Case Study: Kansai Paint disclosure

Established in 1918, Kansai Paint Co., Ltd. has established itself as one of the world's leading paint manufacturers. With a market cap of approximately 4.4 billion USD, it's one among five paint manufacturers in the current MSCI World Index. Direct peers include Akzo Nobel NV (21.8 billion USD market cap), PPG Industries (30.4 billion USD) and Sherwin-Williams (48.4 billion USD)[i]. The company boasts about several features its products have, including environmental sensitivity. It also provides an annual integrated report, combining non-financial data into regular annual reporting.

Like other Japanese companies, Kansai Paint provides a 'Materials Balance' at the start of their environmental report section. This Materials Balance shows a schematic picture of the company's value chain, with some key inputs and outputs at different stages of the chain. Raw Materials Purchasing flows into Research and Development (R&D) and Production through to Logistics to the final customer.

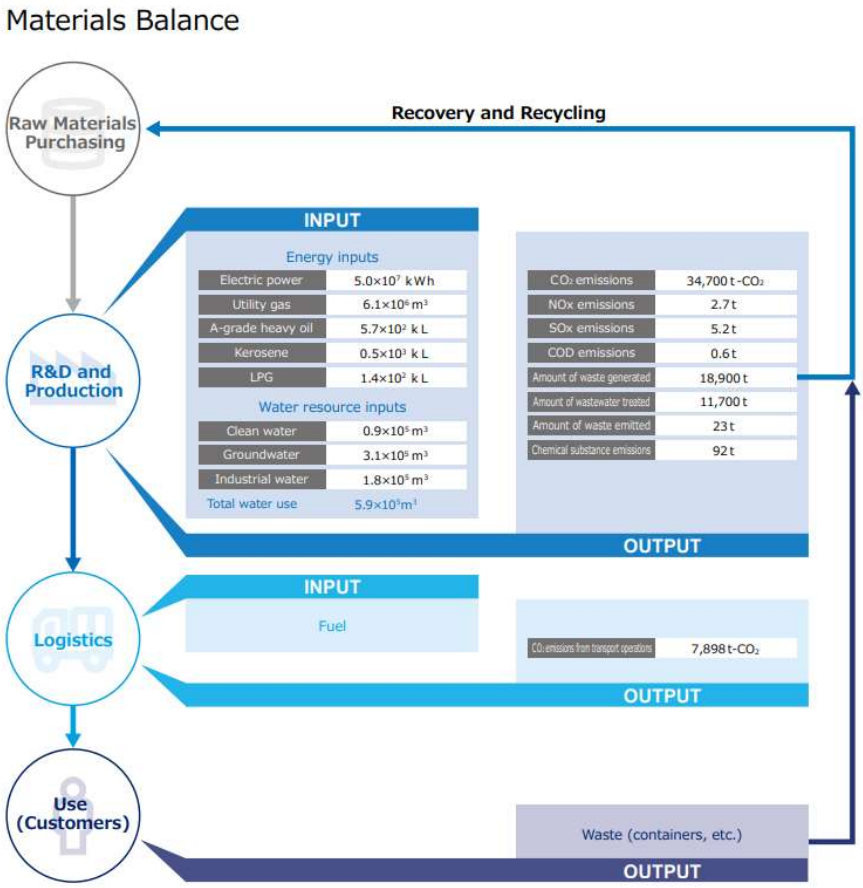

Figure 1. Materials Balance (Kansai Paint Integrated Report p27)

Energy

Within Osmosis' proprietary model of resource efficiency, the first factor we look at is carbon emissions. We collect organization's emission figures in tonnes of CO_2-equivalent (CO_2e), as reported using the GHG Protocol's Corporate Standard. The Model of Resource Efficiency differentiates between direct and indirect emissions, or emissions generated by the company itself versus the emissions generated by its suppliers and/or customers. To ensure our resource figures are directly related to the efficiency of a company's own operations, only emissions directly related to its operations are included.

