Environmental Research 2013

A global study of the attitudes of consumers and influencers







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Scope of the research



Purpose of survey:

- 1. To gain a 360° understanding of attitudes about the environment and packaging
- 2. To secure a solid basis for environmental communication
- 3. To collect input for future strategy and product development

How we did it:



Consumers

Who: Cross section of consumers,

aged 18 or over

How: Interviews using an online questionnaire. 500 /country (except China, India and USA, where we did 1000)

Number surveyed: 7,000 Number of countries: 11



Influencers

Who: Food and beverage industry stakeholders (50%) and other influencers e.g. NGOs, government and journalists (50%).

How: In-depth interviews. 20/country (except

China and Japan, where we did 15)

Number surveyed: approx. 230

Number of countries: 13 (including

Belgium and The Netherlands)



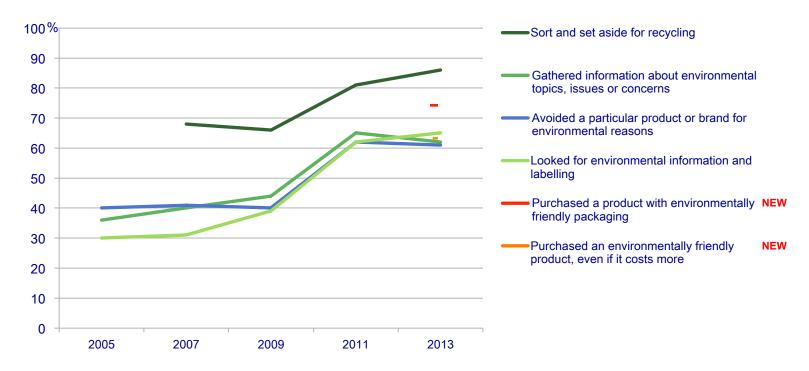




What environmental actions have consumers done or considered doing?



Survey question: We asked consumers, 'Please indicate which of the following actions you have actually done or considered doing, or have not considered doing in the past year.'



- · Consumers are doing more of almost everything!
- Sorting and setting aside for recycling is the top environmental action and growing, thanks mainly to the organisation of recycling systems
- Second most frequently mentioned are new actions e.g. buying products in environmentally sound packaging





Consumers are most willing to do things they believe make a difference



Survey question: We asked consumers, 'Please indicate which of the following actions you have actually done or considered doing, or have not considered doing in the past year.'

Total %



- Most frequently performed (in the green box) are the things that are easy for consumers to do or things which benefit to
 the consumers as well as the environment
- The blue box shows actions that require a bit more effort, financial commitment or that have a direct impact on purchasing habits





In which countries are consumers more environmentally active?

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Survey question: We asked consumers, 'Please indicate which of the following actions you have performed frequently in the past year.'

	Mature	France	Germany	Japan	UK	USA	Developing	Brazil	China	India	Russia	South Africa	Turkey
Sort and set aside for recycling	75	83	88	79	79	60	39	50	48	46	13	12	52
Purchased a product with environmentally sound packaging	15	12	24	3	18	16	28	24	34	28	22	18	36
Considered environmental aspects when shopping	9	9	12	2	10	12	22	16	31	22	18	13	25
Purchased an environmentally sound product, even if it cost more	6	7	9	1	6	7	18	15	21	19	18	11	19
Looked for environmental information labelling	6	7	5	2	7	9	18	14	20	22	14	10	22
Gathered information about environmental topics, issues or concerns	6	7	6	3	5	7	14	19	14	19	6	9	15
Avoided a beverage in a carton container for environmental reasons	4	4	4	1	5	6	8	9	8	12	3	5	4

- 3 out of 4 consumers in mature markets sort and set aside for recycling
- Consumers in developing markets are more environmentally active in all ways apart from 'Sort and set aside for recycling'. Reason is assumed to be lack of opportunity due to limited access to recycling infrastructure





What makes people buy environmentally sound products?

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Survey question: We asked consumers, 'Why would you buy environmentally friendly products?'

