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## Executive Summary

Millennials feel they have more at stake than any other generation when it comes to matters of health and the environment. In our survey, more of them were concerned about various aspects of the environment than any other age group. They are more apt to look for products that are both eco-friendly and healthy.

When it comes to health, Millennials are concerned about chemical exposure through food and beverage packaging, with large numbers, though not a majority, concerned about issues such as phthalates and bisphenol-A in their packaging. While they may not be aware of these specific issues of concern, nearly two-thirds have changed their purchases to reduce exposure to chemicals in food and beverage packaging. They are particularly concerned where their children are involved.

Some of the highlights from the survey:

- They are more likely than any other age group to be concerned about serious environmental issues, but also feel that they can make a difference through lifestyle changes that can add up to benefit the environment.
- They are highly concerned about the threat of climate change, saving resources, and burying waste in landfills.
- Over 80 percent of Millennials say that being eco-friendly improves their quality of life, and three-fourths actively look for changes they can make in their home and lifestyle to be greener.
- Despite being a generation that has been bruised by the economic downturn in 2008, they are willing to pay more for products that they think are eco-friendly and even more willing to pay more for products that they perceive as healthier.
- Yet ironically, of each of the age groups in this survey, Millennials are the least likely to take actions that would support those beliefs - the least likely to sort recyclables from trash and the least likely to take steps to save energy.

In short, Millennials are a study in contrasts. High intent, low action. Low awareness, high wariness. Short on money, willing to pay more. Each of these contrasts represents a valuable opportunity to learn more about them, understand the barriers to addressing these gaps, and formulate communications messaging that can help cross the chasm.

<sup>&</sup>lt;sup>1</sup> What defines a person as belonging to Millennial generation lacks precise dates and therefore often varies. The survey on which we rely for this report bracketed people in the age group of 21-35 years of age (inclusive), which would mean that for our purposes, we are including people born after 1978.

## About This Report

The Glass Packaging Institute (GPI) is the trade association representing the North American glass container industry and works on behalf of glass container manufacturers to promote glass as the optimal packaging choice. As an industry, we seek to reassure consumers that in a world of toxic threats, glass is the responsible choice to help protect both the health of individuals and the environment for generations that follow.

To understand consumer attitudes, knowledge, beliefs and practices when it comes to preferences for packaging and assessing environmental and health impacts, GPI has undertaken an extensive process to understand what consumers think about the environmental and health aspects of packaging for food and beverages.

In the Spring of 2013, GPI partnered with EcoFocus Worldwide Research, a leading consumer trend research firm specializing in consumer perspectives on sustainable goods and insights into the health and wellness. GPI participated in a survey that sampled 4,046 nationally representative adults aged 18-65 to assess knowledge, attitudes, and beliefs about packaging materials and recycling in the U.S.

In this third report from the survey data, GPI focused on a specific population - the Millennials - comprised of those who were born after 1978. Why this group? According to research conducted by Pew , this generation is more ethnically and racially diverse than others and are likely to be the most educated generation in our history. Their economic affluence has been affected perhaps to a disproportionate degree by the economic downturn that occurred in 2008. They are the generation now having the most children and, therefore, who have the most at stake in protecting the environment for future generations. And finally, they are about to become, if not already, the largest consumer population.

This report is divided into 2 parts:

- Part 1 focuses on environmental issues and seeks to answer some specific questions
  related to the Millennials' approach to environmental conservation. How concerned
  are Millennials about the environment compared to other age groups? Do they believe
  that they can take steps that are going to make a difference? And finally, are they in
  fact taking those steps through better recycling practices, conservation and product
  choice?
- In Part 2, the focus is on matters of health and product choice.

<sup>&</sup>lt;sup>2</sup> See Pew Research Center report "Millennials: A Portrait of Generation Next - Confident. Connected. Open to Change." Published February 2010 located at http://www.pewsocialtrends.org/files/2010/10/millennials-confident-connected-open-to-change.pdf

#### Part 1: Environmental Sensitivities and Practices

Millennials not only show great concern for the environment, they care about environmental issues more than the average person and more than any other age group.

