

Post-Consumer Tetra Pak Cartons (PCCs) Management

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For more information

Project Monitoring Cell
T E R I
Darbari Seth Block
IHC Complex, Lodhi Road
New Delhi – 110 003
India

Tel. 2468 2100 or 2468 2111
E-mail pmc@teri.res.in
Fax 2468 2144 or 2468 2145
Web www.teriin.org
India +91 • Delhi (0)11

Reviewer

Dr Suneel Pandey, Director-GGRE, TERI

Principal Investigator

Mr Sourabh Manuja, Associate Fellow, TERI

Project Team

Dr Alak Chand Deka, Associate Fellow, TERI
Mr Jai Kishan Malik, Research Associate, TERI
Mr Kabir Sharma, Research Associate, TERI
Ms Kripali Vikram, Research Associate, TERI
Ms Pranali Chavan, TERI
Mr R Suresh, Associate Fellow, TERI
Dr Sumit Kumar Gautam, Fellow, TERI
Mr Ved Prakash Sharma, Assistant Manager, TERI
Mr Raj Deep Tripathi, Intern, TERI

Outreach Team

Mr Harminder Singh, Fellow, TERI

Editorial Team

Ms Spandana Chatterjee, Assistant Editor

Secretarial Assistance

Ms Nisha Taneja, TERI
Mr Shyam Sunder Nayar, TERI
Mr Swapan Das, TERI
Ms Lakshmi Subramaniam, TERI

Executive Summary

Tetra Pak is a multinational company that develops, manufactures, and markets systems for processing, packaging, and distributing food products. Tetra Pak cartons are primarily made from paper. A Tetra Pak carton is composed of 75% paperboard, 20% polyethylene, and 5% aluminium. As part of environmental initiatives, Tetra Pak has undertaken various activities for collecting and recycling Post-Consumer Tetra Pak Cartons (PCCs) and is working with non-governmental organizations (NGOs) and waste pickers to segregate PCCs.

The overarching objective of this study is exploring the collection and recycling practices of PCCs and the current quantum of Tetra Pak cartons procured/ retrieved by waste dealers. Also to assess the actual quantum of PCC reaching paper mills that recycle paper from low-grade paper waste and fate of pulping rejects. Value chain and economics in collection and recycling was also studied. These studies also helped in understand the quantity of PCCs reaching dumpsites. Ultimately this predicts the needs to upscale collection and recycling: economics, awareness, infrastructure, and so on.

The survey design was comprehensive and exhaustive enough to capture the overarching scope and facilitate the objectives of the study. Survey partners were identified in each of the identified cities for conducting survey as per the scope given to them. The survey partners were asked to take photographs and film the critical parts of the sampling exercise. TERI professionals visited each survey partner in their respective city to guide the survey teams and supervise the exercise.

The study revealed that the PCC are collected by ragpickers, small scale waste paper dealers, large scale dealers and sent to recycling units. The outcomes of the study revealed the percentage of respondents dealing and PCC and have been depicted in figure 1. Kolkatta, Guwahati and Hyderabad revealed that 100% of the respondents at all three levels were dealing in PCC