	Mature	France	Germany	Japan	UK	NSA	Developing	Brazil	China	India	Russia	South Africa	Turkey
Do something helpful for the environment/ reduce environmental impact	51	50	60	51	51	47	57	68	68	60	37	40	58
Preserve the environment for future generations	49	56	44	36	49	56	59	59	64	66	43	44	66
Fits with my lifestyle habits & preferences (e.g. organic, local, natural, free-from, etc)	21	19	25	18	18	22	36	26	45	35	38	24	41
Because they are higher quality than "regular" products	12	14	13	7	10	15	32	14	31	36	58	30	21
Because it's fashionable	4	3	5	4	3	5	7	2	4	13	3	12	2
None/ I would not buy	9	5	7	12	12	9	2	1	0	1	3	9	1
Average number of times mentioned	1.54	1.50	1.59	1.35	1.51	1.63	1.95	1.72	2.13	2.12	1.85	1.65	1.90

- The majority of consumers choose to buy environmentally sound products to help reduce environmental impacts.
- Buying 'green' also reflects a lifestyle choice, in particular in developing markets





What stops people buying environmentally sound products?



Survey question: We asked consumers, 'Which of the following aspects could make you not buy an environmentally sound product?



- The main barrier to buying environmentally sound products is cost (46%), especially in mature markets
- In developing markets, other important factors are lack of awareness, information and access 1/3 vs 1/5 in mature markets
- The key to selling environmentally sound products is therefore to offer, explain and communicate clearly with consumers about their choices



50% of consumers say bio-based plastic improves the environmental profile of cartons



Survey question: We asked consumers, 'How much, if at all, do you believe the following changes in carton beverage packaging would reduce its environmental impact? Please use a scale from 1 to 5, where 1 is 'not at all' and 5 is 'great improvement'?

% saying it is a "great improvement"

Replacing the plastic parts of the packaging with bio-based plastic 52

Using raw materials that are certified and labelled as sustainably sourced and produced

45



- Using more renewable packaging material is appreciated by most consumers
- Using responsibly sourced certified materials is one important are to meet consumers expectations

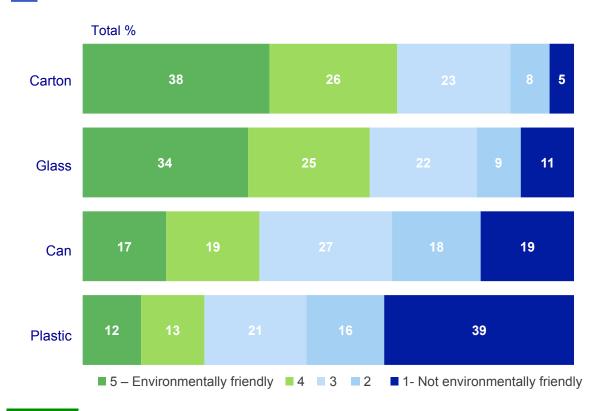




How do consumers rank different types of packaging?



Survey question: We asked consumers, 'Please indicate your belief in the environmental impact of the following types of packaging, using a scale from 1 to 5, where 1 is 'not environmentally friendly' and 5 is 'environmentally friendly'.'



- Consumers rate cartons as the best environmental packaging option
- Little change in scores since 2011





How do consumers choose milk drinks?



Survey question: We asked consumers, 'Using a scale from 1 to 5, please indicate how important each factor is when deciding which milk drinks to buy. You can use the intermediate scores to best modulate your answer.'





- Product attributes have greatest impact on consumers' purchasing decisions
- Pack by itself is not a key driver, but it strongly influences product's perception
- Convenience and environmental profile of milk/juice packaging are of roughly equal importance

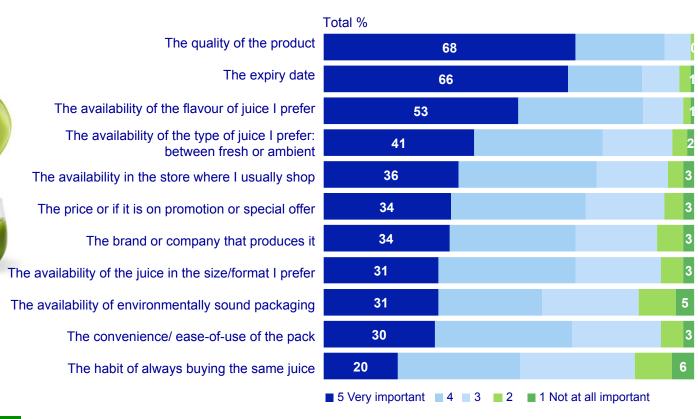




How do consumers choose juice drinks?