In our survey, all of the participants were asked to indicate their level of concern around three specific environmental issues - the proliferation of landfills and dumps, the threat of climate change, and the loss of natural resources. These were included in a much longer list of issues facing today's society, and included the state of the national economy, the cost of the national healthcare system, the financial security of family, and threats posed by offshore drilling for oil, among others.

The loss of natural resources ranked fourth highest for Millennials, just after the economy, healthcare and family security. Moreover, when focused only on just those areas of concern regarding the environment - the proliferation of landfills and dumps, the threat of climate change, and the loss of natural resources - concern about these areas ranked highest among Millennials compared to any other age group, as indicated in the chart below.

For all three areas, the Millennial generation had a much higher percentage of people who either agreed or strongly agreed that the issue was a major concern. And in two of the three - the threat of climate change and the loss of natural resources -- a majority of Millennials expressed agreement. In fact, it becomes apparent that with increasing age comes a lower threshold of concern for the environment.

Table 1:	Specific	<b>Environmental</b>	Concerns
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Area of Concern	21-35	36-45	46-55	55-65	21-65
Landfills and dumps	42.6	37.8	40.1	31.5	39.0
Threat of climate change	51.6	46.2	44.1	40.3	46.6
Loss of natural resources	57.5	57.4	55.8	51.5	55.8

Knowing that the environment is a concern among Millennials is important. But such an observation leads naturally to the question as to whether or not there is a belief that one can make a difference with respect to these environmental issues through efforts to recycle and conserve.

In Table 2, "Little Changes Can Make Big Environmental Impact," it is evident that this generation believes in the opportunities to make an environmental impact through every day choices. In the survey, respondents were asked to state their level of agreement with the statement, "Little changes I make in my lifestyle can add up to big improvements for the environment."

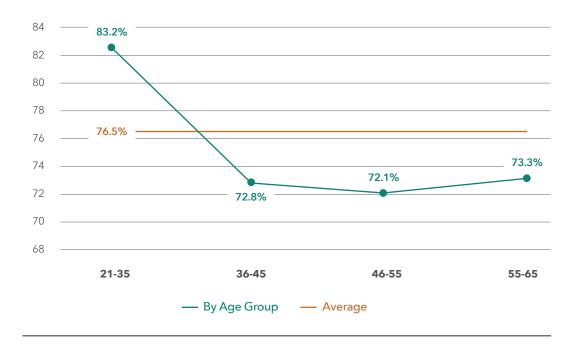
An overwhelming majority of Millennials - 83.2 percent either agreed or strongly agreed with the statement.

Table 2: Little Changes Can Make a Big Environmental Impact



This generation feels that small changes can have a large impact. That is a sentiment that is echoed by the fact that they also believe that acting in an eco-friendly manner is a way to improve their quality of life – a sentiment that they expressed more readily than any other generational group, providing a strong motivation for engaging in eco-friendly practices.

Table 3: Being Eco-Friendly Improves Quality of Life



But how does being eco-friendly translate into action? A number of questions were asked of respondents to assess what it meant to be eco-friendly in terms of changing their habits or behaviors.

Sentiment about the meaning of being eco-friendly translates into intent. Once again this was most clearly expressed by Millennials. Nearly four out of five of this age group looks for changes they can make in their home or lifestyle. That compares to two out of three from the Baby Boomer Generation who are making that effort. (Table 4)

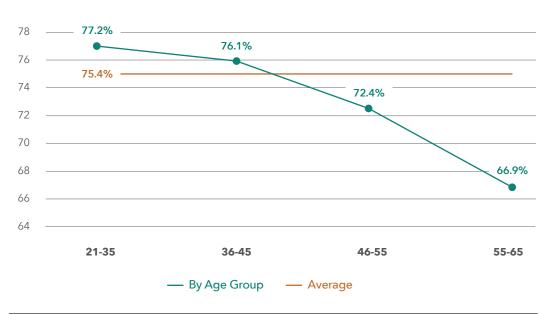


Table 4: Look for Changes to Make Home/Lifestyle Greener

How is this intent expressed? For example, are Millennials willing to pay more to be eco-friendly?

