

The ageing society: an example of consequences for biomass use for incontinence diapers in Europe

Background

One likely consequence of the ageing society is an increased need of products such as incontinence diapers, which are today partly based on cellulose from forestry and partly on petroleum based plastics. A calculation of the potential increase in use of forested area for severe incontinence care was made based on the demographic trends for Europe and on the yield from forestry under Nordic conditions.

Results

Under the assumptions, the forest area needed for severe incontinence care in Europe will increase with about 75% until 2050, see Table below.

If also the petroleum-based material in the of the diapers were to be replaced by wood-based materials, the increase in needed forest area would grow to 136% of today's (assuming a 1:1 replacement ratio by weight) . This would corresponds to 0.2% of the total European forest area, for this product only.

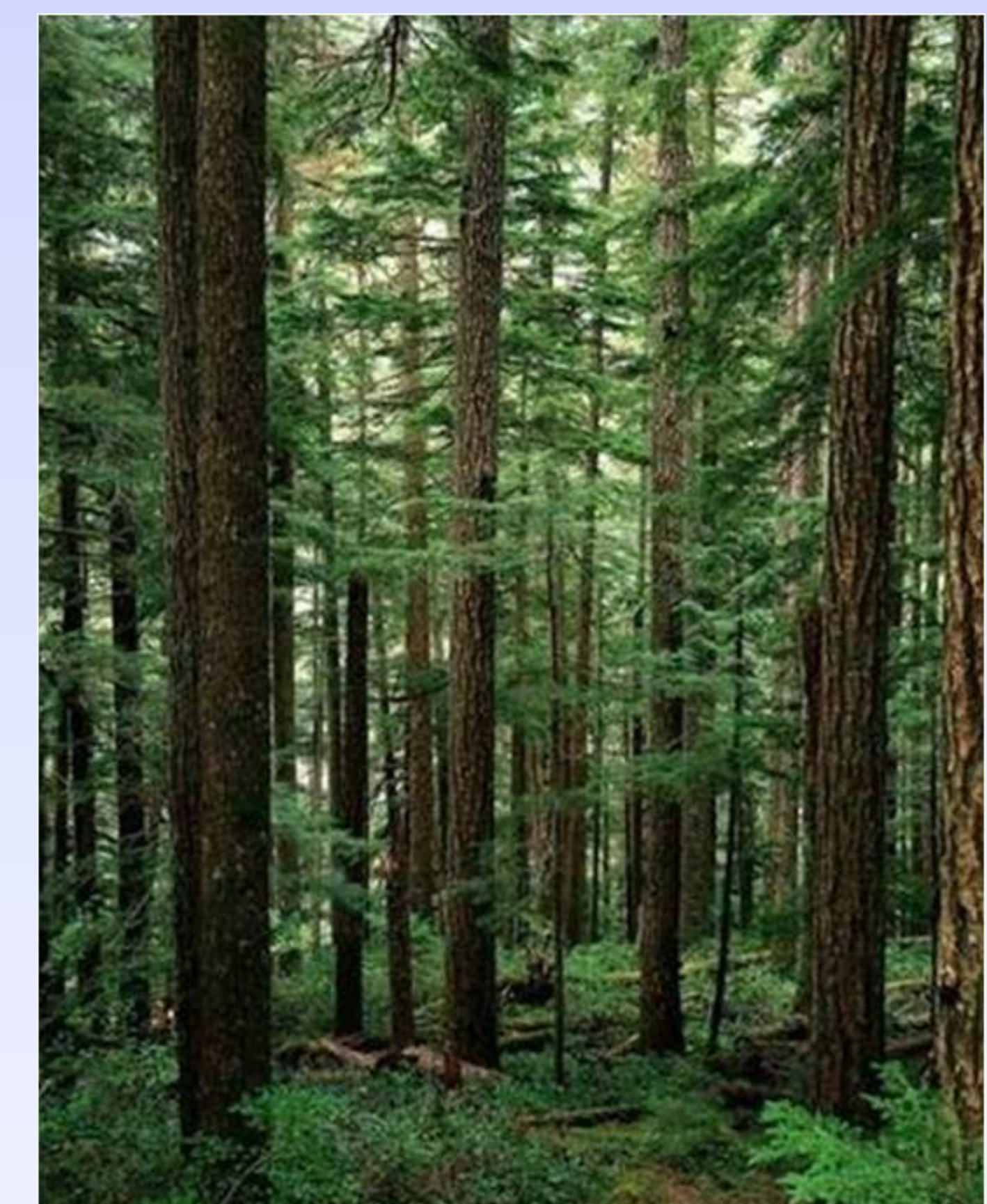
Discussion

Forests are a limited resource. Much is already utilised, e.g. for timber and pulp and paper production, and there is an increasing demand for bio-based fuels and materials for replacement of petroleum. Increasing need for incontinence care may increase the pressure further. The increasing competition for the yield from the forests and the land area results in rising concerns regarding biodiversity and other ecosystem services. There is a need for a discussion within society about how to dedicate forests.

Year	2010	2020	2030	2040	2050
P / (population in Europe)	732 759 000	732 952 000	723 373 000	708 489 000	691 048 000
u / (service / population in Europe)	0.011	0.013	0.015	0.020	0.021
m / (kg wood material / service)	84				
i / (ha Nordic forest area / kg wood material)	0.0010				
I / (ha Nordic forest area) = i * m * u * P	690 000	800 000	930 000	1 190 000	1 210 000

Estimation of forest area needed for incontinence diapers for the ageing population in Europe. The 'service' is to keep a customer with heavy incontinence dry for a year, as-

suming that the same fraction of the population above 50 years as today will need severe incontinence protection.



The WoodDi project - the Wood based Diaper, is a research collaboration between industry and university.



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