Survey question: We asked consumers, 'Using a scale from 1 to 5, please indicate how important each factor is when deciding which juice drinks to buy. You can use the intermediate scores to best modulate your answer.'



- Product attributes have greatest impact on consumers' purchasing decisions
- Pack by itself is not a key driver, but it strongly influences product's perception
- Convenience and environmental profile of milk/juice packaging are of roughly equal importance

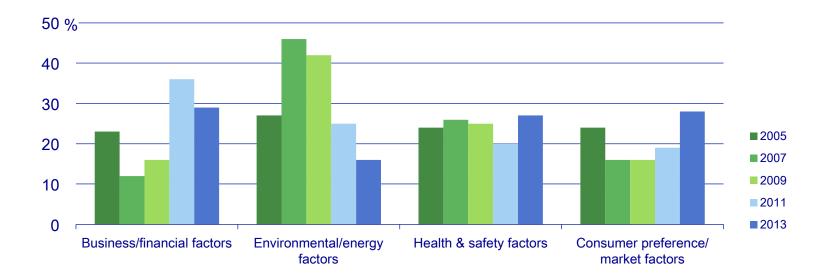




What will shape the future of beverage packaging?



Survey question: We asked 230 influencers: 'From your perspective, which of the following aspects do you predict will be most important in shaping the future use of various kinds of beverage packaging 5-10 years from now in your country?'



- · The 4 factors are increasingly interrelated
- The importance of environment appears to have diminished in recent years, but on closer inspection, we see it has become embedded in other factors. For example, a package's positive environmental attributes add customer value so this is today seen as part of consumer preferences.
- Influencers perceive a significant increase in consumer concerns
- Health and safety factors are more important (from a social responsibility perspective)





In beverage packaging, what are the most important drivers of environmental action?



Survey question: We asked 230 influencers: 'What are the most relevant environmental actions on beverage packaging that are being carried out in your country?'

Top 6 mentioned:

- Consumers Preference / Trust

 Manufacturers leverage environmental positioning to attract consumers' favour and trust
- Short payback of investment
 Influencers prefer environmental investments that offer short-term payback
- Brand Value / Differentiation
 Environmental actions and improvements are used as a way to attract consumers and differentiate from the competition
- Suppliers / Feedstock differentiation
 Environmental actions may help to differentiate among feedstock and fulfil the suppliers requirements
- Material Closed-loop / Value

 Manufacturers exploit the opportunity for higher materials value through sustainable practices (e.g. recycling)
- Logistics improvement
 Improvements in logistics set-up would be indirect consequence and highly appreciated







Which environmental actions are most important?



Survey question: We asked 230 influencers: 'What about specifically environmental factors?' Why are they important?'

- The ability to recycle packaging materials
- Sustainability of materials
- Ability to re-use/re-fill containers
- Ability to bio-degrade and compost packaging

same as 2011

up vs 2011

down vs 2011

NOTE: These are listed in order of how often they are mentioned (e.g. overall most important on top)

- Recycling is still the most frequently mentioned topic, driven by materials value, social implications, easy consumer involvement, statistics
- Sustainability of materials is rising in importance. New opportunities are emerging due to new technology





What do companies consider the most important environmental initiatives?



Survey question:

We asked 230 Industry sector stakeholders:

- 1. 'Does your company consider the impact on environment when choosing beverage packaging?' What are the main environmental issues your organisation faces?'
- 2. 'Does your company have any environmental initiatives and/or environmental products?'
- Waste management
- Reduced emissions, low energy consumption
- New materials (e.g. bio-based)
- Weight reduction, less material

- •
- Supply chain (sustainable, renewable resources)
- down vs 2011

same as 2011

up vs 2011

Labelling and certifications

NOTE: These are listed in order of how often they are mentioned (e.g. overall most important on top)

- · Waste management is very frequently performed, and most often mentioned by influencers
- Use of new bio-based materials is increasing due to the opportunities created by new technology
- · Labelling and certification are often put in place to fulfil consumers' demand for information





How does industry measure environmental impact?



