

## Rising Imports of Waste (Recovered) Paper

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### Overview

According to the Bureau of International Recycling, recycling one tonne of paper saves up to 31 trees, 4,000 kWh of energy, 10.2 million Btu's of energy, 26,000 litres of water and 3.5 cubic metres of landfill space.

Indian paper mills are categorized based on raw materials used by them in the manufacture of paper - wood/forest based mills, agro-based mills and wastepaper (recovered paper) based mills. In terms of share in total production, approximately 25% are based on wood, 58% on recycled / recovered (commonly known as wastepaper in India) fibre and 17% on agro-residues.

The geographical location of the mill often determines the type of raw material used. Most mills in the northern and western regions of India utilise agricultural residues and recovered paper, while southern and eastern regions uses wood and bamboo as raw materials. More than 50% of the total paper produced from recovered paper is produced in western India due to availability of berthing space at ports to import raw materials.

Recovered paper is mainly utilised for manufacture of newsprint, duplex and kraft paper. Processing of waste paper to obtain clean stock for paper making involves a number of cleaning stages to remove contaminants present in the waste paper.

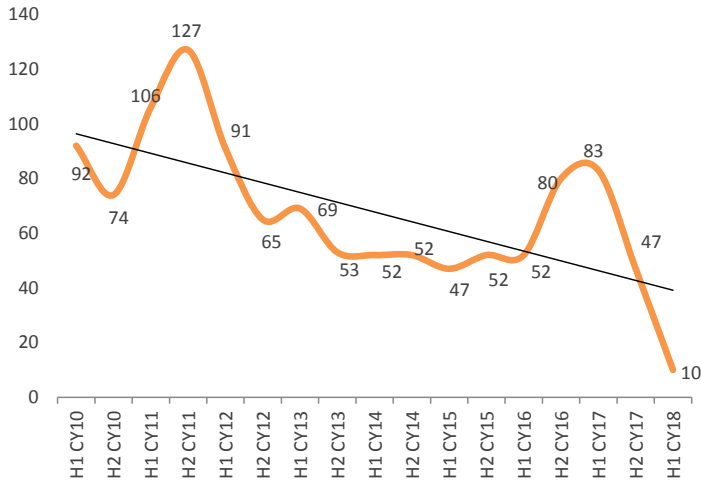
Recovered paper collection and trading continues to be unorganized in India. The collection is carried out by individual dealers with unsophisticated sorting systems. Presently, collection of recovered paper is mainly carried out by small scrap dealers and government offices through tender. Utilisation of recovered paper is also restricted due to multiple end uses of paper products such as wrapping and packaging applications common in India which offer a better price as compared to the paper industry.

Due to inadequate availability of indigenous recovered paper, Indian mills rely on imported recovered paper to meet the raw material demand. More than 50% of India's recovered fiber demand is met through imports as the domestic recovery rate of recovered paper is estimated to be ~30%, which is significantly below the recovery rate in developed countries. In 2016, the US paper recovery rate was 67.2%, while 72.5% of all paper consumed in Europe was recycled.

**Global Prices**

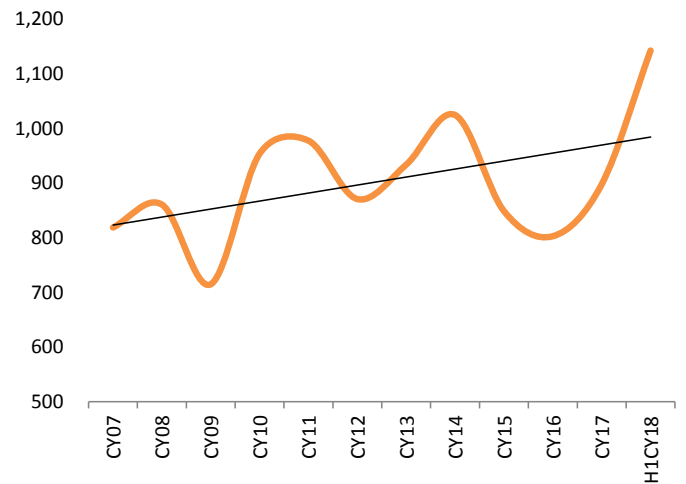
Globally, China accounted for a significant majority of market pulp and recovered paper imports and further accounted for more than half of US exports of recovered paper. The demand from China is a predominant factor driving the prices of pulp and recovered paper globally. To counter rising domestic environmental issues, generate a domestic circular economy and promote domestic recycling, the Chinese Government restricted the import of recovered (waste) paper.

