Consumers
Consumer Health and Safety
Manufacturers should select materials in accordance with applicable safety standards and perform any necessary assessments on chemicals and materials. Manufacturers should procure paper from certified sources to ensure that pesticides and other chemicals used in forestry operations are applied optimally and potential exposures are controlled. In cases where appropriate controls are not in place, chemicals may migrate into the environment, potentially leading to harm of workers or the local environment.

Managing the Supply Chain
Deforestation
Unsustainable forest management can lead to biodiversity loss, reduced ecosystem quality, and increased greenhouse gas emissions. When sourcing paper, look for manufacturers that use sourcing policies that monitor progress on zero deforestation commitments. Sourcing policies should also promote protection of high conservation value forest habitats, which have unique plants and animals. Requiring third-party audits or certifications based on site-specific observations can also reduce the risk of deforestation.

Supply chain transparency
Addressing many of the environmental and social challenges within a paper supply chain requires cooperation among companies at different stages of the supply chain. Chain-of-custody and other data-sharing systems and initiatives can help improve transparency about where materials are being sourced, and manufacturers and suppliers can work together to address common issues, such as energy, water, chemical, worker health and safety, and labor rights.

Use of Resources
Climate and energy
Pulp production and final manufacturing of paper products consume significant amounts of energy which leads to greenhouse gas emissions. Manufacturers can help abate these impacts by measuring, tracking, and reporting energy use and
greenhouse gas emissions, with a focus on reduction. They can also perform preventative maintenance on equipment, replace inefficient equipment, use renewable energy, and encourage efficient energy behaviors throughout their operations.

**Land and Soil**

The quality of soil in forests may be degraded through physical disruptions associated with harvesting activities that do not use sustainable forest management techniques. To reduce soil and land impacts during timber harvesting, manufacturers and suppliers should use institutionalized sustainable forestry best management practices or procure paper from certified sources.

**Transportation and logistics**

Products are transported by land, sea, and air. Manufacturers should select carriers that use fuel-efficient vehicles to reduce emissions. Carriers can address fuel efficiency through preventative maintenance, the use of alternative fuels, and the selection of optimal vehicles, routes, and transport modes. Transportation efficiency can also be improved by maximizing load capacity in vehicles and optimizing the packing of transport vehicles.

**Water**

Pulp production for paper can use a significant amount of freshwater which can be problematic in water-stressed regions, even when the water is returned to the environment. Manufacturers should procure pulp from suppliers that measure water use, and perform water use assessments throughout their supply chain in order to map water risk in different geographical regions to mitigate impacts associated with freshwater depletion. Manufacturers should assure that water pollution is avoided throughout their supply chain, especially where local government monitoring is insufficient.

**Workers and Communities**

**Community Rights**

Timber production can impact the rights of indigenous people and local communities through loss of land and timber rights and reduction of access to resources, especially in places where government controls are insufficient. Manufacturers should have third-party verification embedded in their sourcing policies for paper to protect indigenous and community rights within forestry operations, where applicable. Audits should be performed where needed and audit results should be made available to the public.

**Forced or Child Labor**

In some areas, there is a risk of forced or child labor, characterized by actions such as trafficking, withholding wages or documents, and restricting workers to the work site. Manufacturers should determine if and where forced or child labor occurs and work with supply chain partners and experts to address these issues to ensure all workers have fair working conditions.

**Workers**

Workers may be exposed to dust, noise, chemicals, or other industrial hazards. To help ensure worker health and safety and labor rights, manufacturers should have a documented health and safety management plan, including a chemical management plan where needed, and provide safety training and personal protective equipment to workers. Manufacturers should procure materials from suppliers that address worker health and safety and labor rights transparently and should perform audits when needed.