Survey question: We asked around 115 Industry sector stakeholders: 'Which specific measurements or variables do you use/are used to estimate the environmental impact of your product or services?'

- Total energy consumption and share of renewable energy
- Package recycling rates
- **Olimate** impact
- Water consumption
- Packaging weight
- Use of renewable materials (up significantly)
- Product waste
- Impact on biodiversity

same as 2011

up vs 2011

down vs 2011

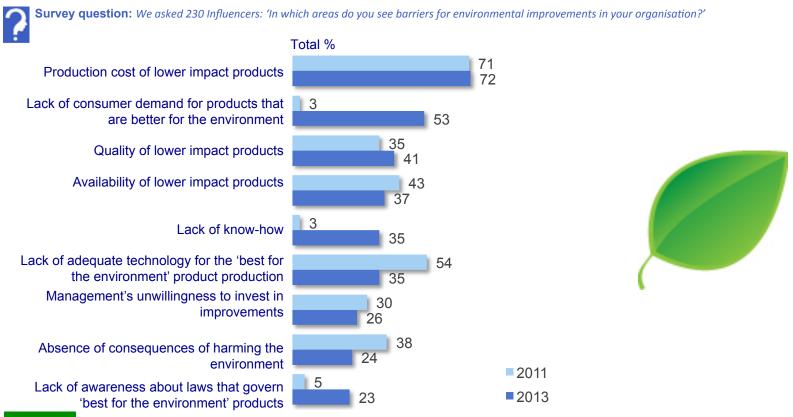
NOTE: These are listed in order of how often they are mentioned (e.g. overall most important on top)

- Many stress the need to use several indicators to analyse the whole product life cycle
- Indicators related to energy and water are used for internal assessments (continuous improvement)
- · Recycling rates and packaging weight are relatively easily calculated and communicated
- There has been a significant increase in the use of renewable materials in the last few years





What holds companies back from making environmental improvements?



- · Production cost is still the number one barrier
- Influencers cite 'lack of consumer demand' as a more important barrier to environmental improvements in their organisation now than in 2011. However, consumers' responses give a different picture. Cost prevents some consumers from buying environmentally sound products but the majority also cite buying environmentally sound products in order to 'do something helpful for the environment' as a key motivator (see slide 13)
- Lack of adequate technology is less of a barrier than in 2011





Industry opinions

"We often don't get the press we deserve; customers don't know all of what we do."

Head of packaging Retailer- UK

"It's senseless to talk about the interests of business or consumers as long as the state doesn't provide the rules."

Industry Stakeholder- Russia





Do influencers think people are prepared to pay for environmentally sound products?



Survey question: We asked 230 influencers, 'In your opinion, are consumers willing to pay more for environmental products compared to their traditional products?'



- · Influencers are sceptical about consumers' willingness to pay more for environmentally sound products
- 35% of influencers think consumers would pay less for environmentally sound products than those believing they would pay more. This is based on the assumption that environmental actions would lower production costs

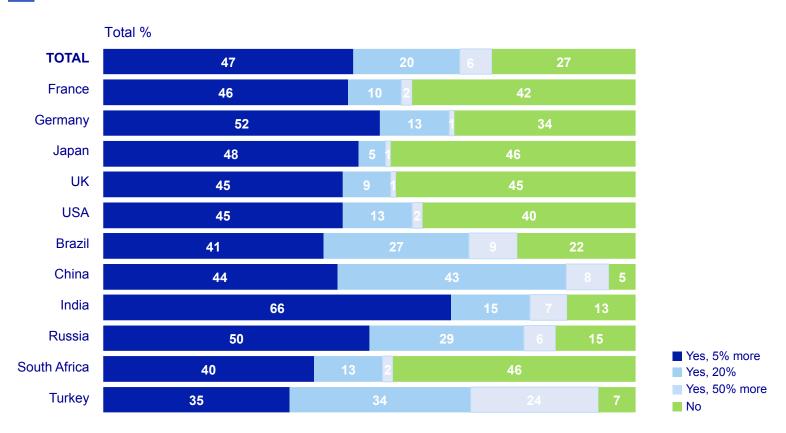




Consumers are more positive than expected



Survey question: We asked consumers, 'Considering 1 litre of milk packed in a new environmentally sound packaging, would you be willing to pay extra for it?'



