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Tropical Forest Destruction for Children's Books

An Analysis of the German Book Market

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Summary

The global consumption of paper has been growing at a steady rate for years and has quadrupled since 1960. More than 40 % of the commercially harvested wood worldwide is turned into paper products. 10 % of the world's population, i.e. Western Europe and North America, consume more than half of the worldwide supply of paper. A part of that ends up as books on the world market and also in Germany. The wood for the necessary pulp comes partially from non-sustainable forest management or even from illegal logging. In other words, the production of books contributes to the destruction of natural habitats of animal and plant species, to climate change and to human rights violations amongst the local population. The destruction and degradation of forests account for approximately 20 % of global greenhouse gas emissions.

More and more books bought here are manufactured abroad, particularly in Asia. With these products there is a particularly high risk that the wood used is from illegal logging, since the Chinese paper industry has close ties to the Indonesian paper industry, which continues to be notorious for large-scale tropical forest destruction in Indonesia. The relocation of production has been particularly rapid within the children's book sector. The WWF has therefore tested a number of children's books from Southeast Asia for evidence of tropical wood. The results are sobering:

In 19 out of 51 children's books tested, a significant amount of tropical wood was present. The types of wood found do not typically occur in plantations but rather in natural and tropical forests. Furthermore, extensive destruction of tropical forest by the Indonesian paper industry, now expanding into China, has been a well-known fact for years and continues to be a tragic reality. The logical conclusion is that for those books which were tested positive for tropical wood, with the utmost probability natural tropical forest was destroyed or even cleared.

The WWF, however, is convinced that the conservation of forests as a natural resource should be a matter of course for children's books in particular, since the actual consumers of the books, namely children, will be especially affected by non-sustainable book production. It is therefore rather ironic that one of the books in which the WWF found tropical wood fibres reads: „We are writing the year 2805. The human race has left planet Earth… nothing grows here anymore…"

In 2008, German publishing houses for children and young people reported significant growth, although production within Germany fell during the same period. The apparent contradiction is explained by the fact that book production is increasingly being relocated to Southeast Asia. In 2008, Germany imported 121,460 tonnes of books at a value of 572 million euros, with China being the most important country of origin. More than a third of books imported to Germany come from there, including the Hong Kong Special Administrative Region. That amounts to approximately 41 thousand tonnes of paper. In addition to this, books are being imported from other Asian countries. Within the last ten years, the amount of books coming from Asia has increased fivefold; the amount coming from China even tenfold. The relocation of production to Asia by German publishers is particularly striking with regard to children's picture books. In this sector, 62 % of imported picture books are from China (including Hong Kong).

The Chinese paper industry now plays the dominant role in the global pulp trade. China has become the largest buyer of pulp. Almost 17 % of the pulp on the world market is exported to China. 50 % of pulp exports from Indonesia and Russia – critical countries of origin concerning forest destruction and illegal logging – go to China. In Indonesia pulp is produced mainly by the two large companies Asia Pulp & Paper (APP) and Asia Pacific Resources International Holdings (APRIL). According to WWF estimates, a significant part of the wood used for pulp production at APP comes from the destruction of natural forests and not from plantations. Using the example of APP, the largest pulp and paper group in Indonesia, and its parent company Sinar Mas, it can be shown within a group of companies how the Indonesian rainforest is processed into finished books that are "Made in China". The subsidiary company Gold East Paper in China gets the pulp from the Indonesian APP works for the manufacture, among other things, of paper for book printing. The Chinese paper processing company Yalong Paper Products, another company within the Sinar Mas group, processes the paper into picture and drawing books, among other things.

APP and its suppliers, who are incidentally also a part of the Sinar Mas group, are responsible for 40 % of the entire forest destruction in the province of Riau alone, which is located on the Indonesian Island of Sumatra. The island is one of the richest ecosystems in the world. Species such as the orang-utan, the Sumatran tiger, and the Sumatran elephant are threatened with extinction by the destruction of the rainforest, their natural habitat. The destruction of the rainforest in Indonesia has global ecological consequences as it causes a gigantic production of greenhouse gases and thus contributes significantly to global warming. According to a WWF investigation, in the Indonesian province of Riau alone, deforestation is producing more CO_2 per year than the Netherlands – with an upward trend.

Even for those books printed in Germany, the wood from which the paper is made only seldom comes from domestic sources. In 2008, Germany imported more than 5.4 million tonnes of graphic paper. For the 8.3 million tonnes of graphic paper which were manufactured in Germany, 80 % of the pulp required had to be imported. The origin of the pulp and the wood used in its manufacture is unclear. According to foreign

trade statistics, the Netherlands, Sweden, Denmark, Finland and Brazil are the main countries from which Germany imports its pulp. However, no pulp is manufactured in the Netherlands. Instead, the pulp is transported by boat to Dutch ports from other countries such as Brazil and Indonesia, and then re-exported to other European countries such as Germany.

Thus, for a growing large proportion of books sold in Germany, it is likely that rainforests such as those in Indonesia or tropical forests and other ecologically sensitive forests in Russia or Canada are being destroyed for their manufacture. This risk is particularly high with books coming from Southeast Asia.

What then, according to the WWF, is the solution? And what is responsible book production? In general, as much recycled paper as possible should be used in the manufacture of paper, since the manufacture of recycled paper saves large amounts of energy (and therefore CO_2), water and chemicals compared to the manufacture of virgin fibre paper. Sustainable book production can only be assured by seamless and credible supply chain certification. According to the WWF and other environmental associations, this is at present only guaranteed by the international forest certification of the FSC (Forest Stewardship Council). With its WWF Paper Scorecard, the WWF has developed a user-friendly instrument with which publishing houses and other buyers of paper can assess the ecological footprint of paper and adapt their production to the paper variety with the least environmental impact. The publishing houses have the power within the market to influence the paper industry and to introduce the development of new environmentally friendly printing paper with as high a proportion as possible of recycled fibres and FSC-certified virgin fibres.

For environmentally and forest-friendly book production the WWF calls on publishing houses to:

- use recycled paper and paper with a high recycled content.
- use FSC-certified paper or pulp if virgin fibres are required.
- give priority to bleached products that are totally chlorine-free (TCF).
- use the WWF Paper Scorecard to find the most environmentally friendly alternative for a given product.

1 The German Book Market – Production and Import

In 2008, more than one billion books at a value of almost 4.6 billion euros were produced in Germany.

- According to the production report of the German Federal Statistical Office this includes 46.6 million children's books at a value of 182 million euros
- and 15.7 million picture books at a value of almost 59 million euros[1].
- Children's books hence account for 4 % of the book production in Germany,
- and picture books for 1.3 %
- In 2008, 22 companies with 20 and more employees produced children's books and nine companies produced picture books (the German Federal Statistical Office only lists companies with a minimum of 20 employees in its production report).
- Within 5 years the amount of children's books produced by these companies in Germany decreased by 24 %[3].
- **The share of production of children's and picture books is significantly lower than their share of turnover in the book trade.**

The decrease in production took place between 2004 and 2006. In 2007, the production improved greatly due to the high number of copies of the "Harry Potter" book and dropped only slightly in 2008. In terms of copies, the production of picture books of the large companies even rose by 12 % between 2004 and 20083. There is no official statistical data on the development of production and turnover of all publishing houses for children and young people (including companies with less than 20 employees).

- According to a quick survey of the German Book Trade Association, however, a + 3.27 % turnover was registered for publishing houses for children and young people, which constitutes the highest growth rate of all segments[3]. **Given the decreasing production figures in Germany, this turnover growth can presumably be attributed to the increase in imports.**

In the foreign trade data available on the websites of the German Federal Statistical Office and the Statistical Office of the European Communities, Eurostat, books for children and young people are not listed separately, but along with all other books. Only picture books and drawing books for children are listed separately, as are encyclopaedias, dictionaries and loose-leaf-collections.

