



**Greendex 2012: Consumer Choice and the
Environment – A Worldwide Tracking Survey**

HIGHLIGHTS REPORT

July 2012

INTRODUCTION

National Geographic conducted its inaugural Greendex survey in January 2008. That first Greendex survey of 14 countries around the world ranked average consumers in those countries according to the environmental sustainability of their behavior. National Geographic replicated these studies in 2009, 2010 and now again in 2012 to track progress or the lack thereof. Consistently, consumers in the large developing economies of Brazil, India and China have scored highest, while Canadians and Americans, with their relatively massive environmental footprints as individuals, have scored lowest.

Despite five years of rapid global transformation and economic turmoil, it is clear that sustainable consumption remains a global challenge and that progress has been insufficient. The Greendex studies have added to our collective understanding of the barriers and opportunities that people face in becoming more sustainable as consumers.

The 2008 findings raised concerns about what economic development and the material aspirations that come with it would mean for the impact that the average consumer in rapidly growing economies has on the environment. At the

same time, the results reminded us that consumers in wealthy countries have a proportionately greater impact on the environment than others—and that they can and should make more sustainable choices. In 2010, we revealed that a lack of trust in companies’ environmental claims, combined with the absence of demonstrated leadership from both companies and governments were major barriers that needed addressing.

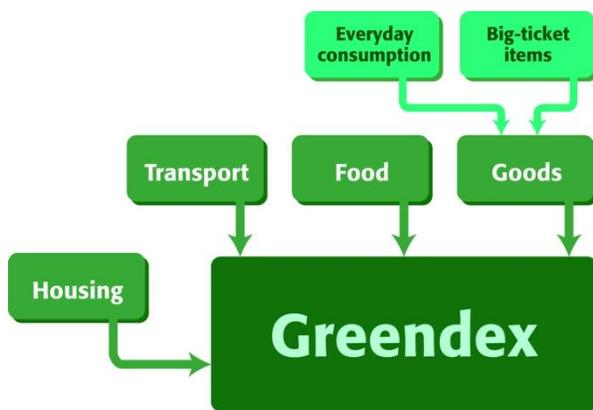
In 2012, we have learned more about how perceptions and behavioral realities are often out of synch with each other when it comes to sustainable consumption, making the transition to sustainability all the more complicated. Greendex 2012 aims to help bridge these gaps. Indeed, Greendex 2012 is intended to further our global understanding of the issues, obstacles and opportunities related to sustainable consumer behavior in a manner that enables behavior change and empowers individuals along with major societal actors like companies and governments.

The following is a summary of the results of Greendex 2012: Consumer Choice and the Environment—A Worldwide Tracking Survey.



The Greendex is a comprehensive measure of consumer behavior in 65 areas relating to housing, transportation, food and consumer goods. Greendex 2012 ranks average consumers in 17 countries—up from 14 in 2008 for which changes are tracked—according to the environmental impact of their discretionary and nondiscretionary consumption patterns within these four major categories.

Each respondent earned a score reflecting the environmental impact of his or her consumption patterns within each, and four corresponding “sub-indices” were created. Consumers were then assigned an overall Greendex score (a measure of the relative environmental sustainability of their consumption patterns) out of 100, based on their performance within the four sub-indices.



GREENDEX 2012: OVERALL RESULTS

In their fourth survey that measures and monitors consumer behaviors that have an impact on the environment, the National Geographic Society and the research consultancy GlobeScan have found that environmentally friendly behavior among consumers has increased from 2010 in only five of 17 countries surveyed. Sustainable consumer behavior has decreased in nine. In only one country surveyed

has environmentally friendly consumer behavior slipped below our 2008 baseline levels. So, while progress remains positive overall, some momentum has been shed in the past two years.

By environmentally friendly consumer behavior, we mean people’s transportation patterns, household energy and resource use, consumption of food and everyday consumer goods, and what consumers are doing to minimize the impact these activities have on the environment.

“Greendex 2012: Consumer Choice and the Environment – A Worldwide Tracking Survey” measures consumer behavior in areas relating to housing, transportation, food and consumer goods. Greendex 2012 ranks average consumers in 17 countries according to the environmental impact of their consumption patterns and is the only survey of its kind.

