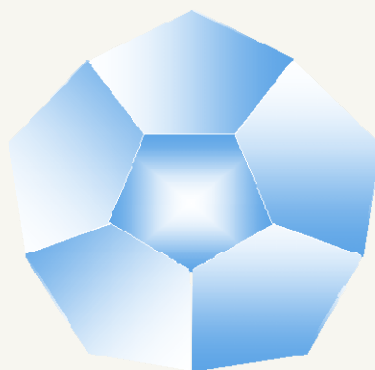




**EFORWOOD**

Sustainability Impact Assessment of the Forestry-Wood Chain

# EFORWOOD



**Tools for Sustainability Impact Assessment of  
the Forestry-Wood Chain**

**Kaj Rosén**





## Industrial activities are evaluated against their impact on Sustainable Development

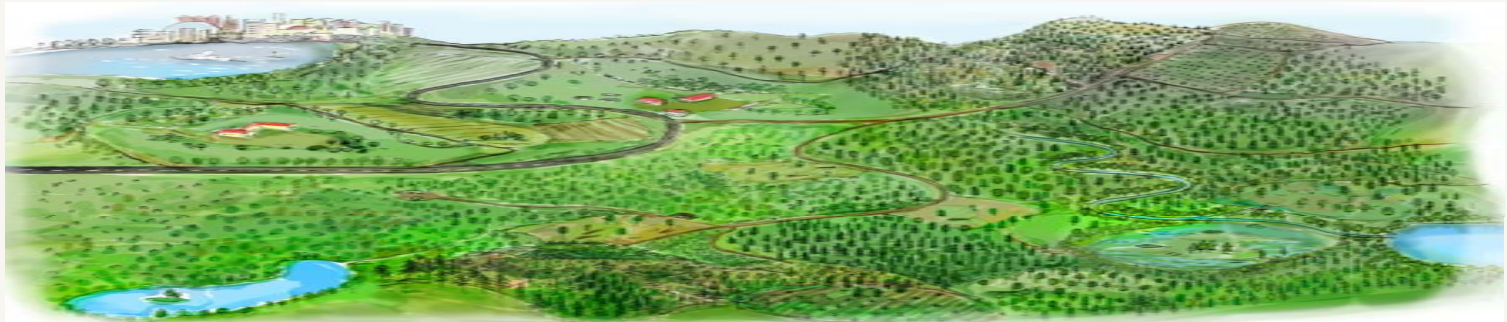




## A number of different methods are used today

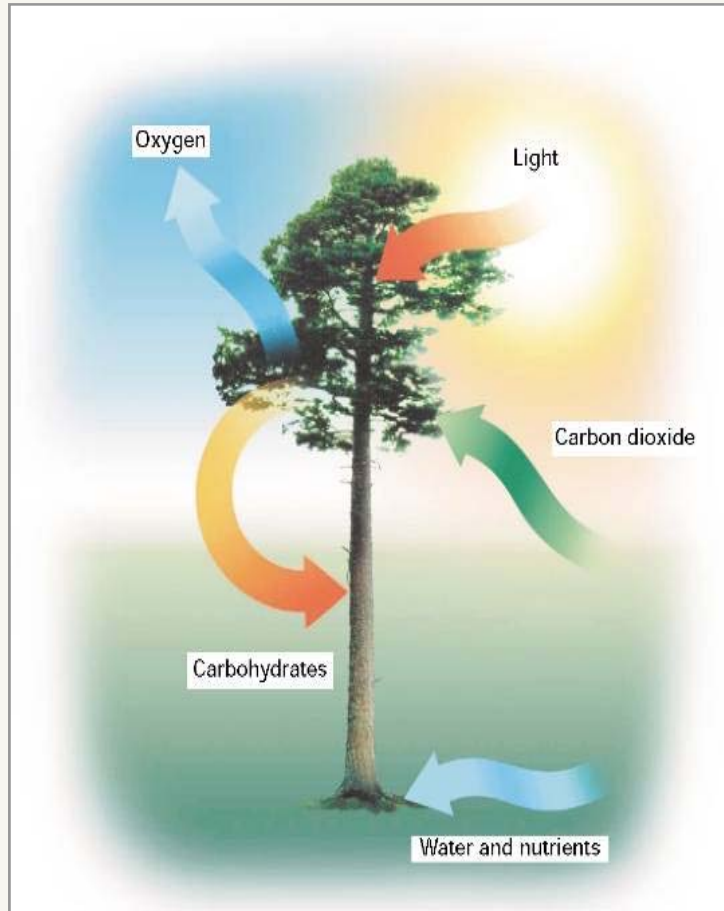
Examples:

