Let’s tell the world the good news about paper and the environment.

Martyn Eustace is the head of Two Sides, an NPO (a non-profit organization) that delivers the good environmental story of paper on a global scale, with a focus on the United Kingdom. While working in the UK paper and printing industries for many years, he saw the need to tell the world about the paper industry’s positive effects on the environment. That led to the establishment of Two Sides.

After graduating from Surrey University in the suburbs of London, Martyn Eustace became involved in sales work for a Canadian-based paper company. At that time (in the late 1970s), there was a shortage of paper, so it was a seller’s market. However, investment by the papermaking companies in large-scale equipment increased production of paper. Soon, supply exceeded demand, and Sales and Marketing became more and more difficult.

At this time, in the UK at least, there was little concern in the paper industry about environmental issues. By around 1980, the public’s interests began to change. Martyn remembers “chlorine free bleaching” as being the first environmental product feature to be promoted. After that, various issues such as recycling and forest certification became advertised features too.

By this time, Martyn had risen to be CEO of the company. It was a time, he recalls, of dramatic changes in the world’s perception of paper. Up till then, paper was just a part of life and alternatives were unthinkable.

However, digital devices for providing information were now appearing. Nowadays, we must consider how people, especially the younger generation, feel about digital verses paper convenience.

The world has become more concerned about environmental issues. People are aware of the dramatic destruction of rain forests, and associate that with paper makers. The truth, of course, is more about plantations, proper forest management, and recycling and reuse. It was to tell this true side of the story that Martyn launched “Two Sides” and became its worldwide advocate.

Two Sides’ members are forest owner, papermakers and merchants, printers, publishers, and all their supply chain. Members unite together to “promote paper as an attractive and sustainable communication medium”, “to convey the correct knowledge about the impact of paper on the environment”, and “the increase of forests in Europe”.

Two Sides was established in 2008, and now has branches in the United States, Australia, and other countries, mainly in English-speaking countries as well as Europe. Members unite together to “promote paper as an attractive and sustainable communication medium”, “to convey the correct knowledge about the impact of paper on the environment”, and “the increase of forests in Europe”.

Each company seems to think that this is an efficient and inexpensive way to communicate facts about the paper and the environment.

Martyn believes activities will continue till paper’s reputation as a friend of the environment is known all over the world.

Based in Europe, where environmental awareness is high, Martyn Eustace travels the world trying to convey the good environmental qualities of paper. I was able to hear his message when he came to Japan.

Forests are the raw material for paper, but deforestation and degradation are becoming serious social issues worldwide, and are increasing in Europe. However, forests are increasing thanks to sustainable forest management. We hope this issue will tell you more about promoting forest conservation and good forest management and how they can help to mitigate the effects of climate change.

Keiko Fujita

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**Climate change problems and forests**

Various worldwide climate change problems, such as global warming, are being caused by the use of fossil fuels.

UN scientists* suspect that greenhouse gas (GHG) emissions are very likely to be the cause. In order to respond to this problem, it is important to not increase the concentration of GHG in the atmosphere, and when possible to reduce it.

This volume will focus on the new international movement for climate change and the role forests are playing by absorbing CO₂ (the most abundant GHG in the atmosphere)

* The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for providing the world with a scientific view of all aspects of climate change.
Global Action to Mitigate Climate Change

2015 global climate change issue

The 2015 United Nations Climate Change Conference (Conference of the Parties 21) agreed to set goals to combat Climate Change for after 2020. A major feature of this Paris Agreement was that developed and developing countries would work with "all-inclusive participation" to mitigate climate change.

The conference recognised that the 40% emissions reduction required of developed countries under the Kyoto Protocol might not lead to an international solution to climate change issues. This was because developing countries such as China and India, which had not been obliged to reduce emissions, had in fact sharply increased greenhouse gas (GHG) emissions.

- Global energy-derived CO2 emissions (1990 to 2012)
  - EU
  - Russia
  - Japan
  - Other developed countries
  - America
  - Canada
  - China
  - India
  - Other developing countries

<table>
<thead>
<tr>
<th>Country</th>
<th>1990</th>
<th>2012</th>
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<tbody>
<tr>
<td>EU</td>
<td></td>
<td></td>
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<tr>
<td>Russia</td>
<td></td>
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<tr>
<td>Japan</td>
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<tr>
<td>Other developed</td>
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<td>America</td>
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<td>Canada</td>
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<td>India</td>
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<td>Other developing</td>
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In addition, the Paris Agreement has set a long-term common world goal that the temperature rise, compared to pre-industrial revolution times, should be kept significantly lower than 2°C.