The economic environment for Millennials has been challenging. A large number are saddled with student debt and many are putting off life decisions until later years. As a group, they were highly affected by the economic downturn of 2008. Yet, in the survey, Millennials also made it clear that despite these realities, a clear majority are willing to pay more for products that they perceive to be eco-friendly, much more than in any other age group. Millennials are the only age group where a majority indicated that they are willing to pay more for eco-friendly products.

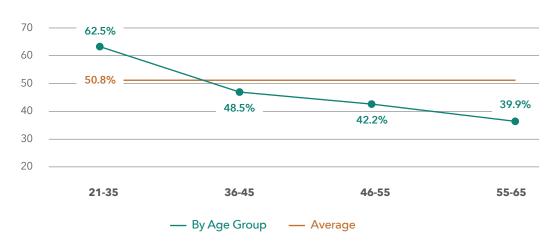


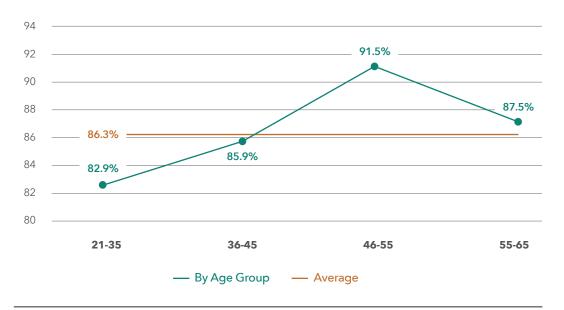
Table 5: It is Worth Paying More for Eco-Friendly Products

All in all, Millennials are consistently more eco-sensitive and believe that they can do things in their daily lives that would positively impact the environment.

Additionally, this generation had a **higher level of intent** than any other to follow through, including a willingness to pay more for eco-friendly products. In short, this generation is emotionally highly committed to matters of the environment and puts their money where their mouth is.

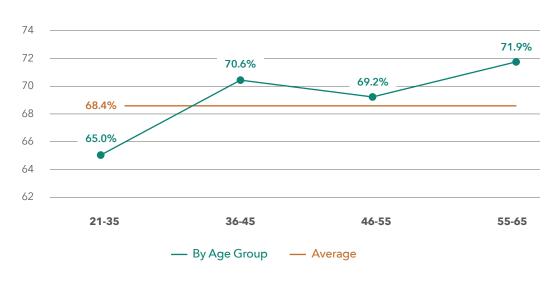
Yet remarkably, when it comes to more specific actions related to conservation, that attitude does not always translate. For example, when it comes to saving energy - a goal embraced by large numbers across the board, Millennials are the least conscientious of any age group, falling just below the average response.

Table 6: Conscious of Trying to Save Energy



Similarly, despite the fact that Millennials are the age group most concerned with conserving natural resources, when it comes to another measure for action - recycling - Millennials are the least likely of any of the age groups to make sure that they separate their recyclables from the trash.

Table 7: Separates Recyclables from Trash



One area, however, where Millennials did indicate they will act, is "product choice." On average, in fact, a majority of all respondents indicated that environmental considerations play a role in product choice.

Consumers were asked how saving energy, reducing waste, avoiding chemicals or pollutants were a consideration for them when purchasing a product for use in their household. Once again Millennials are the age group indicating the most eco-sensitivity. Coupled with the information in Table 5, one could conclude that they are not only willing to choose a product based on its eco-friendliness, they may be willing to pay more to do so, despite their economic challenges.