- Environmental Impact Assessment
- LCA (Life Cycle Analysis)
- Ecological footprint
- Carbon footprint
- Paper score card



**None of them allows for a complete analysis of all aspects of sustainability,**

**which is the objective of EFORWOOD!**

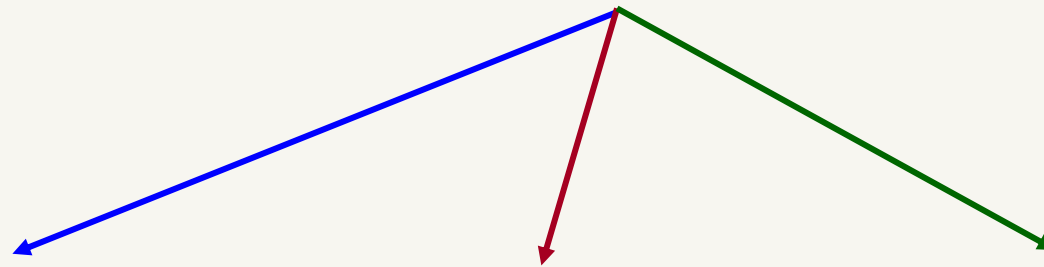


The Forest-based Sector has the potential to play a key-role in the development of a sustainable society!



## EFORWOOD develops a decision support Tool for Sustainability Impact Assessment (ToSIA)

Three pillars of sustainability:



**Economy**

**Society**

**Environment**

Examples of indicators

- Added value

- Production costs

- Investment and R&D

- Total production

- Employment

- Wages and salaries

- Safety and health

- Education and training

- Greenhouse gas balance

- Energy generation and use

- Emissions to soil, water and air

- Recycling and recovery



## Target groups

### Primary:

European commission/policy makers

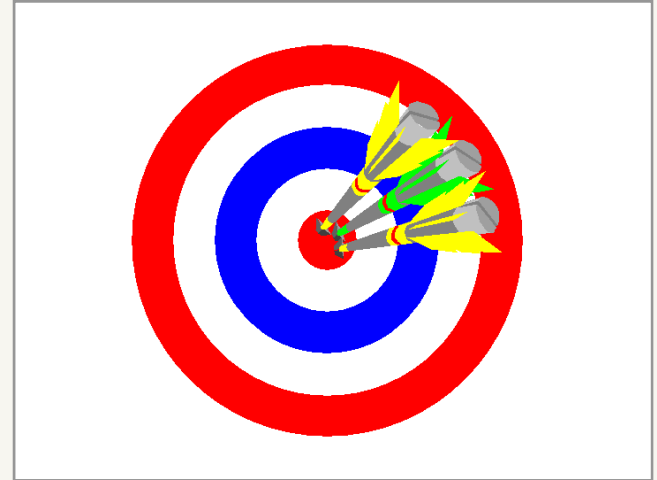
Forest-based industry

### Secondary:

Politicians / civil servants at national level

NGOs

Researchers



**ToSIA** is primarily designed to give answers to **WHAT IF? - questions.**

What if:

- o EU introduces new policies on e.g. energy / transport / recycling / habitat protection?
- o wooden frames in houses are doubled?
- o global market changes?
- o oil prices doubles?





This is done by:

- selecting, weighing and analysing indicator values
- applying the Sustainability Indicators to production processes.
- relating Sustainability Indicator values to flow of material or another preferred reference base, e.g. value.