The Paris agreement was designed to reduce emissions worldwide, and to accelerate the international community's progress in addressing climate change.

Agreed measures to address climate change include GHG emission control and GHG absorption. This relates directly to Nippon Paper Group’s business, since the world’s principle absorbers of CO2 (a major GHG) are forests. Article 5 of the Paris Agreement also stated that “each country will take measures to conserve GHG sinks and storage”, in other words to maintain and nurture forests.

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The Role of Forests and Timber to Mitigate Climate Change

During photosynthesis, trees absorb CO2 from the air, generate oxygen, and store carbon as organic growth matter in branches and trunks. On the other hand, trees emit CO2 by breathing in the same way as humans, but as long as trees grow, photosynthesis uses more CO2 than is produced by respiration, so the difference is made up by absorption of atmospheric CO2.

Even after trees are harvested and used for housing, furniture, paper, and so on, the carbon remains stored in the products created. In addition, when making a house, it is a major feature of the Schematic of photosynthesis mechanism:

- Carbon storage amount and carbon emission amount at the time of material production per house

Nippon Paper Group’s Initiatives

Nippon Paper Group’s own domestic and foreign forests (as of the end of December 2015)

<table>
<thead>
<tr>
<th>Country</th>
<th>Area</th>
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<tbody>
<tr>
<td>Japan</td>
<td>90,000</td>
</tr>
<tr>
<td>South Africa</td>
<td>15,000</td>
</tr>
<tr>
<td>South America</td>
<td>3,000</td>
</tr>
<tr>
<td>Australia</td>
<td>15,000</td>
</tr>
<tr>
<td>Chile</td>
<td>13,000</td>
</tr>
<tr>
<td>Brazil</td>
<td>50,000</td>
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</tbody>
</table>

Proper forest management is important for the absorption and fixation of CO2 by forests. Nippon Paper Industries has received appropriate third party forest certification in all domestic and overseas forests in recognition of its good forest management. In total, 32 million tons of CO2 are fixed in Nippon Paper forests worldwide, thanks to sustainable forest management.

One of the government’s efforts to support domestic forest sinks activities is the “J Credit System,” by which the country endorses the company’s figures for the amount of CO2 absorbed by its forests. The Nippon Paper Group applied for J-credit for Nippon Paper Industries Kitaoyama Co., Ltd., Shizuoka and Nippon Wood Paper Co., Ltd., Sudagai Forest Co., Ltd. (Gunma).

These credits are used to offset CO2 emissions such as those caused by movement of a professional soccer team, and the CO2 generated when using forestry machinery.

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Toward Mitigation of Climate Change by Forests

Afforestation can be an effective way of absorbing and fixing atmospheric CO2 into trees. Unfortunately, in Japan, about 70% of the land is occupied by forests, and it is difficult to find space for new tree planting. The Japanese government’s approach is to promote CO2 absorption and fixation through appropriate forest management.

Meanwhile, in various parts of the world, mainly in developing countries such as those in Southeast Asia and South America, forest deterioration is in progress. Conversion to farmland, non-traditional slash-and-burn farming, excessive logging for firewood, excessive commercial logging, forest fires, etc. all take their toll on forests. Additionally, GHG emissions from these activities account for over 10% of global emissions. In order to mitigate climate change, it follows that efforts to prevent the decline and deterioration of forests in developing countries are extremely important.

At the same time, restrictions on forest use to prevent deforestation and degradation in developing countries can extend to the traditional use by local people. It is important to maintain the customary rights and income of local people, but it is also necessary to establish good forest management methods.

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Notes:

- *Based on the data of the IPCC fifth assessment report
- ** REDD+: Suppression of Slash and Burn Cultivation in INDONESIA
- * Based on the data of the IPCC fifth assessment report

In Indonesia, Japanese companies are collaborating with local government bodies and leading local companies to curb deforestation due to slash-and-burn cultivation. The aim is to improve the profitability of local farmers through conversion to high quality cacao farming.

Originally, farmers in this area mostly cultivated cacao, which is a raw material for chocolate. Cacao was popular, but there was no technology for increasing the added value of harvested cacao.

Corn cultivation, which can easily increase profits has emerged as the dominant crop. This resulted in the surrounding forests being destroyed one after another by slash-and-burn to keep expanding the cultivated land.

In this project, we have been receiving locally selected, highly skilled farmers who aim to improve their technologies, and have begun efforts to teach high-quality cacao cultivation methods and technologies to increase added value.

** REDD+: Reduced of emissions from deforestation, degradation, etc. In developing countries, plus agressive measures to increase carbon storage.