- **According to the foreign trade statistics of Eurostat[2], Germany imported a total of 121,460 tonnes of books at a value of 572 million euros in 2008.**
- Picture books for childrena account for 4 % thereof, equalling 4,899 tonnes at a value of 16.9 million euros.
- Text-heavy children's books are not reported separately, but are included in the group of hardbacks (excluding dictionariesb and picture books). This group accounts for 90 % of book imports, equalling 108,575 tonnes at a value of 490 million euros.
- In terms of value, Great Britain is the most important country of origin for book imports. 14,097 tonnes of books at a value of 110.8 million euros were imported from there. These numbers, however, might primarily refer to English-language books, as probably is the case with imports from the USA, which represents the third most important country of origin in terms of imports.
- Measured by the value of book imports, China is only the second important country of origin with 95.4 million euros. **Nevertheless, considering the amount of imported books, China has already replaced Great Britain as most important country of origin since 2006.** In 2008, 34,050 tonnes of books were imported from China, twice as much as from Great Britain. Altogether, measured by the amount, 28 % of imported books came from China.
- In addition, another 7,678 tonnes of books at a value of 19.6 million euros were imported from the Special Administrative Region Hong Kong in 2008.

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[a] Children's albums and books, whose main characteristic are pictures, while text is only of minor importance.

[b] Works of reference, containing a list of words or other linguistic units, mostly in alphabetical order, matching explanatory information or linguistic equivalents to each entry.

- **Imports from Hong Kong included, China would also represent the most important country of origin of books imported to Germany in terms of value, accounting for 41,728 tonnes and 115 million euros.**
- Furthermore, books are also imported from other Asian countries, especially Southeast Asia.
  - 3,466 tonnes of books at a value of 10.2 million euros, for instance, were imported to Germany from Singapore,
  - 2,095 tonnes at a value of 3 million euros from Indonesia,
  - 779 tonnes at a value of 1.8 million euros from Malaysia, and
  - 746 tonnes at a value of 2.4 million euros from Thailand.
- **In terms of quantity, a total of 42 % of German book imports come from Asia, amounting to more than 51,000 tonnes.** Measured by value, however, the imports from Asia only account for 25 %. Books imported from Asia are generally of lower value compared to books imported from the USA or Western European countries.

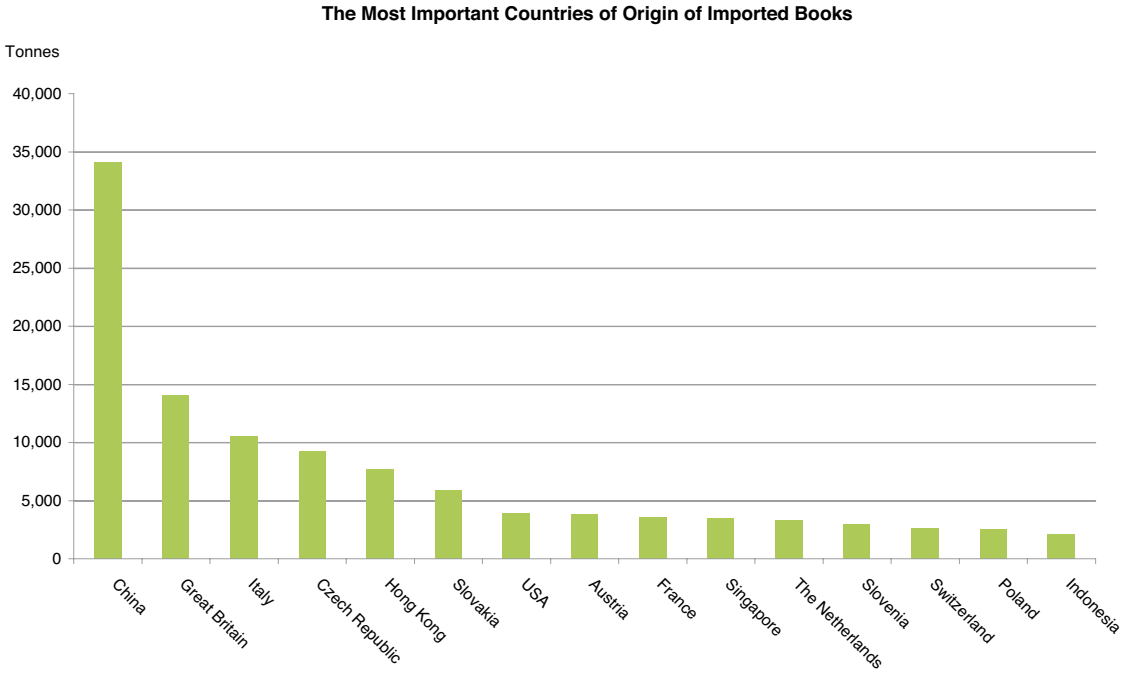

Figure 1: The 15 most important countries of origin of books imported to Germany in 2008. Source: Eurostat[2]

- **Within the last 10 years, the amount of books imported from Asia has increased fivefold.**
- **China is the driving force for this development. Book imports from there have increased almost tenfold within the last 10 years.** Evidently, more and more German publishing houses have their books manufactured there.

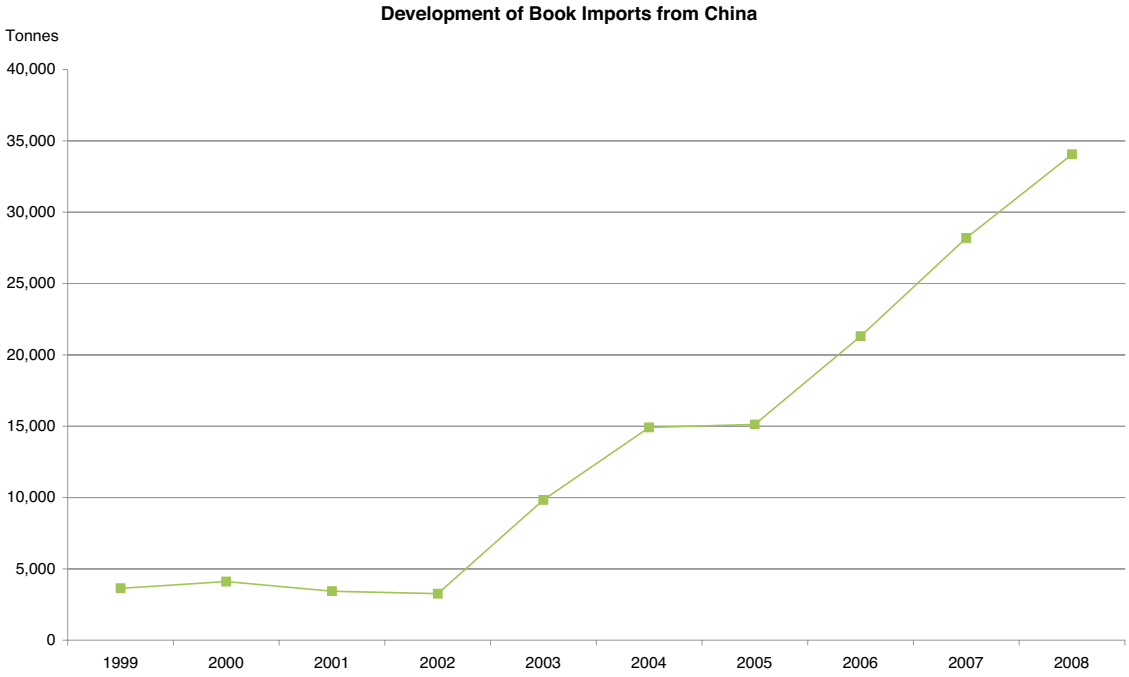

Figure 2: The development of German book imports from China between 1999 and 2008. Source: Eurostat[2]

- The relocation of production of German publishing houses to Asia, and particularly to China, becomes especially apparent in the group of "picture albums, picture books as well as sketch and drawing books for children", which is listed separately in the foreign trade statistics. In 2008, Germany imported a total of 4,899 tonnes of picture books at a value of 16.9 million euros. Three quarters thereof, equalling 3,668 tonnes at a value of 12.2 million euros, come from Asia, **with China being the most important country of origin by far. 55 % of imported picture books come from there, even 62 % when the Chinese Special Administrative Region Hong Kong is included** (3,015 tonnes in 2008). 2,702 tonnes of picture books thereof, at a value of 9 million euros, were imported from China, and a further 313 tonnes at a value of 823,000 euros from Hong Kong. In addition, 150 tonnes of picture books were imported from each of the three Southeast Asian countries Malaysia, Singapore and Indonesia.