- Almost half of the consumers say they would pay 5% extra for milk in an environmentally sound package!
- Disconnection versus influencers' belief (15%)





Which environmental concepts do influencers prefer to use?



Survey question: We asked 230 influencers: 'Which of these environmental concepts do you use most often in your business? Do you use it with the same terminology or differently?'

Frequency of use

Used more

Recyclable Renewable

Environmentally friendly Sustainable (packaging)

Bio-degradable
Bio-based
Carbon footprint
Water footprint



ANALYSIS:

Used

less

- Recyclable and renewable are the most frequently mentioned concepts
- Recyclable is well known and easy to communicate
- · Renewable gives a good opportunity to leverage environmental benefits of materials
- · Environmentally sound and sustainable (packaging) are seen as too vague and generic



Do interpretations of 'recyclable' differ?



Survey question: We asked consumers and influencers: 'Please indicate, in the context of packaging and the environment, what the term 'recyclable' means to you.'



Consumers:

- Most consumers understand the concept recyclable and connect it to recyclable materials and re-use
- 5% don't know what it means
- There is little variation between countries



Influencers:

- Recyclable is often used by influencers to convey the message of materials value (closed-loop) and re-use
- It is often mentioned in relation to use of recycled content and supported by recycling rates figures



ANALYSIS:

• Consumers and influencers are generally in agreement about the meaning of 'recyclable'







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Survey question: We asked consumers: 'Please indicate, in the context of packaging and the environment, what the term 'recyclable' means to you.'

RECYCLABLE	Mature	France	Germany	Japan	Y 5	USA	Developing	Brazil	China	India	Russia	South Africa	Turkey
Recyclable materials	73	76	78	29	86	85	75	77	78	73	72	88	61
Good for the environment/ sustainable/ good for future generations	8	5	4	27	4	6	12	17	8	12	10	2	25
Renewable	2	4	4	2	1	2	6	4	6	4	5	10	6
Made of recycled materials	1	0	0	1	1	1	3	1	4	7	0	1	1
Biodegradable	1	0	1	0	1	1	1	0	1	3	0	1	1
Others – Positive	9	3	10	31	2	3	9	13	11	8	6	1	15
Others – Negative	1	0	1	4	1	1	0	0	0	1	0	0	0
Other	1	2	3	1	0	0	3	1	0	1	11	1	6
None	8	15	6	12	6	5	3	2	1	5	5	1	1

ANALYSIS:

• There is a high awareness of the term 'recyclable' in both mature and developing markets



Do interpretations of 'renewable' differ?



Survey question: We asked consumers and influencers: 'Please indicate, in the context of packaging and the environment, what the term 'renewable' means to you?'



Consumers:

- Several consumers associate renewable with to end-of-life (recyclable/biodegradable) rather than to renewable resources
- 14% don't know what it means (stable vs. 2011)
- Some variation between countries



Influencers:

- For most influencers renewable, refers to resources that can be regenerated by nature again and are not depleted
- They see the value of using it in combination with sustainable, recyclable or bio-based



- · Consumers and influencers understand the term very differently
- The concept 'renewable' is often incorrectly often associated to end-of-life by consumers
- · Influencers understand the concept well







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Survey question: We asked consumers: 'Please indicate, in the context of packaging and the environment, what the term 'renewable' means to you?'.

THE RECYCLE IN THE RE	Mature	France	Germany	Japan	UK	USA	Developing	Brazil	China	India	Russia	South Africa	Turkey
Recyclable / Biodegradable	34	42	27	19	38	39	44	29	60	40	48	37	40
Renewable resources / natural sources	26	26	34	6	26	33	35	44	36	37	25	47	19
Less harmful for the environment / less pollution / sustainable	6	1	3	18	2	4	6	12	7	5	1	0	9
Renewable energy	4	1	9	2	5	3	3	4	2	4	0	0	3
Made of recycled materials	1	1	1	1	0	2	1	0	1	0	3	0	0
Others – Positive	8	3	4	34	2	3	9	14	12	9	5	3	13
Others – Negative	2	1	3	4	2	1	0	0	0	0	1	0	1
Other	2	2	4	1	1	1	4	2	0	2	7	2	17
None	23	30	21	22	28	19	8	10	2	9	15	13	5

ANALYSIS:

• Understanding of the term renewable varies among consumers only slightly between countries





Do people understand the term 'bio-based'?