**Chart 1: US Average Mixed Paper Prices (\$/tonne)**



Source: waste360, Moore & Associates

**Chart 2: International Pulp Prices (NBSK \$/tonne)**

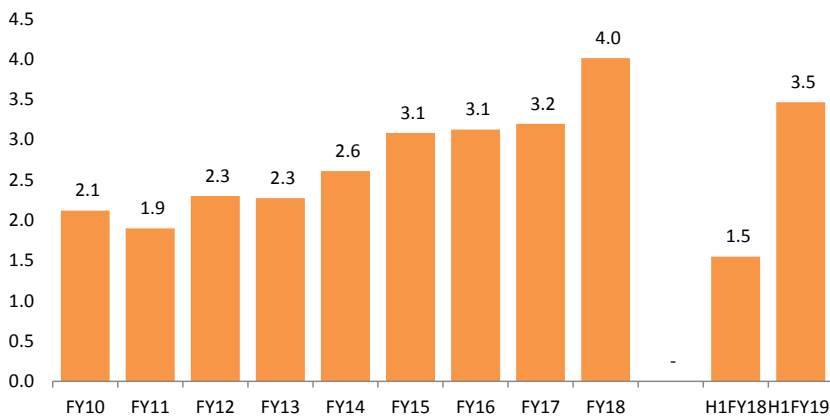


Source: CMIE, Economic Services Division, Govt. of BC, Canada

Internationally, recovered paper prices have generally moved in tandem with the pulp prices (as can be witnessed in charts 1 and 2). However, actions by the Chinese government have severed this linkage and have caused them to move in opposite directions. Import restrictions on recovered paper increased global availability causing prices to reduce significantly and had a reverse impact on virgin pulp; the demand increased causing prices to remain at elevated levels. Additionally, as US is the primary generator of waste paper globally, its exports to China have dropped significantly in late 2017 and also in 2018. It has had to search for new markets and its imports to other Asian nations have increased significantly.