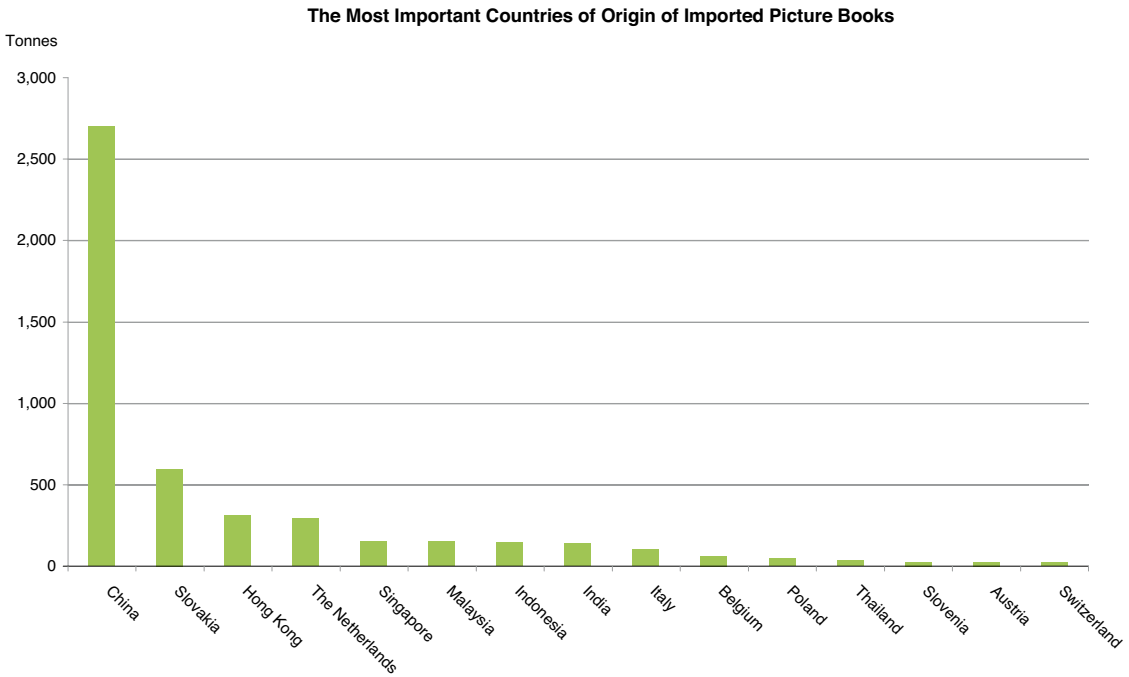

Figure 3: The 15 most important countries of origin of picture books imported to Germany in 2008 Source: Eurostat[2]

Furthermore, it seems reasonable to suppose that part of the picture books imported to Germany from the Netherlands essentially comes from Asian countries and has merely been imported into the Dutch ports. This can be concluded due to the fact that the value of a tonne of picture books imported from the Netherlands, amounting to an average of 476 euros, is in fact significantly lower than the value of picture books imported from the neighbouring country Belgium, but is approximately as high as the value of picture books imported from Asia.

- **The quantity of picture books imported to Germany from China has increased more than fivefold within the last 10 years.** Since 2006 in particular, the imports of picture books from the People's Republic have soared to more than double. Between 2007 and 2008 alone, these imports have increased by almost 70 %[2]. As picture books are often equipped with small details through costly handiwork, more and more publishing houses award their printing contracts to China[3].

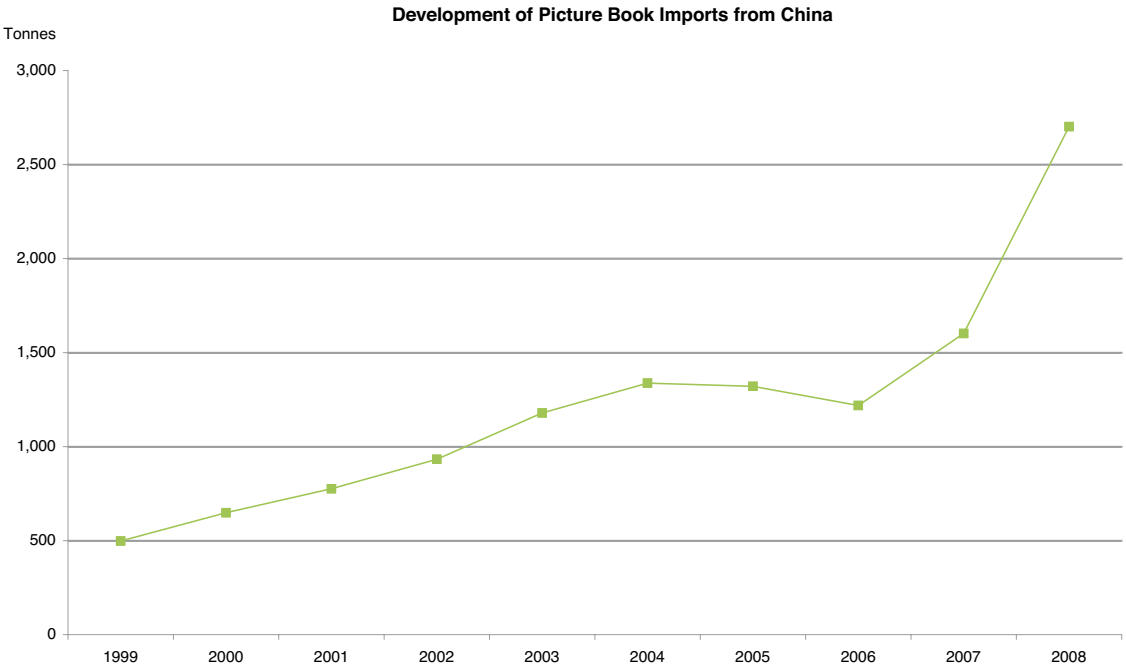

Figure 4: The development of German picture books imports from China between 1999 and 2008. Source: Eurostat[2]

1.1 The German Children‘s Book Market

In 2008, the German book trade generated a total turnover of 9.6 billion euros.

- **Books for children and young people account for almost 15 % thereof, i.e. 1.4 billion euros.**
- The share of turnover of hardbacks in the children’s book segment is 76 %.
- Paperbacks and audio books are represented with an almost equal number of copies, with a share of turnover of 13 % and 11 %, respectively.

This is to say that the share of audio books in the segment for children and young people is above average, the share of paperbacks, however, is significantly lower. The share of turnover of hardbacks, on the other hand, equals their share of turnover on the entire German book market.

Compared to 2007, the share of books for children and young people in the total turnover of the book trade has decreased from 15.4 % to 14.6 %. The publishing of bestsellers in the respective year, however, has significant impact on sales figures and turnover for books for children and young people. Special impact is attributed to so-called all-age bestsellers as they are also read by a great number of adults, but appear in the statistics among the books for children or young people[4]. Depending on whether these bestsellers appealing to all ages are listed among children’s books up to age 11 or among books for young people starting from age 12, these segments register a boost of turnover or in the subsequent year a severe drop of turnover. The statistics for the German book trade, for example, lists the successful “Harry Potter” books among children’s books up to age 11. Contrary to 2008, a new volume of the “Harry Potter” series was published in 2007, greatly improving proceeds for books for children and young people.

Segment of Books for Children and Young People	Share of Turnover	
	2007	2008
Picture books	14.1	16.1
Books to read aloud, fairy tales, legends, rhymes, songs	6.4	6.1
Age of first reading, preschool age	4.9	5.4
Children’s books up to age	34.4	27.0
Books for young people starting age	30.8	25.4
Biographies	0.3	0.2
Non-fiction books/ non-fiction picture Books	12.8	13.1
Play, learn	6.4	6.7

Table 1: Breakdown of the segment of books for children and young people as well as the turnover obtained in 2007 and 2008. Source: media control[3]

- Children’s books up to age 11 have the largest share of turnover within the segment of books for children and young people. In 2007, the share amounted to 34.4 % due to “Harry Potter”, while it dropped significantly to a share of 27 % in 2008.
- Books for young people starting from age 12 have the second largest share of turnover, having improved their share from 20.8 % to 25.4 % compared to the previous year. This development can primarily be attributed to the “Twilight” novels, which are also read by a large number of adults, while the statistics list them among the books for young people starting from age 12.
- Picture books have the third-largest share of turnover, accounting for 16.1 %, followed by non-fiction books and non-fiction picture books with a share of 13.1 %[3]. In 2008, picture books in particular increased their share of turnover in the German book trade significantly by 9.7 % compared to the previous year[5].