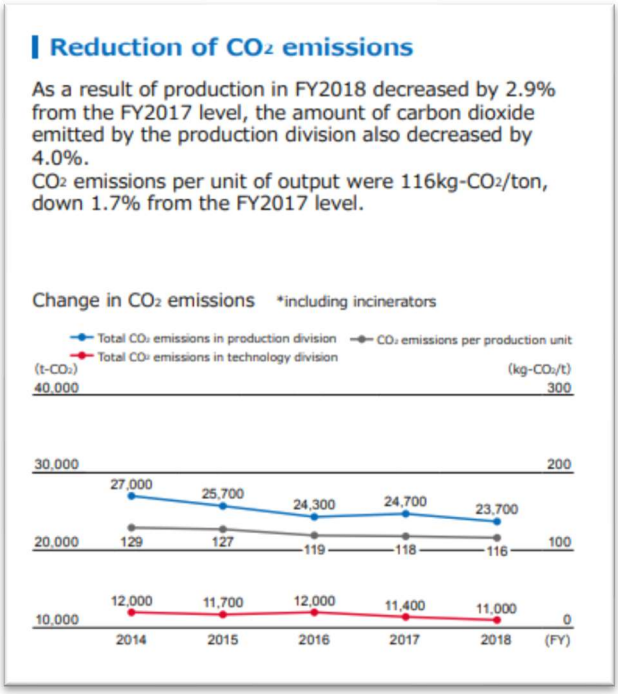

Figure 2. Reduction of CO2 emissions (Kansai Paint Integrated Report p29)

While analysing the company's emissions disclosure there were several areas calling for further interpretation and verification.

The provided 'Materials Balance' shows various energy inputs in the R&D and Production phase, including purchased electricity, natural gas, oil, kerosene and LPG. The consumption of these energy sources generates greenhouse gas emissions, which have been calculated by the company and reported under the 'Outputs'.

However, it is unclear from the 'Materials Balance' whether 'Logistics' is part of the company's direct operations, and thus whether the 7.898 tonnes of CO_2e from transport should be included in Kansai's total emissions. Details provided in different parts of the report indicate that the corporate boundaries only encompass 'R&D and Production'. As such only the figure 34.700 tonnes of CO2 should be considered. This CO_2 emissions figure includes both direct (Scope 1) and energy-related indirect (Scope 2) emissions.

The same approach is taken across all companies within our universe. Kansai Paint's direct competitor Akzo Nobel reports up to 300,000 tCO2e in upstream and downstream logistics, while Sherwin-Williams only provides a downstream distribution figure of 323,012 tCO2e. Competitors Nippon Paint and PPG Industries fail to provide any emissions figure associated with third party distribution.

Such adjustments to emissions data are essential to avoid double counting, as well as issues with data accuracy and incomplete Scope 3 reporting. By applying the same approach for all companies,

we ensure that the model creates the most appropriate comparisons. In this scenario the Logistics emissions are excluded as they are the emissions of a third party (Scope 3).

Water

The second set of inputs in MoRE is the consumption of water within its operations. Water consumption data is collected in m^3 and is treated differently based on the source it originates from.

Within the materials balance Kansai Paint provides water consumption figures stemming from clean (municipal) and industrial water sources, and groundwater, adding up to 590.000m^3. Our models include all the types of water Kansai lists. However, a graph further in the report provides a different figure, showcasing one of the challenges facing environmental disclosures.

The report contains a water-focused section, providing more detailed water figures as well as a time series of water consumption dating back to 2014. In 2018, the total water consumption figure adds up to 511.00m^3, which is materially different to the 590.000m^3 found on the 'Materials Balance'. On investigation, it turns out the figures in the graph only apply to production plants and do not include the research and development listed on the materials balance. It is the figure of 590.000m^3, which includes both production and R&D found on the materials balance, that is taken into the Osmosis model.