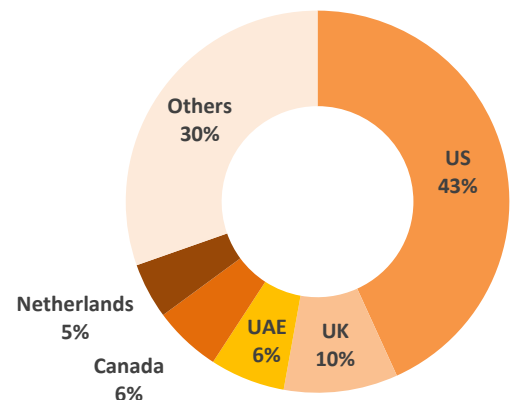
**Imports**

**Chart 3: By volume (million tonnes)**



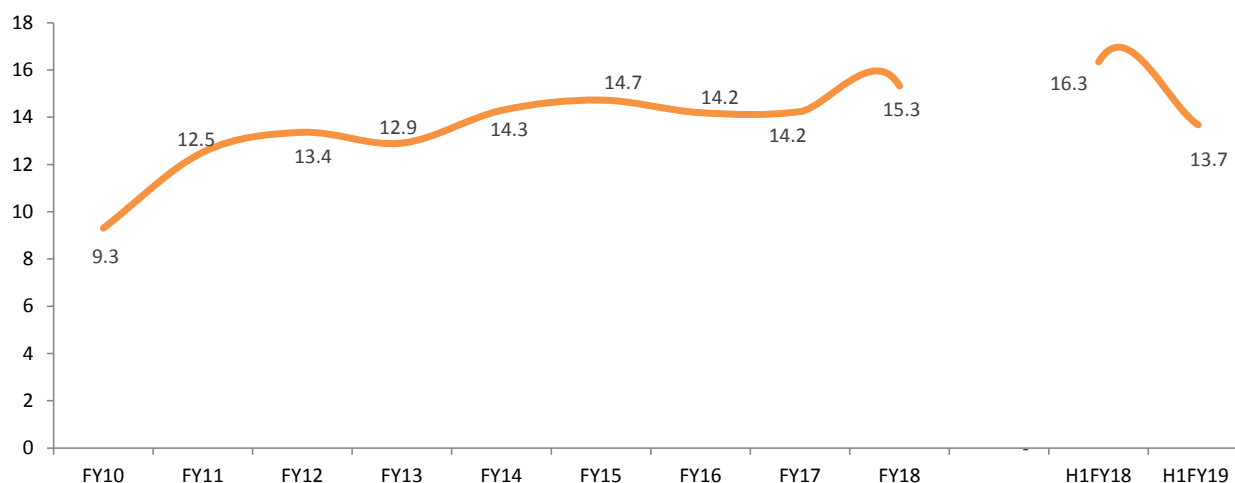
Source: Department of Commerce

**Chart 4: Imports by Country (Rs. cr.) (H1 FY19)**



Imports of recovered paper had reached 3.1 million tonnes in FY15 from 2.1 million tonnes in FY10, increasing at a CAGR of 8.1%. Thereafter the imports remained steady at 3.1-3.3 million tonnes level for three years through FY17. However due to Chinese regulatory modifications in 2017 resulted in a 25% annual increase in imports to 4 million tonnes in FY18. Further imports for H1FY19 have already increased by 133% as compared to H1FY18. Additionally till FY18, recovered paper realisation had generally been on an uptrend given a steady international demand and price. However, the realisations dipped in H2FY18 and have continued to decline in H1FY19. This can be demonstrated by the level of realisations, overall FY18 realisation was Rs. 15.3 while H1FY18 realisation was Rs 16.3 indicating a significant reduction in realisation for H2FY18, which has continued in H1FY19

**Chart 5: Imported recovered paper realisation (Rs/kg)**



Source: Department of Commerce

## Conclusion

The probable impact of the elevated levels of recovered paper imports include:

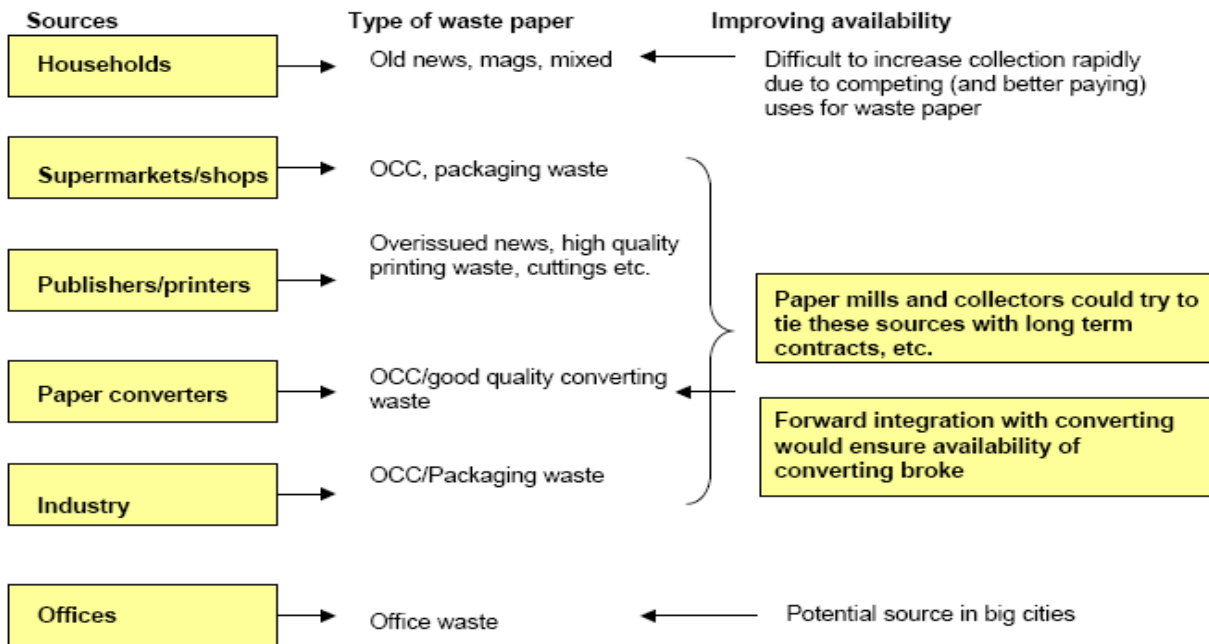
- Higher profitability of companies which use imported recovered paper as an input
- Elevated levels of contamination in imports as waste paper containers are generally more polluted compared to virgin pulp
- Disincentivize domestic recycling which is already at a low level thereby increasing landfills and causing other environmental degradation

However, imports are expected to continue to grow given high availability of international recovered paper at low rates and low recovery rate (~30%) of wastepaper domestically due to lack of well-structured collection channel of wastepaper in India. However, such imports should not be allowed to contain hazardous or high levels of contaminants which could cause environmental damage. The imports can only be reduced when the domestic recovery rate increases i.e. not only recycling but also collection on a sustainable basis. Some options to increase domestic recycling include:

- Create a policy on waste paper management in accordance with e-Waste (Management and Handling) Rules 2011
- Formulate guidelines for the producers, collection centres, dismantlers and the recyclers
- Incentivize municipalities to meet segregation targets
- Allocate appropriate locations to develop sorting centers for sorting, baling and storage of waste paper
- Support NGOs and other similar agencies which promote a cleaner environment and the use of recycled fibers

Appendix

Source of recycled/recovered paper in India



Source: CPPRI

Recycling Process