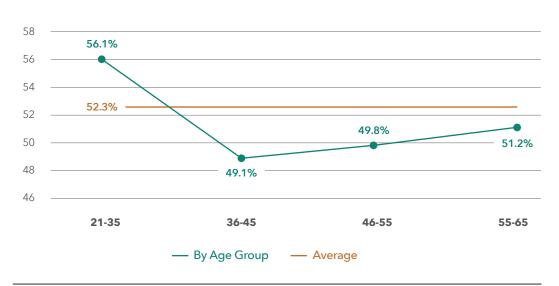


Table 8: Role of Environmental Issues in Product Choice

When it comes to the environment, Millennials report contrasting views. They are a generation that is highly concerned about the environment, which is intuitive given that they are also the generation who will tomorrow bear the brunt of the choices made today. That being the case, while their sentiment is in line with eco-friendliness and their intent is to protect the environment, as a generation they are less likely to act in a manner entirely consistent with their sentiments. Other generations, in fact, make a greater effort to recycle and save energy. The one exception is product choice.

Because glass can be recycled endlessly without compromising purity or taste, glass not only is an optimal packaging material for Millennials, it is also a means by which they can close the gap between sentiment, intent and action.

### Part 2: Product Choice and Health Concerns

Exposure to chemicals through food and beverage packaging has become an important source of study among researchers. In the past few years, there have been an increasing number of studies assessing the potential effects of bisphenol-A (BPA) – a compound found in many forms of plastic packaging and the plastic lining in aluminum cans. While studies have ensued, many consumers have voted with their feet, particularly where children are concerned, rejecting products that contain BPA. Policy followed suit in the U.S. with bans of BPA in packaging for baby bottles and sippy cups.

Given the level of interest in BPA exposure and its health effects, the survey also explored issues around health. Specifically, the survey sought to delve into concerns over potential health threats, and to understand if they translate into product choices, particularly when it comes to packaging.

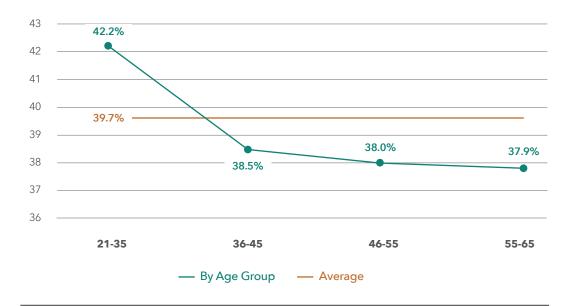
To find out how consumers feel about various threats, they were provided with several health risks and asked to respond with their level of concern related to each. They were asked about three specific areas related to substances that come into contact with food or beverages – plastic microwave dishes, BPA and phthalates. Of the three issues, the respondents were most aware of and concerned about BPA with 43 percent stating that BPA was a concern. As we saw in environmental issues, here Millennials once again demonstrate a higher degree of concern than any other generational group for all three of these aspects of plastic packaging.

Table 9: Plastic Areas of Concern							
Area of Concern	21-35	36-45	46-55	55-65	21-65		
Plastic Microwave Dishes	37.7	36.4	34.2	31.0	35.4		
BPA	43.0	38.1	33.3	38.3	38.9		
Phthalates	35.1	33.1	26.4	30.7	31.8		

Millennials also take action on this front. When asked whether or not they have changed their purchasing patterns to reduce exposure to chemicals in packaging, Millennials are more inclined than any other group to take concrete steps to avoid exposure to chemicals in packaging. Over 63 percent, or nearly two-thirds, indicated that they had changed their purchase decision – a far greater number than those who indicated that specific plastic issues were a concern.

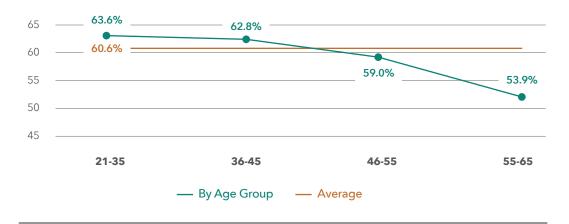
In similar numbers and proportions, Millennials stated that the plastics used specifically in packaging food and water were a concern - still registering the highest level of concern about plastic among any of the age groups.

