How can we meet the rising demand for wood-based products while conserving the world’s forests?

The amount of wood we take from forests and plantations each year may need to triple by 2050. This growing market for wood can motivate good stewardship that safeguards forests – or destroy the very places where wood grows, including many of WWF’s priority places.

So can we produce more wood without destroying or degrading forests, in a world where competition for land and water is increasing?

Our research suggests it’s possible, and that it could even be good for the planet. But it’s a challenge that spans the whole supply chain, from where and how wood is grown and harvested to how wisely and efficiently it is processed, used and reused.

Wood Can be Good

Wood has many natural advantages. Made by nature, it’s durable, versatile, aesthetically pleasing, biodegradable and, if forests are well managed, renewable. Some wood products have a long working life – wooden construction materials can last hundreds of years and are usually produced with less energy and pollution than those made from alternative materials like plastic and steel.

Demand for wood and paper is likely to grow with rising population and incomes in developing countries. New technologies are also likely to enable greater use of wood to make biofuels, pharmaceuticals, plastics, cosmetics, consumer electronics and textiles. These new uses could add significantly to the volume of wood extracted from forests or grown in plantations.
New plantations in the right places

Plantations carry potential risks and benefits, depending on their placement and management. With a projected 250 million hectares of new tree plantations needed between 2010 and 2050 to meet increased demand, these potential impacts – good or bad – are significant. Expansion of plantations should be focused on degraded land, while safeguarding the rights and livelihoods of indigenous peoples and local communities.

Expanding production in well-managed natural forests

Our models suggest that another 242-304 million hectares of natural forest would need to be managed for commercial harvesting by 2050 – up to 25 per cent more than today. There is no simple verdict on whether it’s better to log natural forests more heavily in a smaller area or conduct a lighter form of logging over a larger area. In either case, better forest management is needed, as well as improved governance and law enforcement, with stricter trade regulations and accurate tracing of wood along supply chains.

Forest certification

Forest certification provides assurance that the wood in a product comes from a well-managed forest, with an audited chain of custody running from the forest floor to the customer. Perhaps 30 per cent of the world’s production forest is certified, with around 15 per cent of this under the Forest Stewardship Council (FSC) – which WWF considers the only credible forest certification system in use today. Certification needs to expand significantly in regions, particularly the tropics, where forests suffer most from destructive forestry.

Reuse and recycling

Nearly all types of solid wood can be reused. Wood can be salvaged from old buildings, bridges and wharfs and used again in modern décor, from furniture to flooring. Smaller, less valuable wood scraps can be collected and used to make particleboard and other composite products.

Similarly, paper can be recycled and reused many times, taking the pressure of forests. In 2010, more than half the fibre used in global paper production came from recovered paper (53 per cent, up from 43 per cent in 2000). Even with higher global paper consumption in the future, we would need less virgin wood than we do today if we recycled more. Better sorting of waste, technological advances in recycled fibres and consumer choices can all contribute.

Fairer distribution

Today, 10 per cent of the world’s population consumes over 50 per cent of the paper. This is hardly fair – paper is an important means to share knowledge and express ideas, improve sanitation and keep food safe. Reducing wasteful consumption in developed countries, like overprinting or overpackaging, would ease the pressure on forests and land use as paper use grows in developing countries.

Technological advances

More efficient processing and manufacturing can help reduce the amount of wood taken from forests:

• A 10 per cent increase in the efficiency of sawmills for tropical timber (bringing them closer to the standards of leading sawmills in Europe and North America) could reduce global demand for saw logs by 100-200 million m³ per year.

• Modern pulp and paper mills can make more paper from less wood, while using the by-products to generate energy and manufacture bioplastics.

• Engineered wood products use wood very efficiently and can be manufactured from fast-growing, underused and less expensive trees species.

• In the paper industry, new product designs and advances in engineering offer the prospect of near limitless re-use of short, recycled fibres.

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