Survey question: We asked influencers: 'Please indicate, in the context of packaging and the environment, what the term 'biobased' means to you?'



Most respondents do not know the concept and cannot define it

When understood, it is related to agricultural goods or vegetable waste

For many respondents the term is relatively new, but it and sounds modern and appealing

Most influencers mention **paper/carton** as examples of bio-based materials

- The use of bio-based is growing among some big players but the majority of respondents are still not planning to use it
- The term bio-based is seen to overlap with 'made from renewable sources', but also considered appealing to further define and complement renewable





Do people understand the term 'environmentally friendly'?



Survey question: We asked influencers: 'Please indicate, in the context of packaging and the environment, what the term 'Environmentally friendly' means to you.'



Many say it's often misused. A typical 'green-washing' expression

Widely used and understood but considered **generic**, refers to nothing in particular

It sounds **outdated**, was widely used in the past. Does not add value

Associated with materials with limited impact on environment across **full life cycle**

- Environmentally friendly is perceived by influencers to be generic and out-dated, carrying the risk of green-washing
- Today's influencers prefer to use measurable concepts to express low carbon footprint or low impact on the environment



Do people understand the term 'sustainable packaging'?



Survey question: We asked consumers and influencers: 'Please indicate, in the context of packaging and the environment, what the term 'sustainable' means to you?'



Consumers:

- Many consumers think that sustainable packaging is recyclable/biodegradable, has limited impact on the environment, or lasts a long time
- 18% don't know the meaning (25% in developed countries)



Influencers:

- Influencers associate sustainable packaging with a broad list of meanings (in general, something that fulfils sustainability - full scope)
- For many, it's vague and misused. For others, it's related to the role of packaging to minimise waste



- Sustainable is associated with several meanings
- · Overall, the term is perceived as generic and vague by both influencers and consumers





Global understanding of the concept 'sustainable packaging'

Survey question: We asked consumers, 'What does the term 'sustainable packaging' mean to you?'

HOME THE RECYCLE	Mature	France	Germany	Japan	UK	USA	Developing	Brazil	China	India	Russia	South Africa	Turkey
Recyclable/ Biodegradable	29	37	34	28	23	25	39	35	80	10	38	18	44
Less harmful for the environment / limited use of resources/ sustainable	13	9	16	14	13	13	23	39	12	26	45	9	16
Durable/ last for long time/ protects food	16	27	3	13	12	19	20	7	4	44	2	41	10
Renewable resources - energy/ natural sources	15	2	19	6	31	15	4	7	3	4	8	3	1
Made of recycled materials	3	4	1	0	4	5	2	8	1	1	2	2	1
Others – positive	4	4	2	11	2	3	6	14	3	7	6	1	7
Others – Negative	3	5	3	4	1	2	1	2	1	2	0	2	1
Other	2	1	4	3	1	1	3	5	0	3	8	2	7
DK	25	24	29	25	24	26	12	7	4	13	6	27	18

- The concept of sustainable packaging is difficult for consumers to understand
- 80% of Chinese consumers link it to environmental features Recyclable/Biodegradable
- Over 40% of consumers in India and South Africa link it to food protection



Do people understand the term 'carbon footprint?'



Survey question: We asked consumers and influencers: 'Please indicate, in the context of packaging and the environment, what the term 'carbon footprint' means to you.'



Consumers:

- About one third of consumers associate it with carbon emissions and climate change
- 10% link it to positive action on the environment in spite of not knowing the meaning
- 38% don't know the meaning (with higher peaks in Germany, Japan, Russia, Turkey, South Africa)



Influencers:

- Influencers associate it with carbon dioxide emitted in production processes
- Used for environmental assessments done by the company (or required by a customer / other stakeholders) in business-to-business context



- A high proportion of consumers do not understand meaning of carbon footprint
- Influencers mainly link the term to industrial processes



Opinions about the term 'carbon footprint'?