First conducted in 2008, the Greendex survey was expanded in 2009, with the addition of Argentina, South Korea and Sweden to Australia, Brazil, Canada, China, France, Germany, Great Britain, Hungary, India, Japan, Mexico, Russia, Spain and the United States. Seventeen-thousand consumers were polled online (1,000 in each country). The same 17 countries were included in the 2012 survey.

The top-scoring consumers of 2012 are in the developing economies of India, China and Brazil, in descending order. Those in emerging economies continue to round out the top tier of the Greendex ranking, while the lowest scores are all earned by consumers in industrialized countries. American consumers’ behavior still ranks as the least sustainable of all countries surveyed since the inception of the study, followed by Canadian, Japanese and French consumers.

Meanwhile, consumers in developing countries with the highest Greendex scores are the most likely to agree that they “feel guilty about the impact [they] have on the environment,” despite having the lightest footprint as individuals. The research finds a positive relationship between the extent to which people feel guilty about their impact and the Greendex scores of average consumers in the same countries. Consumers with low Greendex scores, i.e., those demonstrating the least sustainable behavior as consumers, are least likely to feel guilty about the implications of their choices for the environment.

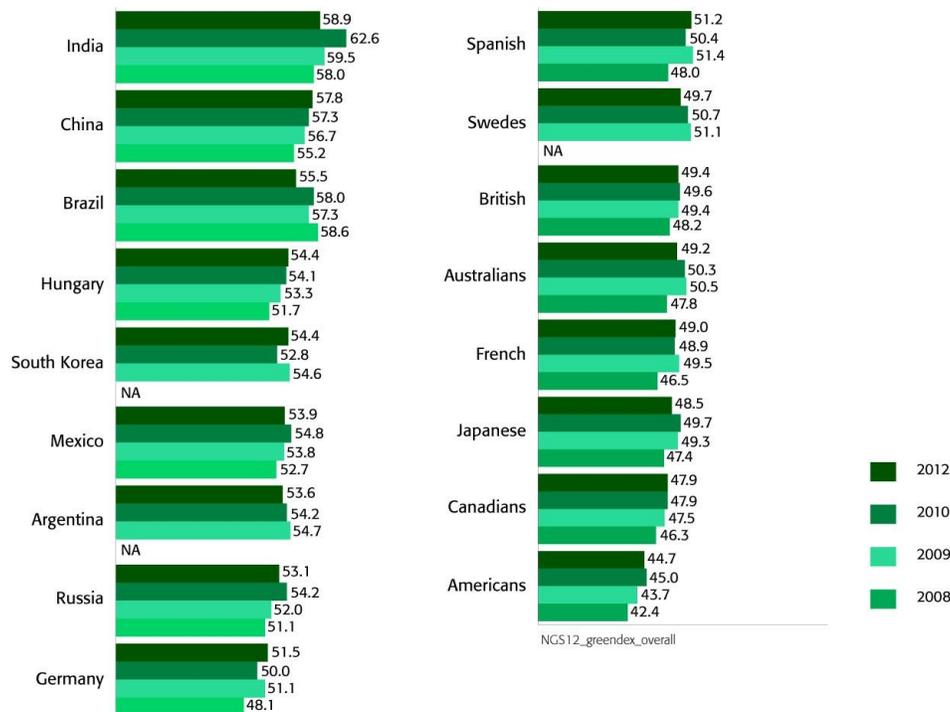
However, the opposite is true when it comes to the extent to which people feel empowered to help improve the environment as individuals. Those with the lowest Greendex scores and the least sustainable patterns of behavior are, ironically, also those who most feel able to make a difference. Consumers in emerging economies feel relatively helpless in the face of

environmental problems which are often more tangible there.

Consumers in countries such as Mexico, Brazil, China and India tend to be most concerned about issues like climate change, air and water pollution, species loss, and shortages of fresh water—all factors affecting the planet’s ability to support life. Consumers in these large emerging economies are the most likely to report that environmental problems are having a negative impact on their health today. In contrast, the economy and the cost of energy and fuel elicit the most concern among American, French and British consumers.