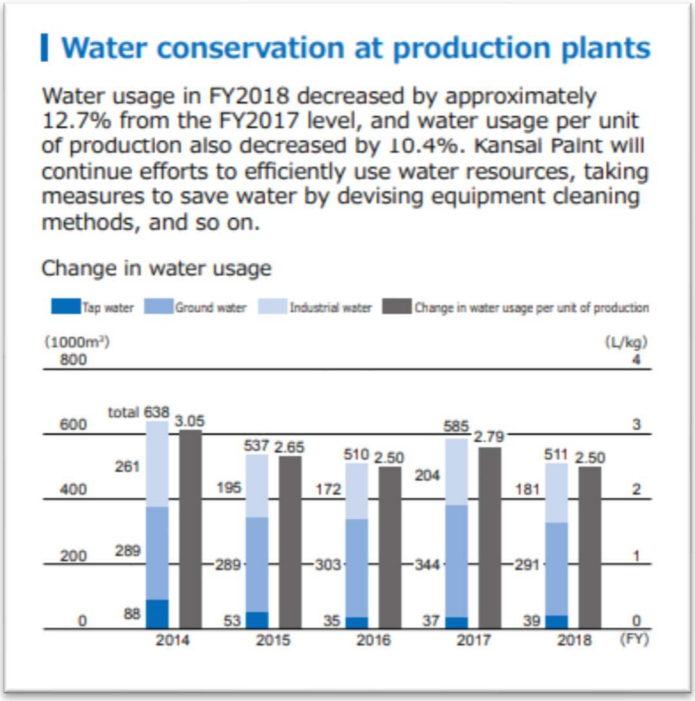

Figure 3. Water conservation at production (Kansai Paint Integrated Report p30)

Waste

The last set of inputs to the Osmosis model pertains to waste. Operational efficiency gains should result in less total waste generated, regardless of the disposal method. Rather than focusing on different waste treatment methods, an inherently subjective metric based on ill-defined terminology, MoRE focuses on total waste production as an objective metric for operational efficiency.

Kansai Paint's materials balance includes how much waste is generated in 2018, 18,900 tonnes, as well as how much is externally disposed of, 23 tonnes. When assessing operational efficiency,

looking at how waste is treated is not an appropriate metric. On that basis only the first figure is relevant.

The use-phase waste of the products is accounted for on the balance sheet, but without any quantifiable figures. This waste stream, along with the waste which isn't disposed of, is assumed to be brought back into the value chain through recycling. To calculate Kansai's resource efficiency performance, the use-phase waste is not included on their environmental balance sheet as MoRE only focuses on a company's own operational waste streams.

Further in the report, a waste-focused section is found in the report, with more detailed data. These figures however only apply to the production sites and omit the research activities. For Osmosis' model, the total waste generated figure of 18,900 tonnes found on the materials balance is taken.

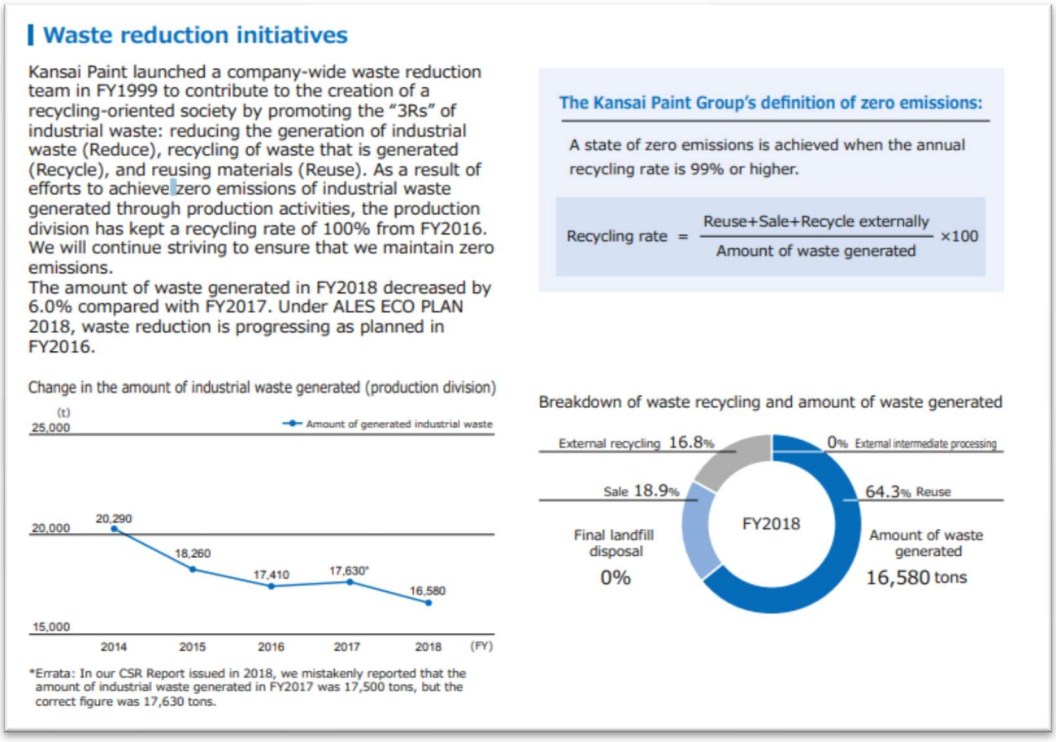

Figure 4. Waste reduction initiatives (Kansai Paint Integrated Report p30)

Under the 'Outputs' we can find four additional sources of emissions, including NO_x, SO_x, Chemical Oxygen Demand (COD) and chemical substance emissions. Lastly, the amount of wastewater treated is provided. All of these environmental metrics are forms of local pollutants and none are currently included in the model. They are often not disclosed consistently or regularly, and are therefore ill-suited as an assessment metric.

