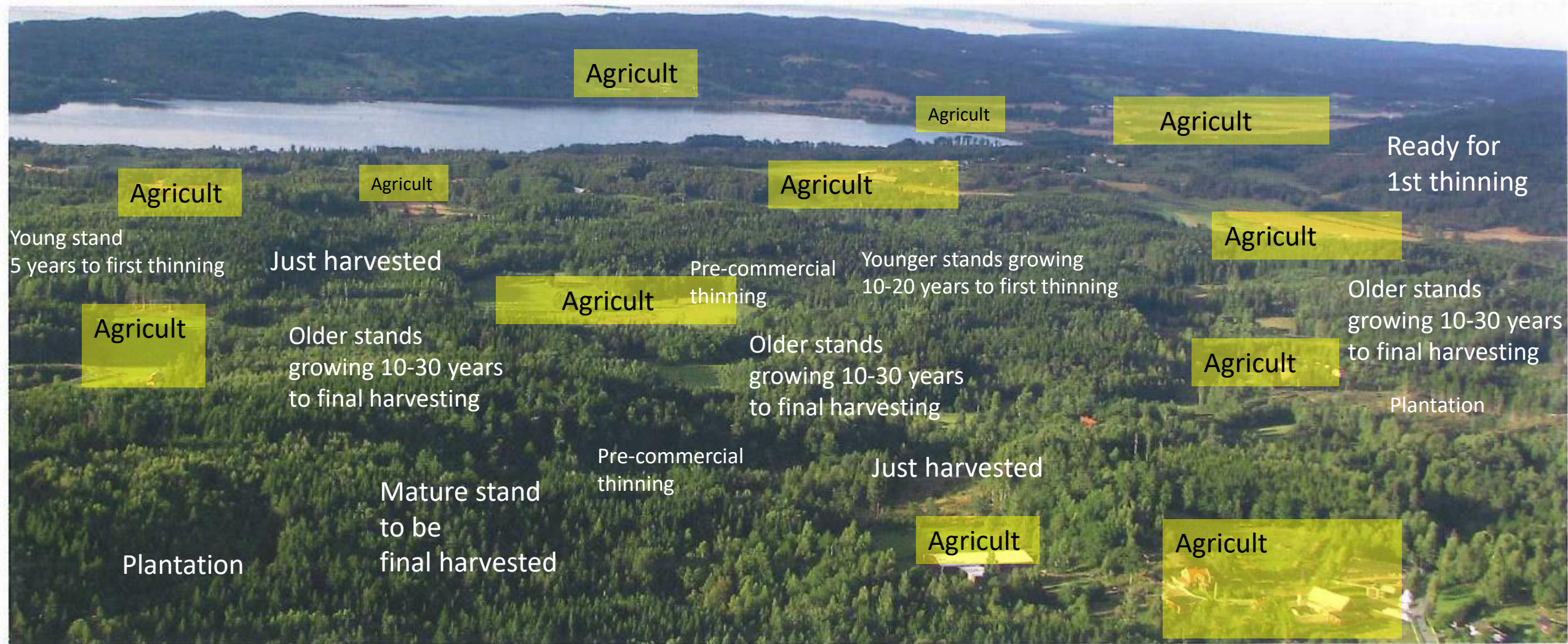


# Utvalda aspekter & frågor inom PCR utvecklingen

Lars Wilhelmsson, Chef Strategisk FoU-samverkan och Seniorforskare Värdekedjor,  
Skogforsk