Table 10: Plastics Used in Packaging Food or Water



Just over 40 percent of Millennials listed plastics used in packaging as a concern. Still, plastic still appeared to be a motivator to change purchasing habits. When asked whether or not they had changed their purchasing behavior to avoid exposure to plastic chemicals found in food and/or beverage packaging, nearly two-thirds (63.6 %) of Millennials stated that they had done so, despite the fact that only 43 percent had indicated a specific concern related to BPA. That could mean that many Millennials, while not aware of the specific research going on related to bisphenols, nevertheless are concerned about chemicals in plastics and the possibility that it could pose a health hazard. In other words, while the threat may not be clearly understood, there is a strong enough concern to motivate some level of product avoidance.

Table 11: Changed Purchases to Reduce Chemical Exposure in Packaging



This sentiment intensifies when children are at issue. When asked whether they agreed with the statement that they want to minimize their child's exposure to plastic in food and beverage packaging, two-thirds of all consumers agreed and fully 70.1 percent of Millennials.

72 70.1% 70 68 67.2% 65.9% 66 63.2% 64 64.6% 62 60 21-35 36-45 46-55 55-65 — By Age Group — Average

Table 12: Want to Minimize Children's Exposure to Plastic Packaging

In Part 1 of this report, survey data shows that Millennials, despite the economy, say it is worth paying more for eco-friendly products with 62.5 percent of them saying so. But an even larger proportion - 3 out of 4 - are motivated to pay more money for products that they perceive to be healthier.



Table 13: Worth Paying More for Healthier Products

There was one important area where there was a disconnect for Millennials that may reveal a knowledge gap. More than any other group by far, Millennials say they look for beverages in packaging with renewable materials, with 51.1 percent of Millennials saying that they did so. That means that a majority of Millennials are actively looking for renewable packaging.

Table 14: Renewable Packaging						
Renewable and Recyclable	21-35	36-45	46-55	55-65	21-65	
Look for beverages in packaging made with renewable materials	51.1	39.2	39.4	38.2	43.5	
Glass is 100% recyclable and can be recycled endlessly without loss in quality or purity	61.9	61.8	69.1	72.7	65.7	

Yet while they look for packaging that is renewable, they are less likely to understand the renewable nature of glass. When asked how many agree with the statement that glass is 100 percent recyclable and can be endlessly recycled, 61.9 percent agreed with that statement compared to 72.7 percent of Boomers (age 55-65).

This is important because Millennials indicate in the survey that they are most likely to look for beverages in packaging that is made with renewable materials, but are also least likely to realize that glass is endlessly renewable. If they are not getting the message that glass is an endlessly renewable material, then it could undermine their drive to choose glass when looking for packaging made with recyclable materials.

Table 15: Increase/Decrease in Use of Packaging Materials							
Glass Use	21-35	36-45	46-55	55-65	21-65		
Glass more often	28.6	20.8	22.4	24.1	24.7		
Glass less often	17.9	19.0	20.2	19.6	19.0		
Plastic more often	33.8	31.6	29.7	33.6	32.4		
Plastic less often	17.2	14.6	16.7	13.9	15.9		

However, when they did migrate to another packaging material, they were also the group most likely to migrate to plastic. They did so in higher numbers than those who went to glass. That said, 61.7 percent of Millennials indicated that they are trying to purchase beverages that use less plastic in their packaging.

#### **Conclusion**

There is little doubt that Millennials are aware of the mounting environmental concerns. However, the fact that they are more sensitive, yet less likely to take action means that there are some barriers for them to act on their beliefs when it comes to saving energy and preserving the environment. Probing the nature of those barriers and applying strategies that will enable Millennials to overcome them could reap large rewards. While they have the motivation, they may not – for some reason – have the means.

As consumers, they also are concerned that there may be hidden dangers in plastic and are wary of it - particularly when it comes to exposure and children - even if they are not aware of the specific nature of those potential threats. When it comes to packaging choice, a big factor for this group is that the material be renewable, and while an overwhelming majority of them realize that glass is endlessly recyclable, of all of the age groups, they were among the least likely to know that fact.

This report provides a snapshot in time. While the Millennial generation is particularly motivated, communications aimed at them to help narrow the gap between their intent and their actions in general is needed. This could help boost recycling rates, as well as increase preferences for glass as an endlessly recyclable packaging material that provides distinct taste and health advantages.