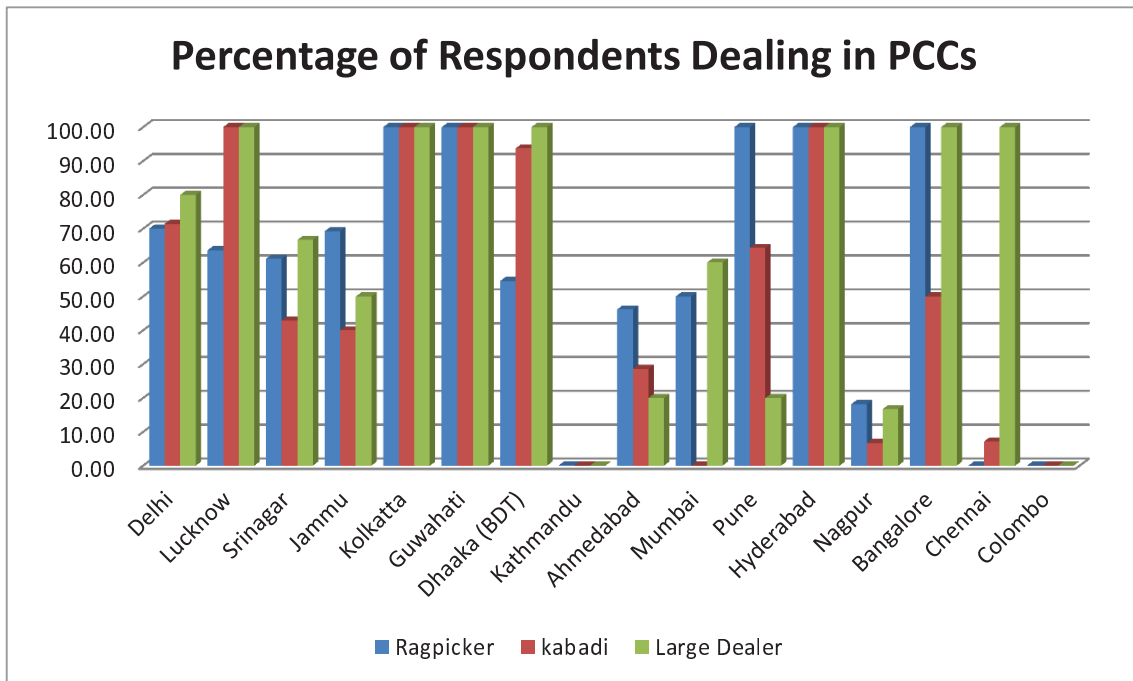


Figure 1: Respondents dealing in PCC at survey cities

Samples at large scale waste dealers were analyzed as per the scope of survey and revealed more than 10% fraction of PCC in waste paper bales in cities of Bangalore, Dhaka. The possible reasons for high fraction of PCC in these two cities is attributed to high price and acceptability for recycling of PCC in both the cities which even attracts small waste dealers from outside city to sell PCCs to large scale dealers. The analysis results are shown in figure 2.

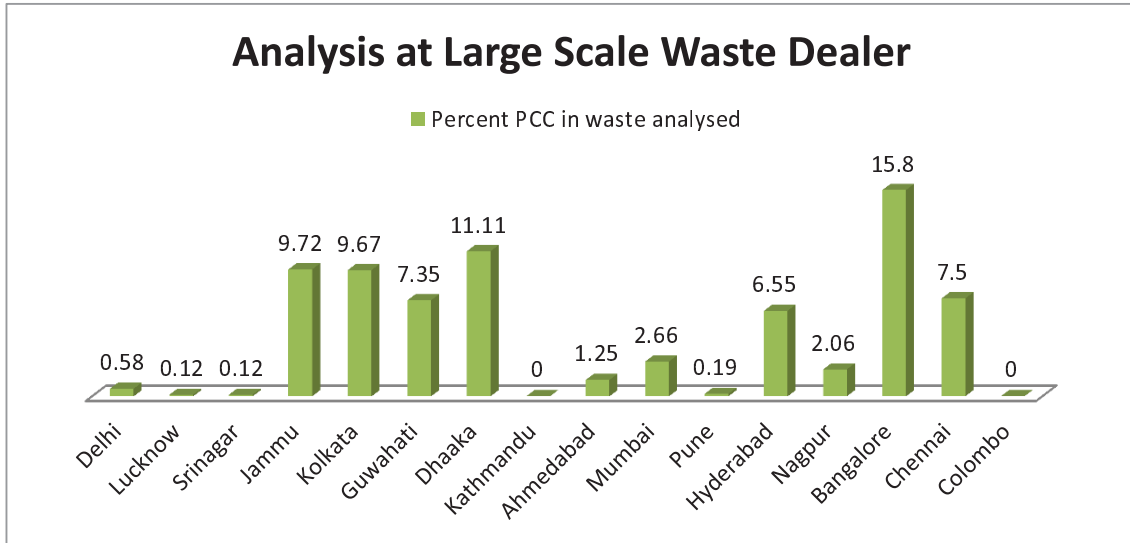


Figure 2 Percentage of PCC analyzed at large scale waste dealer level.

Survey revealed that in cities of Kolkata and Guwahati PCC was treated before selling by separating aluminium and paper and aluminium was sold at a high price of Rs 45 to Rs 60 per Kg. The recycling rates were worked out with two scenarios of 26% and 29% recovery rates by informal sector revealing an overall recycling rate of 42.85 percent and 45.52 percent respectively. The results are as in figure 3 and figure 4.