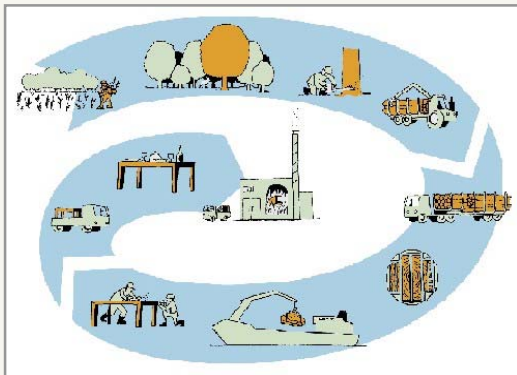




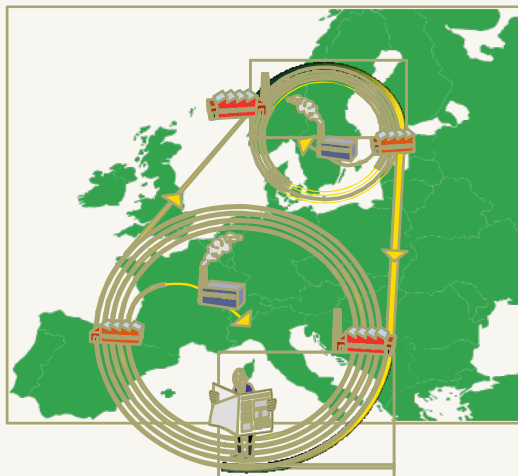


## ToSIA is very scalable and can operate at different levels, within defined system boundaries:

### (1) Single FWCs

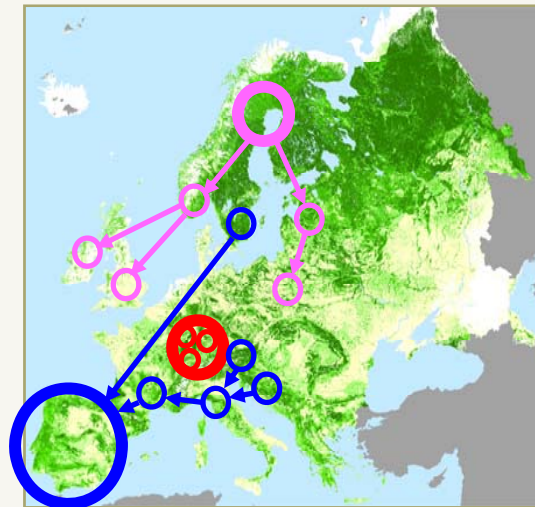


### (3) European FWC



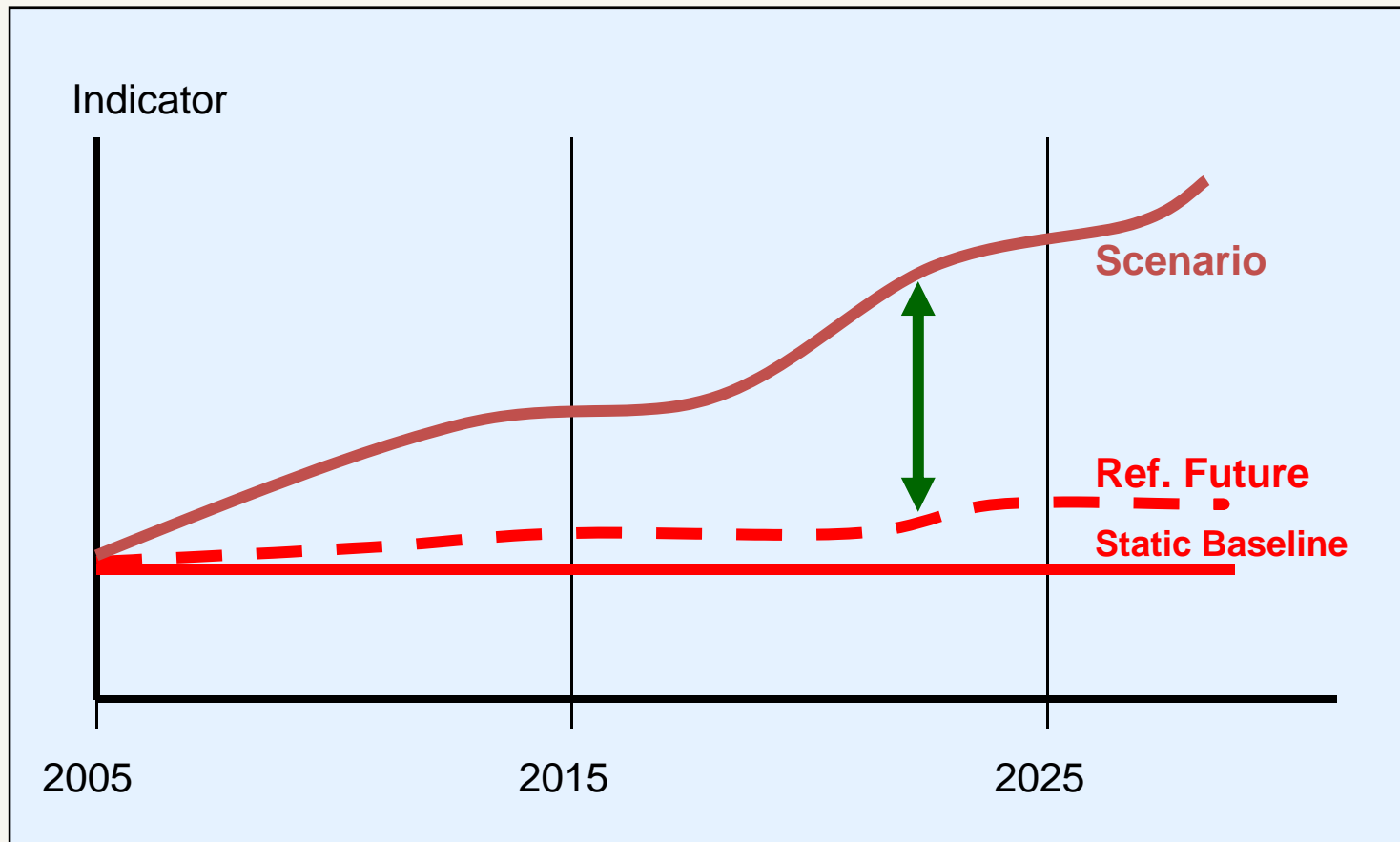
### (2) Case study FWCs

- “Production driven” (N. Scandinavia)
- “Products driven” (Iberia)
- “Regional” (Baden Württemberg)





## Foreseen applications



**The future is not static!**



## Two Reference Futures

IPCC scenarios **A1** and **B2** are translated into future changes related to the Forest-based Sector in Europe.

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### **A1: Free trade**

- Consumer oriented
- High economic growth
- Forest functions separated
- Free trade – cheap raw-material
- Less agriculture, more forests but less harvesting in Europe
- Zero-growth in wood based products



### **B2: Regionalised economy**

- Social cohesion and environmental integrity
- Slow economic growth
- High demand for wood based products
- Less trade – high raw-material prices
- Emphasis on energy conservation and bio-energy
- Forest industry play a key role in bio-based economy
- Innovative investments in SFM and FBS





## Scenarios (under development)

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➤ **Policy** – climate change / mitigation