In 2008, the number of first editions of books for children and young people increased by 8 % compared to the previous year, amounting to 7,319 titles. The first editions of books for children and young people account for 8.8 % of the total of first editions published in 2008. With 10.72 euros, the average retail price of first editions from the segment of books for children and young people is significantly lower than the one of books at large, accounting for 24.62 euros[3].

Mothers are the ones who usually buy books for children and young people. An analysis of the buyers’ structure[5], published in 2007, shows that approximately twice as many women than men buy these kinds of books. According to this analysis, in 2006 a total of 20.6 % of Germans older than age 10 and living

in private households, equalling 13.2 million people, bought books for children and young people, the household income serving as decisive factor. The higher the income, the higher the proportion of people buying books for children and young people. In the group of 30- to 49-year-olds, which accounts for 50 % of the book sales for children and young people, this share of buyers is particularly high. Sales drop only slightly with increasing age, as the generation of grandparents also represents an important group of buyers with a share of 23 % of sales. Children and young people up to age 19 constitute a mere 7 % of sales of books for children and young people, while adults starting from age 20 represent 93 %. These figures, however, refer to the person who formally buys and pays the book and do not reveal to what extent the children have had an impact on the decision to purchase[6].

1.2 Publishing Houses for Children's Books

A great number of publishing houses for children's books are part of a publishing group. Often, those publishing houses for children's books are imprints, i.e. brands which are treated like a publishing house in the book trade but are no real independent publishing houses in terms of company structure. Figures regarding turnover are usually only available for the publishing group as a whole.

Hence, the following is an overview of the largest German-language publishing houses, which also publish children's books, only. Listing them based on turnovers generated by children's books, however, was not possible. Moreover, bestsellers which are listed among children's books, but are also read by a great number of adults would greatly influence such a list. Therefore, the Carlsen publishing house would presumably have been the leading publishing house for children's books in terms of turnover when it published a new volume of the "Harry Potter" series. In the subsequent year, lacking the "Harry Potter" effect, the turnover of Carlsen publishing house literally plummeted from 80.3 million euros to 48.4 million euros[4].

Publishing Group	Turnover (Million Euros)	Publishing Houses for Children's Books
Klett-Gruppe	434	Esslinger, Klett Kinderbuch
Cornelsen Verlagsgruppe	354	Patmos
Random House	259	cbj
Westermann Verlagsgruppe	247	arena Verlag
Weltbild	175	Weltbild
BI/Brockhaus	90	Kinderbrockhaus
Rowohlt	79	rororo rotfuchs
S. Fischer	71	S. Fischer
Friedrich Oetinger	54	Ellermann, NordSüd, Xenos, Verlag Friedrich Oetinger
Ravensburger Buchverlag	51	Ravensburger Buchverlag Otto Maier
Carlsen	48	Carlsen

Table 2: Overview of the largest German-language publishing groups, which publish children's books. Source: Buchreport[4]

2 The Origin of Paper and Fibres

Books are made of so-called book paper. The statistics list this book paper in the group of graphic papers, together with the paper used for magazines, catalogues and brochures. Only newsprint is listed separately. For black and white printing of text-heavy books for children and young people, the paper used is generally uncoated. Smooth coated paper is used for printing illustrations, as for example in picture books.

Depending on the desired quality, fibres of different origin, such as wood pulp, chemically produced sulphite and sulphate pulp, and diverse manufacturing processes are mixed for the manufacture of paper. In addition, fibres from recycled papers can be used, for instance, for the manufacture of paper with a recycled content of 30 %. Paper with a mechanical wood pulp content of less than 10 % is misleadingly called "wood-free". Yet, it consists of pulp which was chemically processed from wood fibres. In this process, one of the constituents of wood, namely lignin, is dissolved and removed, as a result of which the second basic substance of wood, namely cellulose, remains as pulp. With 40 % to 60 %, the yield is significantly lower compared to mechanical wood pulp, which still contains lignin[7]. Furthermore, the chemical production of pulp has a substantially higher environmental impact. For durable products such as books, mainly papers with a low content of wood pulp are used, as lignin causes the yellowing and browning of paper when exposed to sunlight. The statistics distinguish between graphic papers with a wood pulp content of 0 % to 10 % and paper with a wood pulp content of 10 % to 100 %, which, while allowing a broad range, does not offer inferences about the proportions of wood pulp, pulp or recycled fibres contained in the respective paper.

2.1 Paper Production and Pulp Imports in Germany

In 2008, a total of almost 8.3 million tonnes of graphic papers was produced in Germany, newsprint excluded. Coated paper accounts for almost 4.7 million tonnes thereof, and uncoated paper for almost 3.3 million tonnes. Recycled paper and other paper accounts for a further 332,000 tonnes. Coated and uncoated paper, however, might also contain a certain amount of recycled fibres. According to data provided by the German Pulp and Paper Association, the proportion of recovered paper used for graphic papers, excluding newsprint, amounted to 28 % in 20088.

In addition to this, Germany imported more than 5.4 million tonnes of graphic paper in 2008. Coated paper accounts for almost 3 million tonnes thereof, and uncoated paper for almost 2.4 million tonnes.

- Finland is the most important country of origin; with imports of graphic papers from there amounting to more than 2 million tonnes.
- It is followed by Sweden with 737,308 tonnes
- and Austria with 570,844 tonnes.
- The fourth most important country of origin is Switzerland, accounting for 455,936 tonnes. The majority of imports from there consist of coated wood-free paper; in 2008 this amounted to 362,197 tonnes. This is double of Switzerland's own consumption of coated wood-free paper, which is why Switzerland has to import 99 % of the pulp for the manufacture of this paper[9].
- A comparatively few amount of paper is imported from Asian countries; 1,934 tonnes from China, 2,281 tonnes from Indonesia and 2,447 tonnes from Hong Kong.
- **Twenty times as much paper is imported from China in the form of books than in the form of unprinted paper. The amount of picture books alone is 1.4 times as high as the amount of paper coming from China.**
- **Book and paper imports from Indonesia are almost equal[2].**

Of the fibrous raw material used for the manufacture of paper in Germany, only the wood pulp and the recycled fibres are mainly produced domestically. **Germany has to import 80 % of its pulp[8]**. This is due to the fact that sulphate pulp is mainly used for the manufacture of paper as it has longer fibres than sulphite pulp and hence also a higher tear resistance. The production of sulphate pulp, however, has an extremely high environmental impact. Due to such environmental aspects, there was no sulphate pulp production in Germany for a long time. It was only at the end of 1999 that the production of sulphate pulp in Germany was resumed under strict environmental obligations[10]. On a global scale, however, 80 % of pulp remains being produced using the sulphate process[11].

Of the 4.7 million tonnes of sulphate pulp used in Germany in the year 2008, 4.4 million tonnes had to be imported[12]. The two most important countries of origin of pulp are the same as those of the paper imports.

- Sweden, accounting for 23 % of imported sulphate pulp,
- and Finland, accounting for 16 %[2].
- These two Scandinavian countries are followed by Brazil
- and the Netherlands, each accounting for 12 % of sulphate pulp imported to Germany[2]. There is, however, no pulp production in the Netherlands[12]; therefore, the pulp imported to Germany from the Netherlands evidently comes from other countries. It can be supposed that it was imported by boat into the port of Rotterdam and initially registered as import into the Netherlands. According to EU foreign trade statistics, in 2008, more than 1 million tonnes of sulphate pulp were imported to Europe from South America, especially from Brazil, via the Netherlands. 16,000 tonnes of pulp were imported to the Netherlands from Indonesia, where the pulp and paper industry contributes significantly to the destruction of the rainforest[2].
- In 2008, Germany only imported 1,200 tonnes of pulp directly from Indonesia[2].

This example, however, shows that the figures provided by the foreign trade statistics cannot rule out the possibility of further amounts of pulp from Indonesia and other critical countries of origin being imported to Germany via third countries such as the Netherlands, for manufacturing paper. Ultimately, only FSC-certified products provide the buyer with a guarantee that the pulp and paper have not been manufactured with wood coming from illegal logging or non-sustainable forest management – regardless of the country in which the paper was manufactured.