"...energy is becoming more expensive and attention on energy consumption is growing, it will be more and more difficult to sell products with high carbon footprint"

Stakeholders, South Africa

" Carbon footprint is a bit of a buzz word"

Journalist, UK





How do influencers view the importance of labelling?



Survey question: We asked influencers, 'How important do you believe environmental labelling for packaging is? Do you think consumers pay attention to them?'

Industry
Stakeholders
are sceptical about
Environmental labels

Low interest and involvement in developing countries

Consumer attention is low

Need to be endorsed by international certification

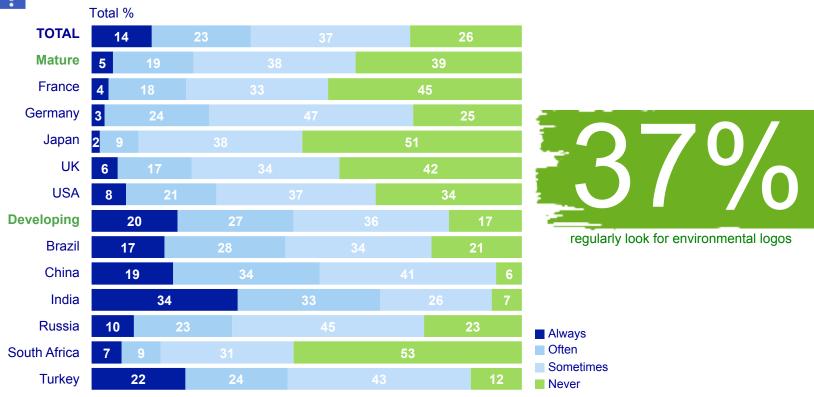




Consumers are looking for environmental logos more often than expected



Survey question: We asked consumers, 'When you shop for beverages, do you typically look for environmental logos on the products you buy?'



- The influencers' opinions are out of synch with consumers, 37% of whom regularly search for environmental logos. Slight change compared to 2011 (39%)
- Consumers in developing markets look for environmental logos twice as often as consumers in mature markets an untapped opportunity for the industry

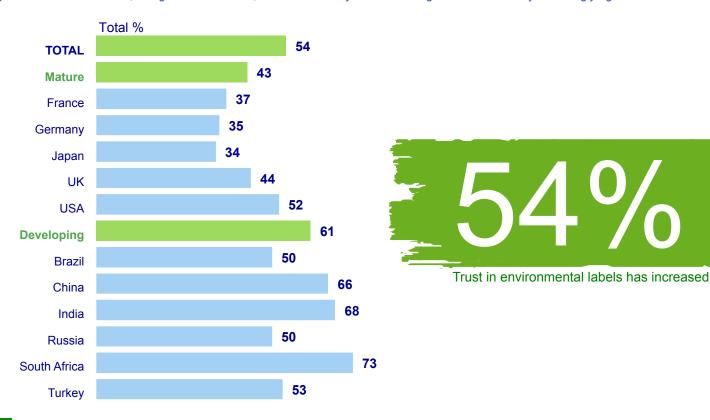




Do people trust environmental labels?



Survey question: We asked, 'Next are some statements about environmental logos. Please indicate how much you agree or disagree with each statement, using a scale of 1 to 5, where 1 means you 'not at all agree' and 5 means you 'strongly agree'.



- Trust in environmental labels has increased (now 54% versus 37% in 2011)
- There is a clear difference between countries
- Developing countries trust environmental labels the most. (Over 2/3 of consumers in China, India and South Africa compared with only 1/3 in Japan, Germany and France)

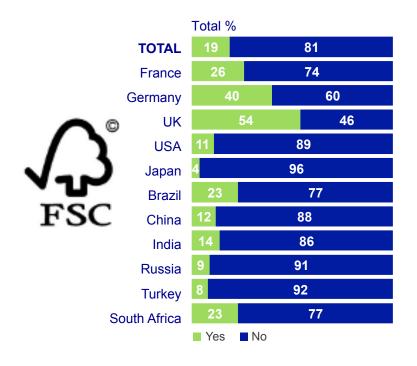


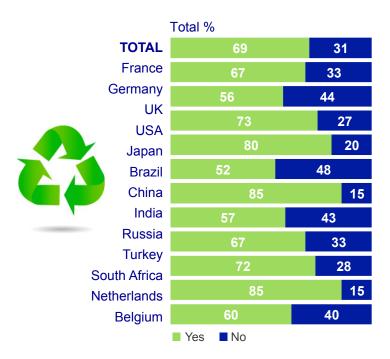


To what extent do consumers recognize the FSC label?



