# REVIEW STATEMENT ON CIRCULARITY STUDY REPORT:

## CIRCULARITY IN ACTION & STRATEGIC BLUEPRINT FOR THE CORRUGATED INDUSTRY

**Commissioning body**: FEFCO *(Fédération Européenne des Fabricants de Carton Ondulé)*

**Consultant / report author**: Circul'R

**Reviewed documents**: Circularity Study Report January – September 2026, Tipping points document including all the related calculations

HELSINKI, OCTOBER 26, 2026

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## 1. Background and Objectives

The European Federation of Corrugated Board Manufacturers **FEFCO** has carried out **a circularity study** during the period from January to September 2026. The study was conducted by **Circul'R,** a circular economy consultancy.

The main objective of the study was to evaluate the circular model of corrugated board. More specifically the study aimed at:

- Assessing the circularity of corrugated board recycling system vis-à-vis alternative packaging solutions
- Defining conditions for optimal circularity
- Providing grounded and fact-based industry data for further market and policy discussions

We, **Jay Partners**, have been invited to provide a review of the study. We have worked on corrugated board and the entire packaging value chain for more than 20 years. Furthermore, we have extensive expertise in sustainability and circularity and the related legislation as well as in providing independent reviews on various research and consulting studies. The objective of our work is to provide **a critical review** of the circularity study including:

- Assessing approach, methodology, data sources and assumptions
- Verifying the key conclusions and statements made
- Evaluating the overall reliability, validity and robustness of the circularity study

Nevertheless, this review is not an audit of third-party primary datasets and does not investigate nor verify accuracy of this external data.

## 2. Review Process and the Findings

### 2.1 Review process

The circularity study was completed in September 2026. FEFCO has given us the following documents

- The **complete final report** dated September 2026; a pdf file consisting of 96 pages
- An excel file covering the calculations, assumptions and background data utilized in the study
- A Word document consisting of feedback and revision comments as well as related discussions between Circul'R and FEFCO participants

We have also had access to the earlier FEFCO studies[1] and statistics[2] that were used as data sources for the circularity study. These documents are publicly available at FEFCO home pages.

[1] Studies | Fefco
[2] Annual Statistics 2024 | Fefco

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Furthermore, we have had two Teams discussions with FEFCO where we were given the opportunity to discuss and ask questions about the circularity study, the working process and the findings.

To sum up, besides the full final report, we have been able to investigate the underlying assumptions, calculations and data sources and get insights into the working process. Therefore, we were given the transparency that is required for providing a critical third-party review.

## 2.2 Findings

The commentary and findings below refer primarily to the final report whilst the other material is commented only when integrity of the assumptions and the used data is concerned.

Starting point and approach of the study

The circularity study aims at addressing circularity performance of corrugated board and whilst recycling is vocally in the focus, the study has taken a wider perspective on circularity system. The circularity topic is approached under the following premises:

- All the data used in the analyses is based on existing industry documentation and studies, which had been conducted by third parties
- Performance of corrugated board is compared to competing packaging solutions
- Touching upon the entire value chain including policy alignment

*Jay Partners' comments:*

We largely agree on the starting point of study and the drawn boundaries and limitations. We see that the scope and the approach are well-defined and aligned with the study objectives and that the study addresses questions and topics that are relevant for the overall circularity discussion.

More specifically we can confirm the following:

- Recycling is the central process, and recyclability is the most important attribute for circularity, but it is essential that circularity system is looked at from a wider perspective.
- However, whilst corrugated board is packaging solution made from containerboard and operationally these two are greatly interlinked, the study has made the appropriate limitation and treated containerboard as raw material, defined the key assumptions for containerboard, but not expanded the study scope to deep dive on containerboard circularity.
- This approach is also beneficial for the comparison of corrugated board against the alternative packaging solutions and getting the value chain boundaries coterminous.
- As FEFCO already has conducted multiple related studies and has ample amount of reliable and relevant information, it was a wise decision to utilize and aggregate the existing information.