# Landscape perspective – Annual full scan perspective

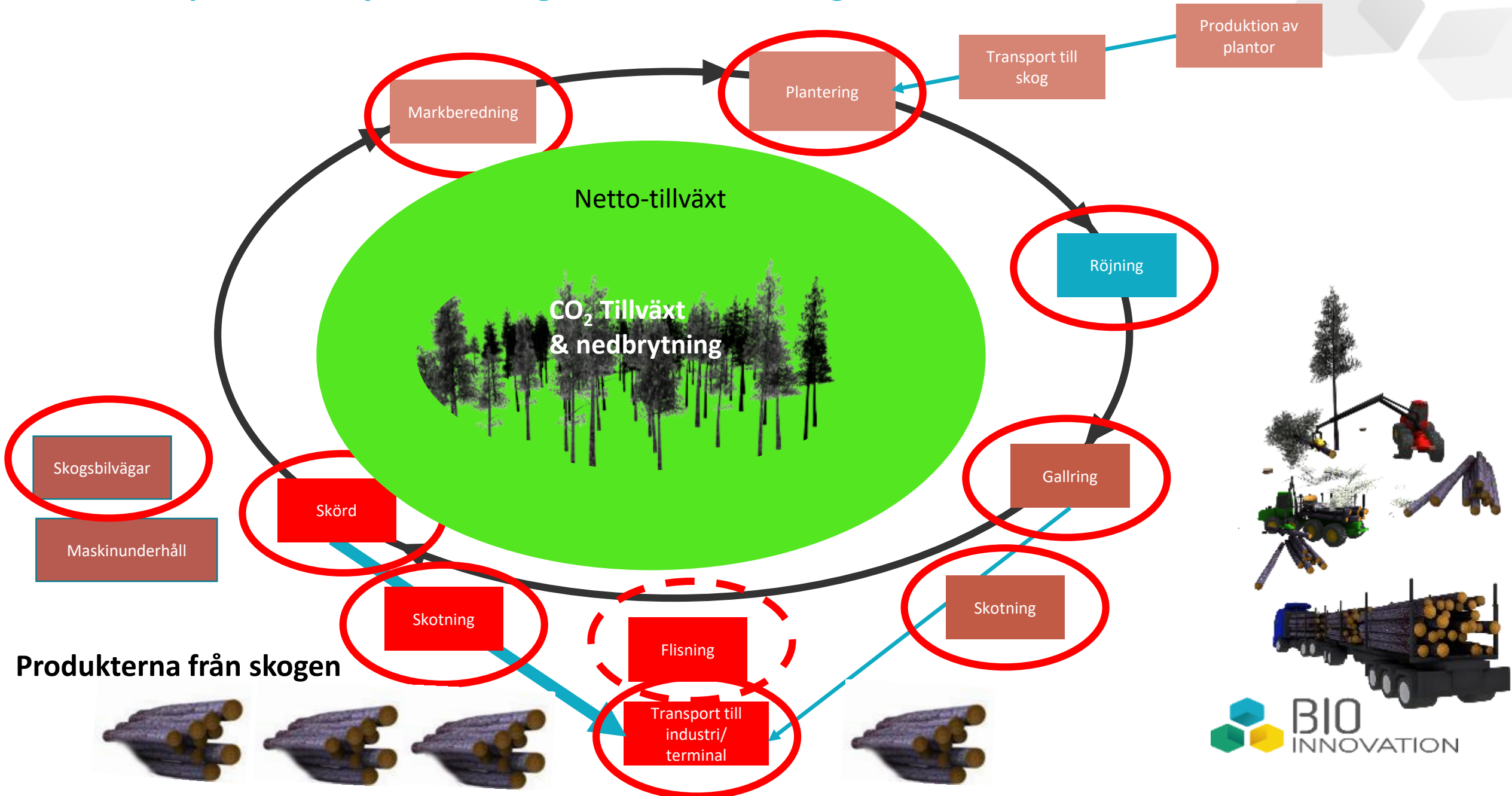
Photo: Erik Sollander, Swedish Forest Agency.



Landscape photo from the publication (KSLA): Forest and Forestry in Sweden



# Förenklad processkedja över skogsbrukets olika steg och aktiviteter



# Forestry Products



- **4 produkter**

1. Sawlogs
2. Pulpwood
3. Fuelwood
4. Branches and tops

- **3 grupper med trädslag**

1. Spruce
2. Pine
3. Broadleaves

- **4 regioner**

1. Norra Norrland
2. Södra Norrland
3. Svealand
4. Götaland

⇒ 48 produkter





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