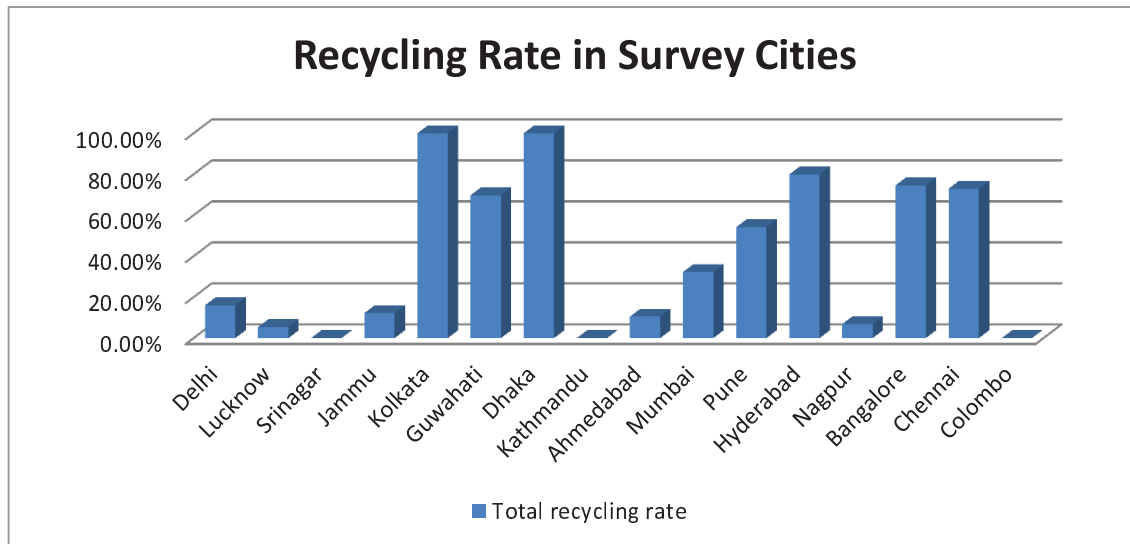


Figure 3: Recycling rate with 26% recovery by informal sector

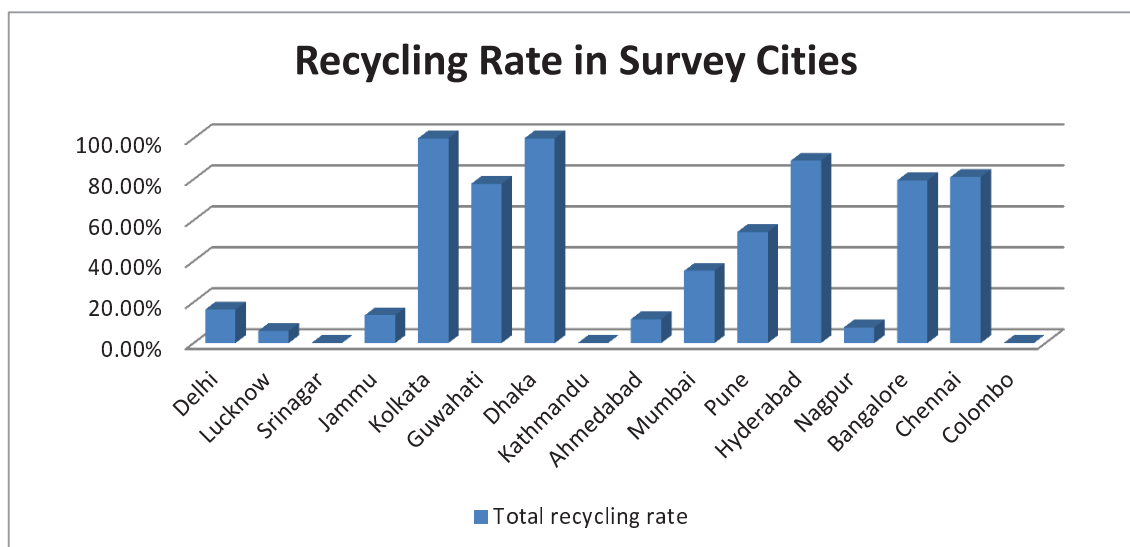


Figure 4: Recycling rate with 29% recovery by informal sector

Study also revealed that PCCs reaching paper mills was 0.36 percent of the total paper received by the mill. On an average PCCs reaching dumpsite was 0.343 percent of total waste reaching dumpsite.

Based on the study conducted TERI recommends the following:

1. PCC management can be effectively increased in cities with no or low market by developing markets in these cities. Active recycling has significant contribution in the overall recycling of PCCs. Hence, efforts should be made to upscale the capacity of the existing collection centres and to install more such centres in other cities.
2. PCC management can be more efficient if the chain is small and there is better price in the market for the collectors.
3. Awareness among recyclers about the potential for using PCCs is important. This should be done by highlighting statistics and case studies of mills consuming PCCs for paper production.
4. R&D should be carried out for efficient technologies for separating paper from PCCs and usage of polyethylene and aluminium recovered thereafter. Paper mills and recyclers should also be involved so as to create a better market.
5. Kolkata, Guwahati, Hyderabad and Chennai reported the highest informal recycling rate for PCCs. Many ragpickers in Kolkatta and Guwahati reported that they separated paper and aluminium from the PCCs before selling them to kabadiwalas. The management of PCCs should be further studied and lessons should be replicated at other places along with proper environmental pollution control measures.
6. Such an exercise (to study the management of PCCs in major cities and identify the recycling rates) may be repeated in every 3 years to assess the improvement in recycling rates.