Below is an overview of the environmental metrics disclosed by Kansai Paint, and which data points are retained within the Osmosis model. These adjustments are necessary to standardize the data and enable us to make comparisons between companies based on objective and measurable data.

Reported by Kansai Paint					
Carbon (tCO2e)		**Water (m3)**		**Waste (tonnes)**	
R&D and Production	34,700	R&D and Production	590,000	R&D and Production	18,900
R&D	11,000	R&D	79,000	R&D	2,320
Production	23,700	Production	511,000	Production	16,580
Logistics	7,898	Municipal water	39,000	Reuse	10,661
		Ground water	291,000	Sale	3,134
		Industrial water	181,000	Recycling	2,785
				of which disposed	23
Accepted on the Osmosis environmental balance sheet					
R&D and Production		R&D and Production		R&D and Production	
R&D	11,000	R&D	79,000	R&D	2,320
Production	23,700	Production	511,000	Production	16,580
Logistics		Municipal water		Reuse	
		Ground water		Sale	
		Industrial water		Recycling	
				of which disposed	

Figure 5. Adjustments made to the reported environmental data creating the MoRE environmental balance sheet (Osmosis IM).

Conclusion

While the paint industry is a very specific segment of the chemicals sector, the information in our database does allow us to make comparisons to Kansai's direct peers.

- Kansai's energy management is particularly effective, achieving the second highest level of carbon efficiency after Nippon Paint Holdings and almost twice as efficient as their third ranked peer.
- On waste, the element ranked by the company as most material, Kansai is 21% more efficient than Akzo Nobel NV, and 44% more efficient than PPG Industries, while Sherwin-Williams is the top performer in waste management.
- Kansai's water usage is similar to that of Akzo Nobel, however, Nippon Paint Holdings has the best performance versus its peers.
- Of the paint companies, only Kansai Paint, Akzo Nobel and PPG Industries provide sufficient information to be included in the model. Of these, Kansai is listed ranked highest on resource efficiency, and is second highest across the whole Chemicals sector.

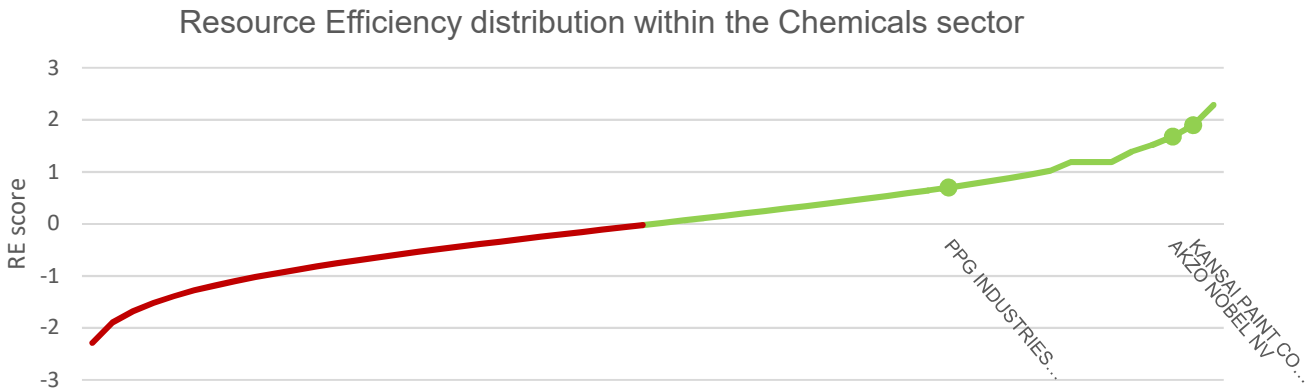

Figure 6. Resource Efficiency distribution within the Chemicals sector (Osmosis IM).

[i] Bloomberg

IMPORTANT INFORMATION

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