Survey question: We asked consumers, 'Now you will see some environmental logos or labels that you can find on food and beverage packaging. Which of them have you seen or heard of? Please select all the logos this applies to.'





- The Moebius recycling loop is the most recognized label (69%)
- 19% of consumers recognize FSC, even though it is relatively new
- FSC recognition is highest in markets with more FSC certified beverage packaging or which have been promoting FSC (with the exception of South Africa where awareness is quite high)





What do consumers associate the FSC logo with?



Survey question: We asked consumers, 'What does this logo mean to you?'





- The majority of consumers who correctly recognize FSC associate it with responsibly managed forests
- Only 8% globally link it with other messages





Which are the best-known environmental labels?



Survey question: We asked consumers, 'Now you will see some environmental logos or labels that you can find on food and beverage packaging. Which of them have you seen or heard of? Please select all the logos this applies to.'



	France	Germany	Japan	UK	USA	Brazil	China	India	Russia	South Africa	Turkey
Moebius Loop	67	56	52	73	80	85	57	67	72	60	85
FSC	26	40	4	54	11	23	12	14	9	23	8
Carbon Label	5		6	33	13	9	35		5	29	19
Green Dot Logo	69	90							60		48
PEFC			4				29	15			
Blue Angel	78		78								
On pack recycling	47				47						
Eco Mark India								33			
SFI					8						
None of these	13	3	42	11	14	8	12	7	13	26	5

- Consumers in all countries are most aware of the Moebius recycling loop
- The FSC logo is the only forestry label recognized by consumers in all countries
- Other labels are predominantly local or regional



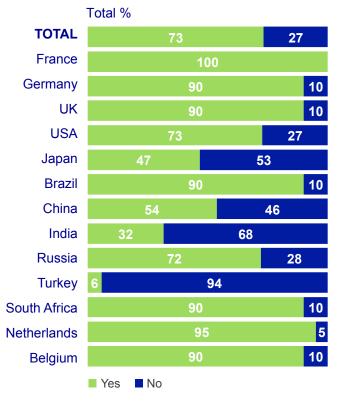


How many influencers recognize and can explain the FSC logo?

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Survey question: We asked influencers, 'Do you know the FSC logo? What does it mean to you? Does (would) it add value to your products?





Logo means that the packaging or product comes from a sustainable forest

It works mainly on **brand/ product equity**, improving and qualifying image and reputation

- In 7 markets, there is over 90% awareness among influencers
- 3/4 of respondents know and can explain the FSC logo
- There is a split between markets. Significantly lower in eastern countries, including Turkey



FSC

Comments on FSC from around the world

"Builds trust with consumers but doesn't drive sales"

Retailer, UK

"The FSC logo is good, we use it more and more"

France

"More trendy, western and credible"

Other Stakeholders, China



Findings of special interest to Tetra Pak and our customers

- Environmental factors of packaging are increasingly important, but no longer viewed in isolation of other business factors
- The ability to recycle packaging material is still the most important environmental factor in beverage packaging
- Interest in the sustainability of materials has grown since 2011
- Consumers' environmental actions continue to rise. The main actions include recycling more and buying more products in environmentally sound packaging
- Cost is still the main thing that stops companies making environmental improvements
- Cost is also the main reason for consumers NOT choosing lower impact products
- Lack of awareness is another reason for consumers NOT choosing lower impact products
- Consumers are more keen to pay more for environmentally sound products than influencers think





Findings of special interest to Tetra Pak and our customers

- There is a high awareness of the term 'recyclable' in all countries
- Influencers are sceptical about the consumer impact of environmental labels, but in reality, consumer trust has increased from 37% to 54% since 2011
- The Moebius recycling loop and FSC logo are the only environmental logos which consumers in all countries recognize
- · Those consumers who recognize FSC, understand and can explain correctly what it's about
- More than half consumers believe introducing bio-based polymers improve the environmental performance of carton packages
- Consumers consider cartons the best environmental packaging option



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