In turn, the lion's share of wood pulp is produced in Germany. In 2008, almost 1.4 million tonnes of wood pulp were produced in and 285,000 tonnes imported to Germany, while only 96,000 tonnes were exported[8]. However, wood pulp only accounts for a quarter of the virgin fibres needed for the manufacture of paper, while chemical pulp, mainly sulphate pulp, accounts for three quarters. Also recycled fibres are mainly produced in Germany through waste paper recovery. Imports and exports of recovered paper are more or less equal. In Germany, the use of recovered paper in the manufacture of graphic papers amounts to 28 %[8], which is significantly above the European average of 10 %.

2.2 Paper Production and Pulp Imports in China

In recent years, China has grown to be one of the global players in the paper industry. **About half of the worldwide increase in the manufacture of paper and cardboard since 1990 can be attributed to China.** A large part of the raw material needed, i.e. the fibres, has to be imported. China's demand has great impact on the global wood trade in general, and on neighbouring countries such as Russia and the Southeast Asian countries in particular[13].

China also processes a large amount of recovered paper, which is, however, mainly used for the production of packing material for its export goods. Of the 83 million tonnes of fibres China used for the manufacture of paper and cardboard in 2007, two thirds came from recovered paper, equalling almost 55 million tonnes. 43 % of the recovered paper was imported[14].

	Tonnes	Value (1,000 US$)
Canada	2,057,418	980,120
Indonesia	1,274,385	554,243
Brazil	1,257,896	528,316
Russia	973,160	414,288
USA	747,521	403,533
Chile	640,005	334,036
Finland	207,157	121,520
New Zealand	198,377	98,995
Sweden	170,025	95,215
Japan	133,903	68,939

Table 3: The 10 most important countries of origin of Chinese pulp imports 2006. Source: FAO

For the manufacture of paper, China used 28.5 million tonnes of pulp in 2007. Almost half thereof, namely 13.5 million tonnes, was pulp produced from straw and other non-woody constituents of plants in China itself. Yet, due to its short fibres, the pulp is of inferior quality and the paper manufactured thereof has a low tear resistance. As a result, this paper does not qualify for exports or the use in the production of books intended for export, but is used for domestic products only.

For the manufacture of book paper, however, pulp made of fresh wood fibres is used, the great majority of which has to be imported to China. **China has to import 60 % of the 15.6 million tonnes of pulp that is produced of fresh wood, i.e. 9.3 million tonnes.** By way of comparison, this equals more than triple of Germany's total pulp production in 2006, an amount of 2.9 million tonnes. China's dependence on imports becomes even more apparent with regard to **chemically produced pulp which is used for so-called "wood-free" paper and which does not yellow over time. Three quarters of the 10 million tonnes of chemically produced pulp needed for China's manufacture of paper are imported.** Both consumption and import of wood fibres for the Chinese manufacture of paper have increased threefold between 1998 and 2007. A detailed listing of the countries of origin is only available until 2006. According to this listing, the most important countries of origin in 2006 were

- Canada, providing a quarter of the imported wood fibres,
- followed by Indonesia and
- Brazil, each accounting for 15 %, and
- Russia, accounting for 12 % (table 3).

Pulp imported from Russia and Indonesia is especially precarious since illegal logging and non sustainable forest management are widespread practices in these countries. In the Russian Far East, a region bordering China, an estimated 50 % of the wood comes from illegal logging; in Indonesia it is even said to be three quarters. In addition, the Indonesian pulp and paper industry is one of the driving forces of rainforest destruction.

The Chinese paper industry now plays the dominant role in the global pulp trade. China is the world's largest buyer of pulp, preceding the USA. Almost 17 % of the pulp on the world market is exported to China. In 2006, Canada was the most important export country for pulp worldwide, its exports amounting to 11 million tonnes. 45 % of Canada's pulp exports are shipped to the neighbouring USA, while China represents the second most important purchaser, accounting for 19 % of Canadian pulp exports, a percentage equalling 2.1 million tonnes. On a global scale, Brazil is the second most important export country for pulp. Accounting for a volume of 6 million tonnes, it ranks just ahead of the USA in

the year 2006. China is the most important purchaser for Brazilian pulp, ahead of the USA, Germany and Italy. In 2006, more than 20 % of Brazilian pulp exports were shipped to China.

The Chinese paper industry is hungry for raw materials, which becomes even more apparent when taking into account Russia's and Indonesia's pulp exports. In 2006, for instance, 51 % of the 1.9 million tonnes of pulp exported from Russia were shipped to China. According to the FAO, Indonesia produced 3.6 million tonnes of pulp in 2006, 2.7 million tonnes of which were exported. 47 % of the Indonesian pulp exports went to China, just as 36 % of the pulp production. **More than a third of the pulp produced by Indonesia is destined for the Chinese paper industry.**

2.3 Case Study Indonesia: Tropical Forest Destruction by the Paper Industry

In Indonesia, pulp is produced mainly by the two large companies **Asia Pulp & Paper (APP)** and **Asia Pacific Resources International Holdings (APRIL)**. The Indonesian pulp mills of both companies are located on the Island of Sumatra. Using the example of APP and its parent company **Sinar Mas**, it can be shown within a group of companies how the Indonesian rainforest is processed into finished books that are "Made in China".

APP is the largest pulp and paper company in Indonesia and the third largest worldwide, with an annual capacity of more than 15 million tonnes in the sector of pulp, packing and paper processing[15]. It is part of the Sinar Mas group, owned by the Wijaya family, an Asian family of entrepreneurs. According to its last environmental report, APP produced more than 2.5 million tonnes of pulp in Indonesia in 200516. APP thus produces more than half of the total pulp made in Indonesia. In the province of Riau on the Island of Sumatra, APP has a pulp mill with an annual capacity of 2 million tonnes and another one in the adjacent province of Jambi with an annual capacity of 0.7 million tonnes[17]. Moreover, APP and its parent company Sinar Mas by now own more than 20 pulp and paper mills in China, including Gold East Paper with a capacity of 2 million tonnes of paper. **Gold East Paper** is the largest manufacturer of wood-free coated paper worldwide and, manufactures paper for book printing, which is sold under the name **Nevia**[18], among others. The necessary pulp comes from APP-owned pulp mills in China and Indonesia[19]. Additional pulp is purchased from Brazil and Canada. Gold East claims the role of market leader in China with a share of 45 % for the sector of wood-free coated paper. In 2006, Gold East exported 730,000 tonnes, which equals 36 % of its total production. 180,000 tonnes thereof were exported to member states of the European Union; a further 26,000 tonnes were exported to other European countries[19]. Yalong Paper Products, a paper processing company based in China with an annual capacity of 200,000 tonnes, also belongs to the Sinar Mas group. It uses the paper to produce hardbacks as well as picture and drawing books for children. In addition to the domestic market, **Yalong Paper Products** also delivers these books to the international markets in Europe, USA, Japan and Hong Kong[20].

Although APP has been producing pulp in Indonesia for decades, this large company has not yet guaranteed its supply of raw materials by means of responsible wood plantation management. **For its pulp production the company therefore uses wood coming from the large-scale clear-felling of natural rainforests[21]. According to WWF estimates, APP obtains around 70 % of the wood used for its pulp production from natural forests instead of plantations[17]. In the province of Riau alone, APP cleared approximately 80,000 hectares of rainforest for the production of pulp in 2005, which equals 40 % of Riau's total forest destruction in the same period of time[21]. In the same year, a further 30,000 hectares of rainforest were destroyed for APP's local pulp mill in the province of Jambi[17].** Riau's deforestation rate has been increasing at a steady rate since 1982, with two exceptions. Between 2000 and 2002 deforestation significantly dropped for the first time when APP faced financial difficulties and had to suspend investments temporarily. 2006 to 2007 was the second time of a substantial decrease, which coincided with the investigation of the pulp industry's involvement in illegal logging.

In this, the aim of establishing plantations is often used as a pretext to continue clearing natural forests. In 2004, 4.07 million hectares of land were licensed for pulp plantations in Indonesia. However, in fact only 1.5 million hectares of land were used to establish monocultures for pulp production. In Riau, the licences of APP and its competitor APRIL already cover a quarter of the province's surface area. **Whenever rainforest is cleared for plantations, the wood is mostly used by these two companies for the pulp production[21].** Time and time again this gives rise to conflicts with the population as well as to human rights violations when land is appropriated and the local population is denied access to formerly public territory[22]. In August 2008, for instance, the National Human Rights Commission of Indonesia ascertained that the plantation company **PT Arara Abadi**, which is part of the Sinar Mas group and supplies its associate company, APP, with wood, continually violated human rights by using methods of intimidation in the conflict over land with the indigenous tribe of the Sakai[23]. In December 2008, the commission criticized human rights violations anew when the plantation company destroyed 500 houses of a village in a joint operation with the local police. A **two-and-a-half-year-old child was killed** in the process and the inhabitants of the village whose territory the company claimed were arrested or displaced[24].

