Paper was invented 1,900 years ago and today it is an integral part of our daily life: as a print medium to communicate information and knowledge, as a packing material, for daily hygiene, or as a special material for a variety of applications, from banknotes to medical filters.
As with all production activities, paper-making uses resources. Unlike other materials, however, paper has major environmental advantages. It is made from wood, a renewable raw material, and is a prime example of successful recycling.

Environmental issues are a source of numerous misconceptions and untruths, we should like to address.

www.vdp-online.de/englisch/faf.html

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Fiction and facts

Fiction 1

The paper industry destroys forests

Fact is

- The paper industry does not destroy forests.
- The paper industry is not responsible for the depletion of tropical forests.
- The paper industry supports sustainable forest management.
Bread from grain, milk from cows, paper from wood - all renewable raw materials. Around 20% of the timber felled throughout the world is used to make paper. But the paper industry does not saw off the branch it is sitting on. It is very much in its interests that this raw material can be used sustainably and will remain available as a raw material to future generations.

Sustainability means that every tree that is felled should be replaced by three or four new ones. Over the years, thinning operations weed out the weaker trees, but there is still a net gain. Managed forests have been used for centuries in Northern Europe as a raw material source. Practically all of the remaining primeval forest areas are protected. Even in countries with large natural forest reserves, such as Russia or Canada, felling represents only a fraction of annual new growth. Sustainability involves economic, environmental and social considerations.

The situation in the southern hemisphere is more critical. According to the FAO report State of the World’s Forests 2009, the continuing destruction of forests there results from the uncontrolled development of further arable and grazing land, illegal felling of tropical timber for building, or forest clearance to create plantations for food or energy crops such as oil palms or soya. In countries like Brazil there are huge eucalyptus plantations for the pulp industry. However, these have been planted on former agricultural land that was no longer productive enough for farming.

The paper industry supports certification as a way of documenting sustainable forest management.
Fiction and facts

Fiction 2

Too much energy is used to make paper

Fact is

- The paper industry has considerably reduced its energy requirement.
- The paper industry already generates a considerable proportion of the energy it requires from renewable sources.
Energy is required for all industrial production. The paper industry is no exception: it requires energy to operate its machines and to dry the paper web. About half of the energy required in the European paper industry already comes today from renewable energy sources.

Around 560 kWh of energy are required in Germany to make 200 kg of paper, which is more or less the average annual per capita consumption in the countries of the European Union.

Is that a lot?

By way of comparison, 560 kWh is equivalent to:

- the amount of energy consumed by a game computer with high-speed processor in nine months (767 kWh per year when used four hours a day), source: ARD
- the amount of energy consumed by a single 60 W low-energy household light bulb in three and a half years (approx. 7.5 hours/day)
- less than half of the amount of energy consumed annually by an average household with television, kitchen appliances, etc., left on standby

For economical and environmental reasons the paper industry works continuously to optimise its processes. Since 1990 alone, measures have been introduced to reduce the specific energy consumption per ton of paper by 27% (source: VDP monitoring of the climate protection agreement by German industry).
Fiction and facts

Fiction 3

Paper production damages the climate

Fact is

- Paper does not kill the climate.
- The paper industry has steadily reduced its carbon dioxide emissions.
- Through the encouragement of sustainable forest management it helps to reduce worldwide carbon dioxide emissions.
Around 160 kg of CO$_2$ are emitted during the production of 200 kg of paper - the average European per capita consumption - equivalent to the amount emitted by a typical family car over 1,000 km.

The current discussion of the climate frequently refers to the “carbon footprint” of products or processes as a way of expressing the emission of climate-relevant gases by a process or through the manufacture of a product. The manufacture of a piece of paper has a carbon footprint, as does a trip to the supermarket.

By way of comparison:

Users of e-mails for business purposes generate 131 kg CO$_2$ per year, of which 22% results from spam (source: Die Welt).

Spam e-mail worldwide uses 33 billion kWh of energy per year. This is equivalent to the energy consumption of 2.4 million US households and the same amount of greenhouse gas emissions as 3.1 million cars (source: McAfee/CF).

According to research by the Royal Swedish Institute of Technology, the carbon footprint when reading a daily newspaper is 20% lower than it would be if the same information were to be obtained electronically on a PC from the Internet. This does not take into account the fact that newspapers are frequently read by several individuals.
Fiction and facts

Fiction 4

We use too much paper

Fact is

- Paper is an indispensable part of our civilisation.
- Paper is made from renewable raw materials.
- Recycling spares resources.
Whether we use too much paper is a matter of opinion. Without paper, however, our life today would be difficult to conceive. We read newspapers, magazines and books, we expect goods to be properly packed, and we need paper for our daily hygiene. Moreover, we only see a part of the theoretical annual per capita paper consumption (226 kg in Germany in 2009). We don’t see industrial and commercial transport packing, or the files and documents in offices, not to mention the special papers that are used in vehicle manufacture, for wine filtering or for medical applications, for example. Unlike other materials, paper is not made from finite resources but from materials that grow again. Sustainable forest management will ensure that it remains so.

Recycling plays an important role in the sustainability of the paper cycle. The reuse of processed raw materials cuts down on energy, wood fibres and waste water treatment. Some paper manufacturers document this through the Blue Angel symbol as indication of environmentally friendly production.

The proportion of recovered paper, i.e. the amount used per ton of newly produced paper, is already over 60% in the European Union as a whole and 71% in Germany. In other words, for every 100 kg of paper made in Germany an average of 71 kg is made of recovered paper.
Fiction and facts

Fiction 5

We could use exclusively recovered paper

Fact is

- Germany is a world leader in recycling.
- But we cannot do without fresh fibres.
Like perpetual motion, endless recycling is not feasible in practice, but in fact the paper industry is not that far off. In Germany 78% or around 16 million tons of used paper is recovered. Not all of it can be recycled but every year the paper industry reuses 15.4 million tons of recovered paper (2009) to make new paper. This is equivalent to a utilisation rate (ratio of recovered paper used to total paper manufactured) of 71%, an outstanding performance given the vast product spectrum in Germany.

Various cleaning and processing phases are required to enable recovered paper to be used to make new paper. These inevitably involve a loss of fibre or quality. Fresh fibres are therefore required to maintain the paper cycle. Wood fibre in paper can normally be reused up to six times, in the laboratory even more.

With the machinery available in Germany and the paper made on it, the technical possibilities for increasing the amount of recovered paper used have been practically exhausted. If market developments cause an increase in the demand for recycled paper, however, new production capacities will be created in which more recovered paper, possibly imported, will be used.

In terms of quality, recycled paper stands up to comparison with paper made from mechanical or chemical pulp. It should not be forgotten, however, that some paper types have higher tear strength and printability requirements and cannot therefore be made completely or at all from recovered paper.