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Methodology, assumptions and data sources

The study evaluates circularity performance of corrugated board via three case studies in which corrugated board is compared to alternative packaging solutions. Each of the cases includes the same scorecard consisting of KPIs which are divided into three categories:

- Environmental performance – 4 KPIs
- Operational and functional performance - 3 KPIs
- Policy alignment – 3 KPIs

The KPIs have been given value either on scale from 1 to 5 or on binary scale (1 & 5) or scale between 1, 3 and 5. A total score has been calculated as arithmetic averages for both the entire score and for each KPI category. Furthermore, besides the base case the assessments have been constructed for two or three sensitivity scenarios.

The case approach, its contents and assumptions have been developed based on consultants' circularity expertise combined with industry insights. For the latter three data sources have been utilized:

- Literature consisting of more than 50 documents
- Industry expert interviews (5)
- Stakeholder consultations (15)

*Jay Partners' comments:*

We have scrutinized the study report and its appendixes, the related excel file as well as two of the main earlier studies[3] that have been used as sources. Hence, we have been able to trace how the assessment has developed. As a result, we can comment on as follows:

- The analysis is very carefully constructed using ample amounts of existing documents and in close co-operation with industry experts.
- Whilst the consultant is recognized and experienced in circularity and has a robust circularity modelling approach, a considerable amount of time and iteration has been put on developing the scorecard. Furthermore, the KPIs are well-explained, justified and linked to the relevant policies and targets set in PPWR, CEA and CSDR.
- The working process, the selections made and the scoring are thoroughly explained, which makes the report somewhat dense, but we understand that this is a compromise for making the analysis understandable for readers with different backgrounds.
- The case studies represent the most relevant end-uses for corrugated board, and the competing solutions are correctly chosen. Technical specifications regarding dimensions and material construction represent the current industry practices.

[3] FEFCO Ramboll 2022, FEFCO Deloitte 2023

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- We acknowledge that the selection has been made for comparison purposes, but the only remark we would like to make is that in e-commerce the weight and dimensions for alternative packaging solution are not quite the same what are used in practice. Typically, polybags and mailers are for lighter than 3 kg items.
- Scoring values are naturally always somewhat subjective and open to debate, however in our opinion that the report has managed to give acceptable values to both corrugated packaging and the alternatives. In our opinion the scoring is fair and not favouring corrugated board in any aspect.
- Finally, whilst it was a judicious decision to interview corrugated industry experts, we were pondering whether is would have been beneficial to include few corrugated board end-users like retailers, packers and brand owners as well.

Conclusions on the report

In the following table we summarize our verdict the key aspects of the circularity study, its quality, approach and findings.

| **Aspect** | *Jay Partners' comment* |
|---|---|
| **Robustness and transparency of the methodology** | *The consultant has applied its own tested and established methodology and adapted it for corrugated board and packaging business. The methodology and the entire work process are clearly and thoroughly documented.* |
| **Assumptions used** | *The assumptions and the case studies are based on industry facts and verified by the industry experts. They provide a grounded and reliable based for the entire circularity report.* |
| **Quality of data sources,** | *The entire assessment is based on well-selected interviews, statistics and ample amounts of earlier studies conducted by leading consultants and research organizations. All the data sources are accurate, valid and reliable.* |
| **KPI framework** | *The KPIs are correctly selected and justified. The scoring of corrugated board and the alternative packaging solutions is done in an objective and fair manner.* |
| **Main conclusion: Corrugated cardboard operates a mature circular model** | *We can confirm, with collection rates of over 80 per cent, with an average recycled raw material content of over 75 per, the closed recycling loop and no downcycling, corrugated board clearly outperforms alternative packaging solutions* |

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## 3. Conclusions

The circularity report is carefully constructed with appropriate approach, methodology and well-driven conclusions. The analysis is robust, insightful, fact-based, comprehensive and provides elaborated research, which is aligned with the set objectives. The narratives, charts, colours and symbols enable the readers with various backgrounds to follow the report effortlessly. The detailed explanations regarding the KPIs and their scoring shed light on the working process and enhance the reliability and transparency of the circularity report.

*Helsinki October 26, 2026*



Outi Juntti, Partner

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