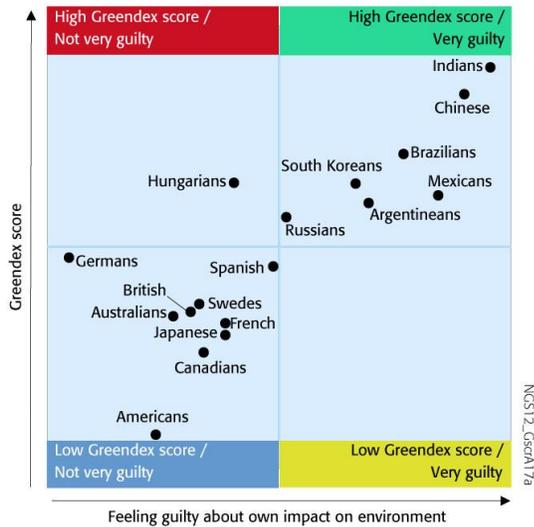
Consumers registering the largest 2012 vs 2010 increases in environmentally sustainable consumer behavior are the South Koreans and Germans, followed by the Spanish and Chinese. Consumers in the rapidly growing economies of India and Brazil, followed by Russia, have seen their Greendex scores decrease most since 2010. Between 2008 and 2010, consumers in eight of

Greendex: Overall Rankings
Consumers in Each Country, 2008–2012



Greendex Score vs Feeling Guilty about One's Own Environmental Impact

Consumers in Each Country, 2012



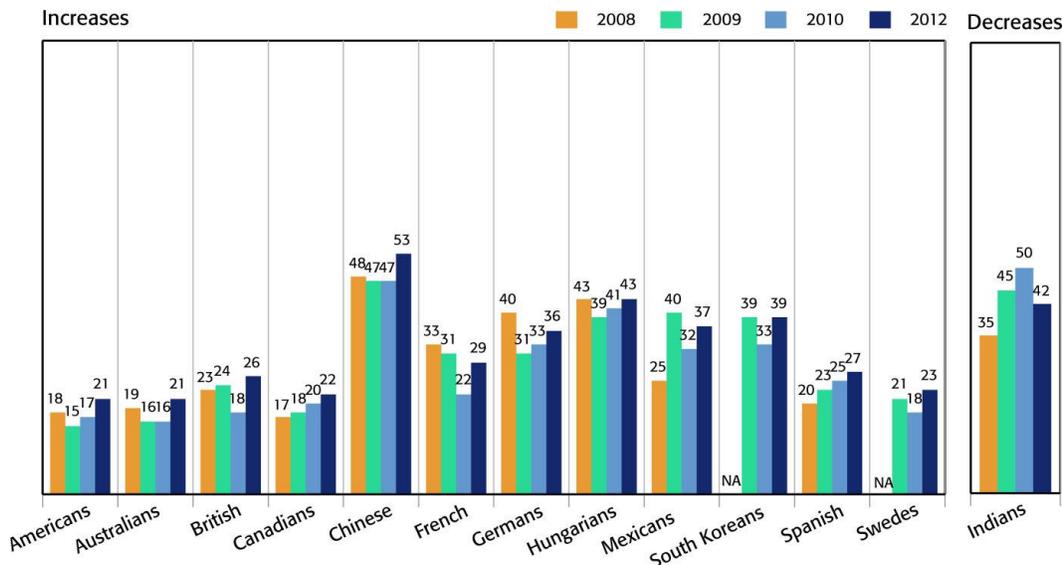
the 14 countries surveyed in all three years demonstrated year over year improvements. Of those, only Chinese and Hungarian consumers have extended the trend in 2012.

Much of the increase in the overall Greendex scores between 2008 and 2010 was due to increased sustainable behavior in the housing category in both 2009 and 2010. Here, the Greendex measures the energy and resources consumed by people's homes. In 2012, housing Greendex scores have fallen in 13 of the 17 countries surveyed. Indians, South Koreans, Germans and Japanese are the only consumers to have improved their housing scores or to have stabilized them.

Changes in personal behavior from 2010 within the categories of personal transportation, food and consumer goods tend to be more often positive than negative, especially for food and consumer goods. We explore each of these categories of consumption in more detail below.

