



FirmoLin

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**No building material can compare
to the sustainability of wood**

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1. INTRODUCTION

Comparing environmental performance of wood, plastics, concrete, glass, metal, stone, ...

Energy use

Water use

Recyclable

Durability

.....

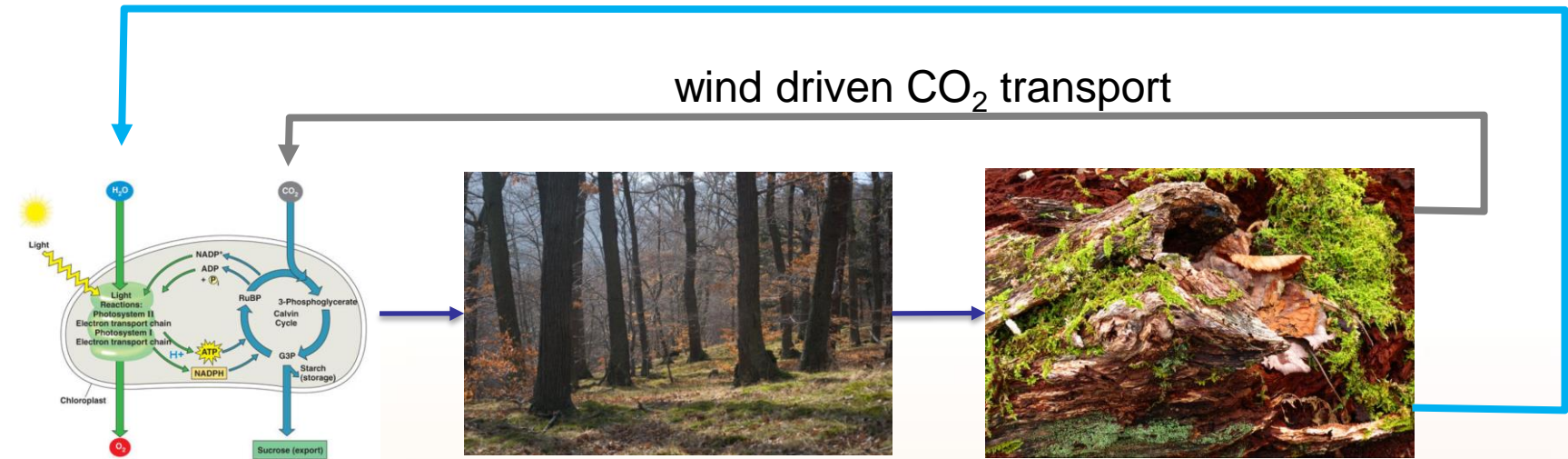
**WOOD SEEMS TO HAVE
NO TRUE ECO-ADVANTAGE**

WHY ?

