

Facts & Trends

# Fresh & Recycled Fiber Complementarity

Key Messages &  
Summary Presentation

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# Context

- Enabling and motivating consumers for **sustainable lifestyles** is one central must-have to **WBCSD's Action2020** program
- Key to sustainable lifestyles are:
  - Efficient, responsible and transparent use of natural resources
  - Recovery & recycling
  - Reduce consumption footprints
  - Providing sustainable products
- **Forests** provide **Wood** → a **renewable** and widely **recyclable** raw material
- Imperative to **make informed choices** on wood and fiber to retain **consumer confidence** in forest-based products and **preserve natural resources**
- Publication demonstrates the **complementarity of fresh and recycled** fiber for **the sustainable supply of renewable raw material** and products



# Why are fresh & recycled fiber complementary ?

- Both part of a **single integrated wood fiber system**:
  - Recycled fiber would not exist if fresh fiber were not harvested,
  - Limitations to what can be recovered,
  - Losses occur during recovery and recycling processes,
  - Fiber degrades with multiple uses,
  - Fresh fiber is essential to meet some quality and product requirements.
- **50% of papermaking** fiber comes from **recovered** fiber
- **Fresh fiber production** will also have to **increase** to provide the amounts of fiber needed.

Global paper & paper packaging production & flow of fiber

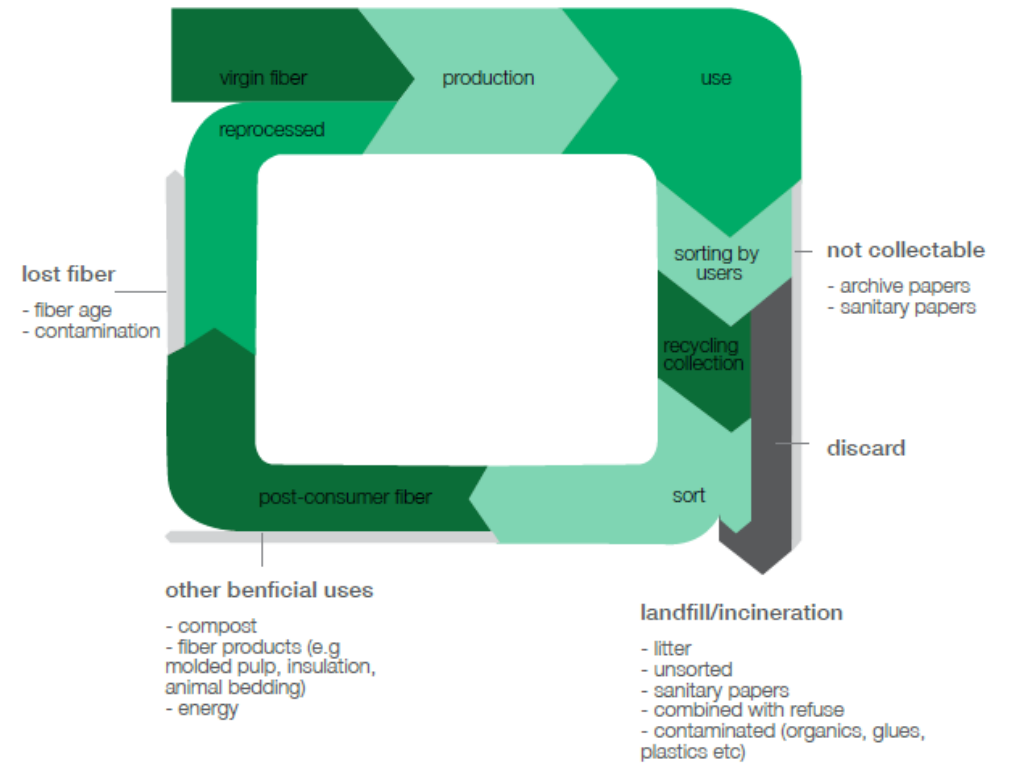


Figure 1: The integrated wood fiber system (Christine Burrow Consulting and Boxfish Group 2011)

# How to maximize the societal value of each harvested tree?

- Most **eco-efficient** use of wood fiber for paper and paperboard is within a **cascading system**.
  - Fresh fiber is removed from the forest and used to make wood or paper products
  - Recovered after use, recycled fibers are reused in paper and paperboard until unsuitable for this purpose
  - At the end burned for energy, displacing fossil fuels.





# What are the environmental trade-offs between fresh & recycled fiber? (1)

- Fresh and recycled fiber mills **use different processes**, resulting in **different impacts**:
  - Recycled fiber production can result in higher or lower releases to the environment than fresh fiber production
  - Results depend on the type of release, the product being manufactured and the fuel being used.
- Studies generally agree that **recycling has lower environmental impacts than landfill disposal**
- Less agreement on the environmental benefits of recycling compared to burning for energy
- In an efficient cascading system, where recyclable fibers are diverted from disposal, burning for energy would not act as an alternative to **recycling**, but as **an eco-efficient means of gaining value** from fibers that have no higher-value use.



# What are the environmental trade-offs between fresh & recycled fiber? (2)



- Fresh and recycled fibers are part of a **single complex system**
- Comparisons between fresh and recycled fibers are very difficult and **heavily influenced** by decisions on **how to split the single integrated system** into separate systems
- Positive impacts and **effectiveness** of recycling depend on **how much** usable fiber can be **recovered**
- **Reduced demand for wood** & fresh fiber can increase the chance that **forests** will be permanently **converted to other land uses**

# What does the future of fresh & recycled fiber look like? (1)

- **Recovery** of paper & paperboard is approaching the **maximum that can be achieved** in developed countries:
  - Europe & United States: 70%
  - Japan: 80%
- Utilization rates for newsprint and case materials **exceed 90% in Europe**.
- Further increases in the use of recovered fiber will require more to be used in grades that have quality requirements that can be difficult to meet with recovered fiber.





## What does the future of fresh & recycled fiber look like? (2)



- Declining production of some grades of paper means that the amounts of recovered fiber obtained from these grades will also decline.
- The **use of recovered fiber** is only **one of many factors** to consider in a sustainable procurement program.
- Visit [www.sustainableforestproducts.org](http://www.sustainableforestproducts.org) for more information

# WBCSD's Forest Solutions Group

The WBCSD **Forest Solutions Group's** (FSG) joins together global companies representing about 35% of forest, paper and packaging sales worldwide. The FSG is a **global platform** for **strategic collaboration** among value chain partners. It aims to bring more of the **world's forests under sustainable management** and expand **markets for responsible forest products**.

For more information, visit: [www.wbcسد.org](http://www.wbcسد.org)

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