The Indonesian Island of Sumatra, where the pulp mills of APP and APRIL are located, is one of the richest ecosystems in the world. During a scientific research on behalf of the WWF in the Tesso Nilo Forest Complex in the province of Riau, for instance, a diversity of vascular plant species was found which was higher than anywhere else in the world[25]. Next to the orang-utan, Sumatra's fauna boasts subspecies that only occur in this region, such as the Sumatran rhinoceros, the Sumatran elephant and the Sumatran tiger. **These species are extremely threatened with extinction by the destruction of their natural habitat, the rainforest.**

Within the last 25 years the number of elephants in Riau has been decreasing much faster than the forest area. It fell by 84 % to only 210 elephants in 2007. Several local elephant populations are already extinct[21]. The Sumatran tiger is the last surviving tiger subspecies in Indonesia. On the islands of Bali and Java the tiger was already eradicated in the previous century. Between 1982 and 2007 the number of tigers in Riau dropped by 70 % due to the destruction and fragmentation of their natural habitat. One of the last refuges for the two endangered species is the Bukit Tigapuluh National Park and its adjacent forests. This is also the location of the only successful resettlement project for the extremely endangered Sumatran orang-utan. The APP / Sinar Mas group just recently obtained the license to clear large parts of the forests surrounding the national park. If the plans are turned into practice, this will have devastating consequences for some of Sumatra's most endangered species[26].

The destruction of the rainforest in Indonesia has global ecological consequences as it causes a gigantic production of greenhouse gases and thus contributes significantly to global warming. Due to its destruction of rainforest, Indonesia comes in third place after the USA and China, being the third largest producer of carbon dioxide worldwide. In the province of Riau (Sumatra) alone, between 1990 and 2007, 3.66 billion tonnes of CO_2 were emitted into the atmosphere through destruction and degradation of rainforests and the subsequent decomposition of peatlands. According to a WWF investigation, in the Indonesian province of Riau deforestation is producing more greenhouse gas emissions per year than the Netherlands – with an upward trend[21].

This extremely high emission of carbon dioxide can be attributed to the fact that the Indonesian rainforests often grow on peatlands. 124 to 194 tonnes of carbon per hectare are stored in the vegetation of these peat swamp forests; in the peatlands, however, twenty times as much carbon is stored per hectare, amounting to 2,850 tonnes[27]. Upon draining of the peat swamps and destruction of the rainforest, the peat soil starts to decompose. The carbon combines with oxygen and is released into the atmosphere in the form of carbon dioxide. This process is accelerated when the peat catches fire, as can occur in dry years. The dense clouds of smoke arising in the process are not only detrimental to the health of Indonesia's inhabitants alone, but also to the people of its neighbouring countries. Peat fires are the greatest cause for carbon dioxide emissions in Indonesia's Sumatran province of Riau. 38 % of CO_2-emissions between 1990 and 2007 can be put down to peat fires, a further 21 % can be attributed to the decomposition of peatlands. Destruction

of rainforests contributes to these CO_2-emissions with a total of 32 %, while their degradation accounts for a further 9 %[21].

With only a few remaining dry lowland rainforests the pulp companies focus their clearing activities on peat swamp forests, which, as already mentioned, further aggravates the problem of CO_2-emissions. According to the land use plan for Riau, a further million hectares of rainforest is supposed to be cleared until 2015. The pulp industry would be responsible for three quarters of this deforestation; 85 % of the rainforest in question are peatlands[21]. **The greenhouse gas emissions in Riau caused by APP's share in the deforestation, i.e. the destruction of rainforest, in the province are equal to the carbon dioxide emissions of Greece.** These emissions will increase significantly, should the company carry out its planned clearings of the peat swamp forests.

3. Tropical Timbers in German-Language Children's Books

More and more books sold in Germany are produced abroad, especially in Asia (development: see fig. 2 and 4). A total of 35 % of German book imports come from China, which equals an amount of 41,000 tonnes of paper. It is much harder to retrace the origin of the wood used to manufacture paper and to make sure no tropical forest was destroyed in the process, for products coming from Asia than it is already for books manufactured in Germany. The manufacture of children's books in particular continues to be relocated to China. For this reason, the WWF has randomly tested children's books of German-language publishing houses which were manufactured in Asia for tropical timbers. It is the first extensive analysis of this kind. The tests for the types of wood contained in the paper were carried out in the IPS laboratory (Integrated Paper Services) in Appleton, Wisconsin/ USA from December 2008 through August 2009.

The result is as follows: almost 40 % of the books were tested positive for percentages of tropical timbers.

German-language children's books manufactured in an Asian country constituted the main subject matter of the investigation. The papers of these books were tested for their composition of wood types. It is possible to distinguish between tropical wood types which are not typically used in plantations but grow in tropical rainforests and plantation timbers. Plantation timbers such as acacia or eucalyptus were listed separately in the analysis and were not counted among the group of tropical rainforest timbers within this investigation. The composition and number of certain tree genera allows a conclusion of whether or not the trees cleared for the manufacture of a certain book come from typical tropical forests. Recycled paper or paper layers made from recycled fibres were not included in the analysis. For this purpose, one children's book from each of several German-language publishing houses was randomly picked and sent in for analysis to a scientific research institute. Paperbacks were not included in the analysis.

Books where evidence of tropical wood was found

Within the testing period, 43 German-language publishing houses offered children's books "made in Asia". Both the pages as well as the material of the cover of randomly picked books sold by those publishing houses and purchased randomly in book stores were tested. When a book was tested "positive", i.e. when several genera of tropical trees were detected in a paper, sometimes tests were also carried out for other randomly picked books of the respective publishing house. The WWF tested a total of 51 books.

In 19 of those children's books – equalling almost 40 % – genera of tropical rainforest timbers were found. The titles, some of them rather famous, are as follows:

Title	Publishing House	Printed in	Proportion of Tropical Wood	In the Pages	In the Cover etc.
Mein großes Buch der Fragen und Antworten	Bertelsmann Lexikon Institut	China	10.7 %	X	
Gegensätze entdecken mit dem kleinen Monster	Bloomsbury / Berlin Verlag	China	17.9 %	X	
Bodobär auf der Ritterburg	Coppenrath	China	23.2 %	X	
Spielen, lernen und entdecken mit Bodobär	Coppenrath	China	3.8 %		X
Der kleine Mondbär	Coppenrath	China	16.5 %	X	
Felix bei den Kindern dieser Welt	Coppenrath	China	32.3 %		X
Weltbeste Briefe von Felix	Coppenrath	China	28.13 %		X
Weltbeste Briefe von Felix	Coppenrath	China	14.0 %		X
Auf die Plätze... fertig los	Esslinger (Klett Gruppe)	China	28.5 %		X
Auf die Plätze... fertig los	Esslinger	China	59.2 %		X
Pixel	Fleurus	China	4.6 %	X	
Bei uns zu Hause	Herder	China	20.6 %	X	
Bei uns zu Hause	Herder	China	15.9 %		X
Bei uns zu Hause	Herder	China	22.6 %		X
Erforsche deine Umwelt	Kosmos	China	19.8 %		X
Rekorde der Tierwelt	Kosmos	China	9.6 %	X	
Benjamin Blümchen – Komm mit mir durch den Tag	Lingen / Helmut Lingen	China	8.1 %	X	
Doktor Thompson	Lingoli / Helmut Lingen	China	34.5 %		X
Meine kleine Satzwerkstatt	Moritz	China	59.5 %	X	
Glitzerspaß mit Formen	Norisbooks / manufactured for KIK	China	27.6 %	X	
Wall.E Sticker-Buch	Parragon	Malaysia	16.4 %	X	
Freunde	Pattloch (Drömer Knaur; subsidiary company of Holtzbrinck publishing group and Weltbild)	China	22.6 %	X	
Tiger & Bär entdecken die Welt	Xenos (Oetinger)	China	15.6 %	X	
Tiger & Bär entdecken die Welt	Xenos	China	20.2 %		X

Table 4: List of books containing tropical timbers

In 13 of the 19 books, which is more than 60 %, the rainforest timber was found in the book pages; in six books it was found in the cover material or in attached pieces of paper. Two books contained tropical rainforest timbers both in the pages as well as in the covers and attached pieces of paper. 18 of the books printed with tropical timbers are "Made in China"; one book was printed in Malaysia.