2. Natural biological sustainability

Solar, wind and gravity driven H₂O transport

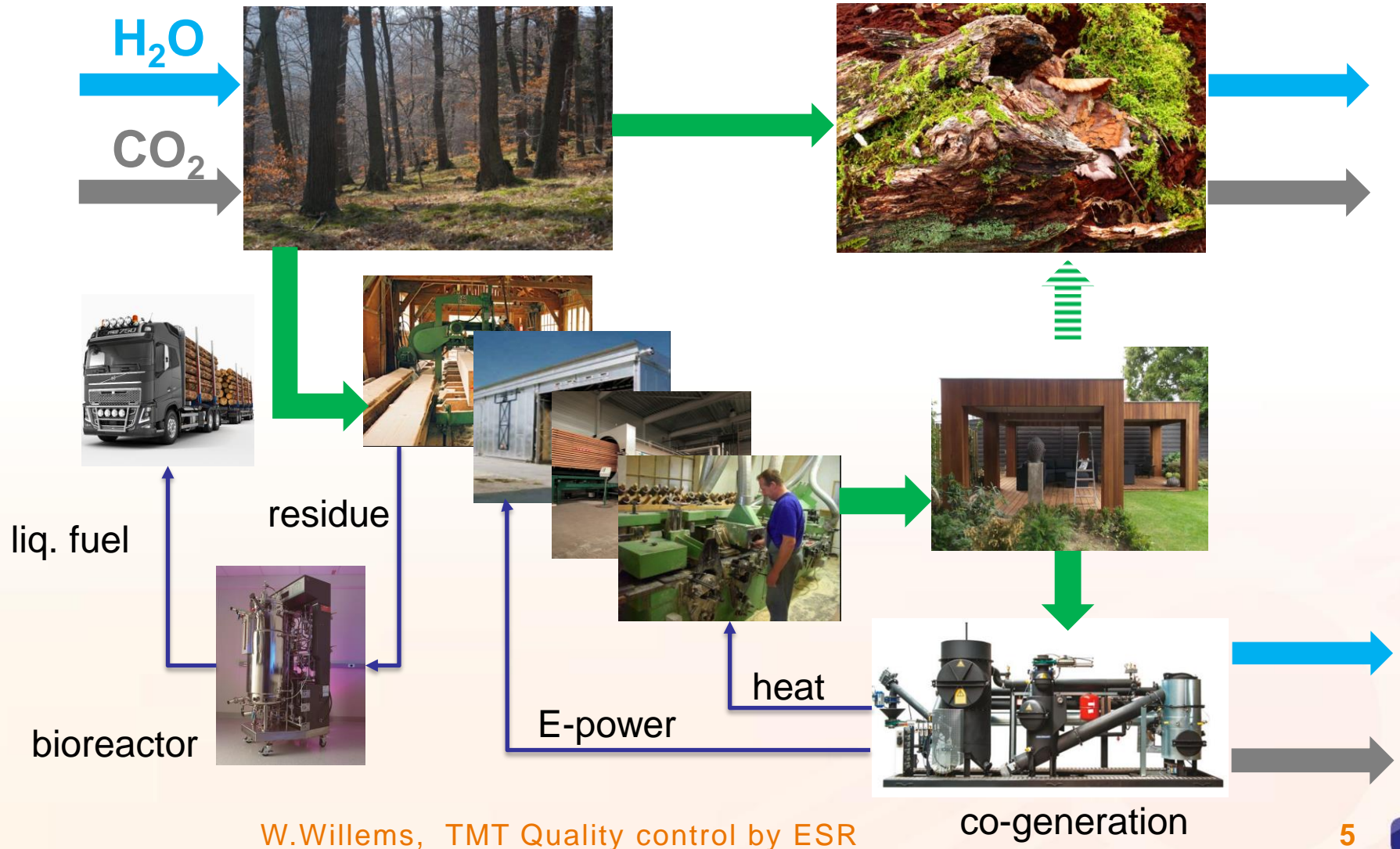
wind driven CO₂ transport



self-assembly and self-recycling

Closed lifecycle of WOOD, not necessarily a particular wood species !

3. Human interference



3. Human interference (2)

ISSUES:

- Translocation of wood around the world: displacement of minerals
- Deforestation (Local / Global)
- Extinction of wood species

4. Strategic Choices

- Offensive: try to get better ratings within the current calculation schemes.
- Defensive: leave the rating methodology and/or communicate directly to the public

4.1. Improved rating scenario

- Take unspecified wood as the raw material?
- Change of system boundaries: include photosynthesis in the production (raw materials become water and carbon dioxide)?
- Calorific recycling, instead of re-use of wood? Recycling is taken care of by nature.
- Mineral recycling?

4.2. Withdrawal scenario

- Can wood obtain a natural sustainability label?
- Compare REACH legislation: wood is a natural chemical composite. No REACH-registration required.

Conclusions

- **Wood is naturally sustainable, single wood species are not.**
- **Try to get rating advantages from the self-assembly and self-recycling nature of wood, fuelled by sun, wind and gravity.**
- **Cover total energetic costs of wood product manufacturing by cogeneration of heat and electricity and liquid fuel production from wood waste.**
- **Define working procedures to replenish local mineral loss.**