EU bio-energy policy; competition for raw-material;  
land-use.....



➤ **Planet** – environmental regulation

Natura 2000; 20% set aside; raw-material prices;  
(increased recycling) .....



➤ **People** – consumption and lifestyle

- a) Increased demand of wood-based products;
- b) Decreased demand of wood based products .....



➤ **Productivity** – technological development

"More from less"; increased flexibility .....





## Main products

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- **ToSIA** can be used to assess the impact on the sustainability indicators of changes in the FWC. Within the project a limited number of scenarios will be analysed.
- **ToSIA** includes modules designed to analyse and evaluate the impacts (e.g. MCA, CBA).
- **ToSIA** will also be available as web-based demonstration application with pre-defined scenarios and a limited number of results





## EFORWOOD final conference(s)

**Stakeholder oriented presentation and training / demonstration:**

Autumn 2009 (dates to be confirmed) in connection to the FTP conference in Sweden.

**Scientific oriented conference:**

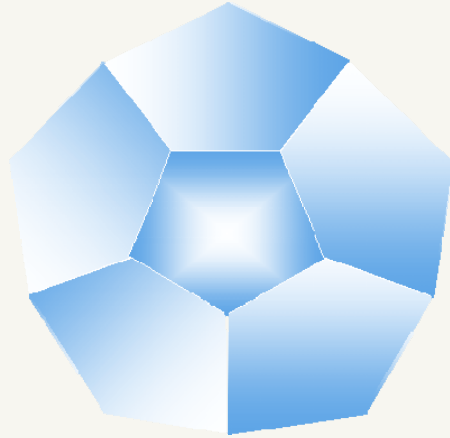
September 2009 (dates to be confirmed), Stockholm





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**Thank you!**