43 publishing houses for children's books were tested and in 13, i.e. almost a third of their products, typical genera of tropical rainforest timbers were detected in the pulp. Of those publishing houses for children's books that were tested positive for typical genera of tropical rainforest timbers, eight belong to the top 100 German-language publishing houses with a focus on books, audio books and specialist literature[28].

With the Asian paper industry in general and the Indonesian paper industry in particular being responsible for massive tropical rainforest destruction, as mentioned above, the results of the analysis seem plausible.

Separate random samples among non-children's books produced in Asia have shown that tropical timber was also used for their manufacture, proving that the problem is not limited to the children's books sector. These analyses, however, were not as extensive as the investigations carried out for the children's books sector.

The Wood Genera

The laboratory was able to assign 17 tropical tree genera to respective references. These tree genera are typically not grown on plantations. Evidence of the plantation woods typically used by the paper industry such as eucalyptus and acacia was also found in the papers analysed. It is possible that tropical rainforest was also destroyed to create these plantations. This aspect is not addressed, however, in any more depth in this study. The tropical tree genera are as follows:

Genus	Tropical Range[29]	Number of Species in this Genus	Species on the IUCN Red List
Albizzia spp.	pantropical	unknown	none
Alphonsea spp.	India and Sri Lanka	unknown	7
Calophyllum spp.	Southeast Asia	190	47
Dacroydes spp.	Southeast Asia and Africa	unknown	11
Dillenia spp.	Southeast Asia , Australia, Islands in the Indian Ocean	60	7
Dipterocarpus spp.	Southeast Asia	70	46
Endospermum spp.	Southeast Asia and Australia	10	none
Eugenia spp.	pantropical	1.000	158
Gonocaryum spp.	South- und Southeast Asia	10	none
Lithocarpus spp.	Southeast Asia	300	14
Macaranga spp.	mainly Southeast Asia	260-300	14
Michelia spp.	Southeast Asia	70	8
Nephelium spp.	Southeast Asia	20	3
Parashorea spp.	Southeast Asia	15	8
Rhizophora spp.	pantropical	10	1
Shorea spp.	Southeast Asia	200	148
Stemonorus spp. (auch Anacolosa spp.)	Southeast Asia	unknown	none

Table 5: Identified genera in the ranges

In addition, several other tropical hardwoods (also not qualifying as plantation timbers) were found, which could, however, not be clearly assigned to a single reference. The lion's share of the identified genera listed mainly in Southeast Asia. Some of the genera are pantropical. Considering the used timbers, it can furthermore be ascertained that one of the identified genera (Rhizophora spp.) is a mangrove species. Mangroves are forests in the intertidal zone of tropical coasts and rank among the globally most threatened ecosystems due to water pollution, drainage during the process of populating coastal areas, coastal erosions, etc. From an ecological point of view the use of mangrove species for the manufacture of paper is therefore particularly precarious.

Bearing in mind the threat of extinction of the identified tree species, the following becomes apparent: Within the 17 identified genera, 472 species are registered in the IUCN Red List. The genus of dipterocarpus spp., for instance, only occurs in Southeast Asia and includes approximately 70 tree species, 46 of which appear on the ICUN Red List. Even though the individual tree species cannot be determined through the fibre analysis alone, it cannot be ruled out that some of the timbers were used despite having been classified as endangered or critically endangered by IUCN.

The types of wood typical for plantations of the paper industry (eucalyptus, acacia) were listed separately in the results and were not included in the category of "tropical timbers" within this investigation. The detected wood genera do usually not occur in plantations in the respective regions. The logical conclusion is that for those books which were tested positive for tropical wood, with the utmost probability natural tropical forest was destroyed or even cleared (also see chapter "Case study Indonesia").

Since this study was first published in 2009, all of the books mentioned here were also analysed by the Technical University of Darmstadt using the same method. The results of this analysis generally support the results of the first laboratory, Integrated Paper Services (USA).

4 Conclusions and Recommended Action

Since 1960, the global paper consumption has increased fourfold, the one of printing paper even sixfold. At the present time, more than 40 % of the commercially harvested wood is turned into paper products. 10 % of the world population, i.e. Western Europe and North America, consume more than half of the worldwide supply of paper[30]. If the entire world consumed as much paper as the Germans, calculated per capita, the global paper consumption would quadruple – and the consequences for forests and the environment would be devastating[31]. And this, although already at the present time a significant part of the wood comes from non-sustainable forest management and, to some extent, even from illegal logging. It is imperative that the paper industry develop a more sustainable approach to the consumption of resources and the supply of raw materials, as emphasised by the aforementioned examples of endangered species and the problem of CO_2 emissions. The destruction of forests accounts for approximately 20 % of global greenhouse gas emissions.

The industrialised countries have to rigorously reduce their consumption of resources. In cooperation with 48 NGOs (non-governmental organisations), the WWF has developed a joint vision for bringing about a change of the European paper industry. The aim of this vision is a Europe with a paper consumption that is substantially lower than it is today, which maximises the use of recycled material and whose paper industry makes less use of virgin fibres for the manufacture of paper. Furthermore, a Europe that respects the local population's rights to land use, creates jobs and guarantees living standards that are socially acceptable, just and conflict-free. It is envisioned that the paper come from responsible and sustainable forest management and be manufactured using renewable energy and water, that is as clean at the end of the paper production as it was before. The entire process of the manufacture of paper is supposed to be based on the idea of avoiding waste materials and emissions of harmful substances[30].

For the manufacture of paper, generally, as much recycled paper as possible should be used in order to conserve natural resources. Each tonne of recycled paper that is used instead of virgin fibre paper saves one tonne of greenhouse gases, 17 trees and 46,000 litres of water. A life cycle assessment for graphic paper on behalf of the Federal Environment Agency has found out that it is much more environmentally friendly to manufacture paper from recovered paper instead of using fresh wood fibres, as the overall environmental impact is generally lower: Less destruction of unspoiled nature, less consumption of fossil energy and fewer emissions of greenhouse gases. Greenhouse gas emissions caused by the consumption of graphic papers in Germany equals the annual environmental impact of 900,000 people in Germany. Moreover, sulphur dioxide and nitrogen oxide emissions caused by the production of pulp are responsible for soil and water acidification[33]. Long routes of transport for pulp coming from countries in the Southern hemisphere such as Brazil, have an impact on the demand for fossil resources and on the greenhouse effect. Yet, even compared to virgin fibre paper made from Northern pulp, a tonne of recycled paper saves the amount of CO_2 that an average car emits per 1,000 km[34].

The virgin fibre content is supposed to exclusively come from responsible forest and plantation management as to rule out social and environmental repercussion in other countries. By means of the individual stages of production – from pulp to paper to the finished children's book – this analysis shows that the trees used for the manufacture were rarely felled in Germany. Germany has to import 80 % of the pulp used for the manufacture of paper. In addition, a large part of the graphic paper consumed in Germany is imported, in part from countries which in turn have to import the pulp or the wood for their pulp production. Finally, as shown with the aforementioned example of children's books, more and more German publishing houses award their printing contracts to China. Yet, also the pulp for the paper on which these books are printed in China has to be imported. The Chinese paper industry now plays the dominant role in the global pulp trade. By now, half of Indonesia's pulp exports are shipped to Russia and China, where they are processed into paper and books which subsequently are exported to Germany, among others. This analysis takes Indonesia as an example to show how the local pulp and paper industry disrespects the rights of the local population, destroys the rainforest and thus contributes significantly to global warming. In the Russian Far East, approximately half of the wood comes from illegal logging; in Brazil conflicts over land between the paper industry and the population as well as its massive environmental impact are reported at regular intervals. Even in industrialised countries such as Canada or Australia (Tasmania) rainforest continues to

be cleared for the manufacture of pulp and paper. Both are globally traded goods and the wood used can originate from all over the world. Ultimately, only a credible certification system can guarantee that the wood comes from a forest management that is both environmentally and socially responsible.

According to the WWF and other environmental associations, this is at present only guaranteed by the certification of the Forest Stewardship Council (FSC). Other certificates cannot credibly rule out that wood is procured without the destruction of natural forests.

The paper industry belongs to the sectors with the highest consumption of water and energy. The chemicals used in paper production, especially in the manufacture and subsequent bleaching of pulp, can have great environmental impact. When using elementary chlorine, the chlorine combines with wood constituents to form organochlorides such as dioxin and chlorinated hydrocarbons[35]. Some pulp producers still use this process which is highly detrimental to the environment. Through international trade these pulps can also be found in German paper products. When bleaching with chlorine compounds such as chlorine dioxide, elementary chlorine is avoided – the bleach hence being called elementary chlorine free (ECF) – but also this method cannot completely do without organochlorides. The environmentally friendly alternative is totally chlorine-free (TCF) bleach, which avoids both elementary chlorine and chlorine compounds and instead uses oxygen and hydrogen peroxide. However, only 5 % of the global pulp is bleached according to the TCF process and 75 % according to the ECF process. The remaining 20 % are even still bleached with elementary chlorine[36].

Regarding the topic of paper, the WWF has developed the **Guide to Buying Eco Friendly Paper** and the "**Paper Scorecards**" questionnaire, by means of which the most important environmental parameters of paper products can be retrieved from the manufacturers[37]. Publishing houses and other buyers of paper can hence assess the ecological footprint and adapt their production to making use of the paper variety with the lowest environmental impact. The Scorecard integrates the different environmental aspects - from emissions caused by the manufacture of paper to the ecologically responsible origin of paper fibres. The Scorecard thus serves as a means for publishing houses to acquire the relevant information from their paper suppliers and compare with the most environmentally friendly alternatives. As shown with the example of "Harry Potter" the publishing houses in fact have the power within the market to influence the paper industry and to introduce the development of new environmentally friendly printing paper with as high a proportion as possible of recycled fibres and FSC-certified virgin fibres. Especially for the production of children's books the conservation of natural resources should be a priority in order to preserve them for the readers, namely the children.

For environmentally and forest-friendly book production the WWF calls on publishing houses to:

- use recycled paper and paper with a high recycled content.
- use FSC-certified paper or pulp if virgin fibres are required.
- give priority to bleached products that are totally chlorine-free (TCF).
- use the WWF Paper Scorecard to find the most environmentally friendly alternative for a given product.

4.1 Harry Potter as Positive Example

How writers can initiate the development of environmentally friendly book printing paper:

In 2000, Canadian environmental associations launched an initiative of writers with the purpose of putting a halt to the clearing of Canada's virgin forests on the part of the paper industry. With this initiative, meanwhile important at an international level, renowned writers such as Günter Grass or Joanne K. Rowling, the author of "Harry Potter", champion the exclusive printing of their work on recycled paper or paper coming from FSC-certified sustainable forest management.

Joanne K. Rowling also accomplished this in her German publishing house. The German edition of the sixth volume in the "Harry Potter" series was the first to be printed on FSC paper containing recycled fibres. On the initiative of the Carlsen publishing house the paper manufacturer Cordier developed an ordinary book printing paper with a new composition of raw materials. After intensive preparatory work in the laboratory as well as several trials for testing purposes it was possible to achieve a 40 % share of recycled fibres (post-consumer). The remaining 60 % of the fibre material were produced with FSC-certified pulp. Despite its content of recycled fibres this new type of paper still meets the quality criteria required for book printing paper, such as colour, opacity, and surface texture. It was manufactured in the paper mill in Schleipen, certified as FSC mixed[38]. Meanwhile, other manufacturers of paper have followed suit and now produce FSC-certified book printing papers with a proportion of recycled fibres.

Harry Potter therefore serves as an example to show that such a turnaround is possible on the basis of determination and technical developmental work. It would be advisable to have FSC-certified qualities for image printing paper as more and more printing contracts for illustrated books are awarded to countries abroad, especially to China. In this, however, there is again a high risk that the books printed in China contain fibres coming from forest destruction or illegal logging, as already pointed out.

4.2 Random House as Positive Example

One of the leading publishing groups, Random House Deutschland, by now uses either recycled papers or FSC-certified virgin fibre papers for almost its entire book production. This is why the publishing house demands a turnaround towards a significantly higher share of FSC-certified papers of its suppliers[39]. As a pioneer for FSC-certified papers in the German book trade, Random House Deutschland has annual sales of approximately 50 million paperbacks and an additional 15 million hardbacks displaying the FSC logo.

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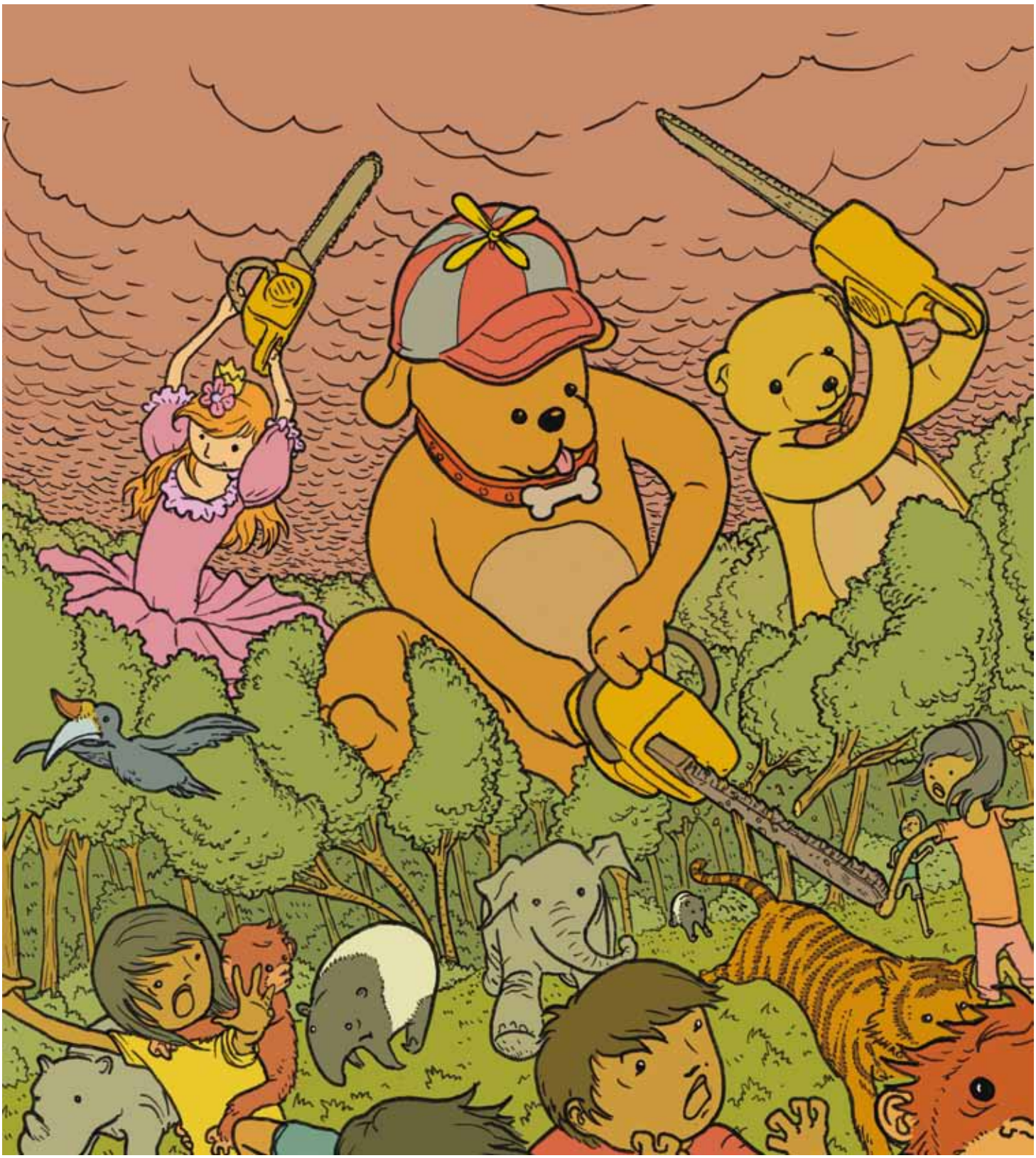

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