The Impact That Our Society Has on the Environment Is So Severe That There Is Very Little Individuals Can Do about It

"Agree,"* Percentage of Consumers in Each Country, Trends: 2008–2012



*"Agree" represents 4+5 (on a scale of 1 to 5 where 1 means "Strongly disagree" and 5 means "Strongly agree").

HOUSING

Indians, Brazilians, Chinese and Mexicans continue to top the housing sub-index, while Swedish, Australian, French, British, Japanese, Canadians and especially American consumers make up the bottom seven. While housing scores generally increased between in 2009 and 2010, in 2012 they are down in more than two-thirds of the countries surveyed.

Energy consumed in home heating is an important component of the Greendex, and heating systems are commonplace in Europe and North America. By contrast, a little over half of consumers in Brazil and Mexico report having residential heating systems.

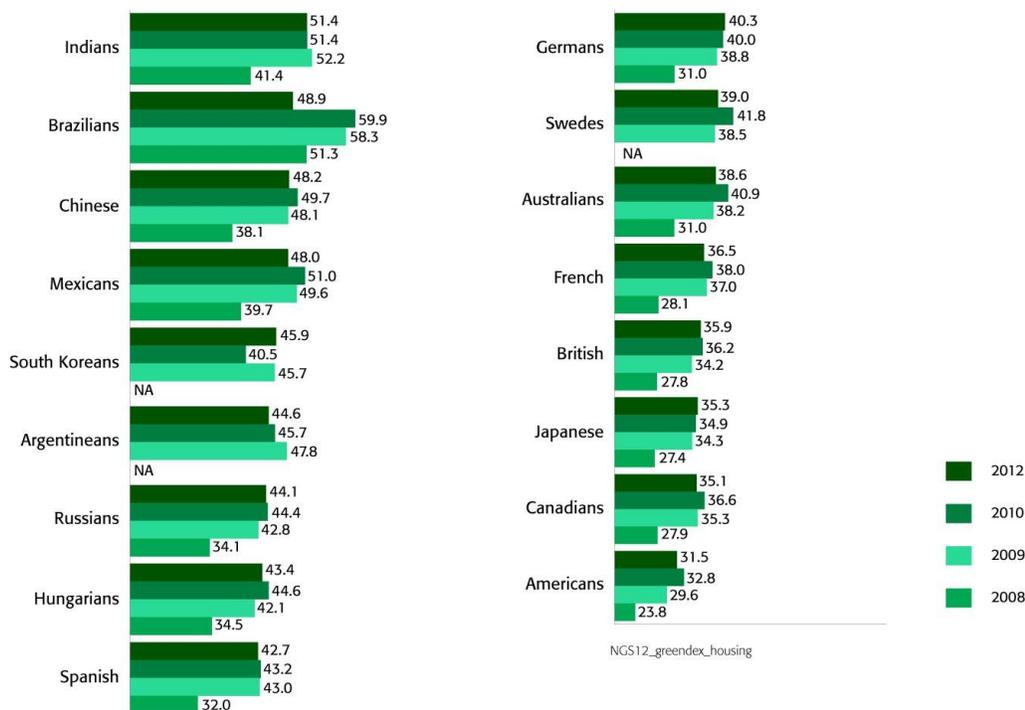
Oil is a significant energy source for consumers in both Japan and Germany, and nearly four in ten consumers who have home heating in China report using coal. Globally, natural gas and electricity are the most common sources of energy for residential heating.

Air conditioning remains a common feature of Japanese, American, Chinese, South Korean and Australian households. Air conditioners are relatively uncommon in European households, with the exception of Spanish homes.

Brazilian consumers remain by far the most likely to report that they purchase electricity sold as “green” or generated from renewable resources, and Brazil continues to produce large amounts of biofuel. Green electricity consumption is becoming more common in Germany and South Korea, resulting in higher Greendex scores there. However, percentages reporting that their household purchases green electricity have declined since 2010 in seven countries surveyed, including four Western European countries, perhaps due to cost premiums.

Still, consumers continue to make an effort to moderate energy consumption in their homes by adjusting heating and cooling settings. More than half of consumers in 15 of the 17 countries

Greendex: Housing
Consumers in Each Country, 2008–2012



surveyed report that they frequently do so, and percentages are up among Argentinians, Brazilians, French, Germans and Mexicans.

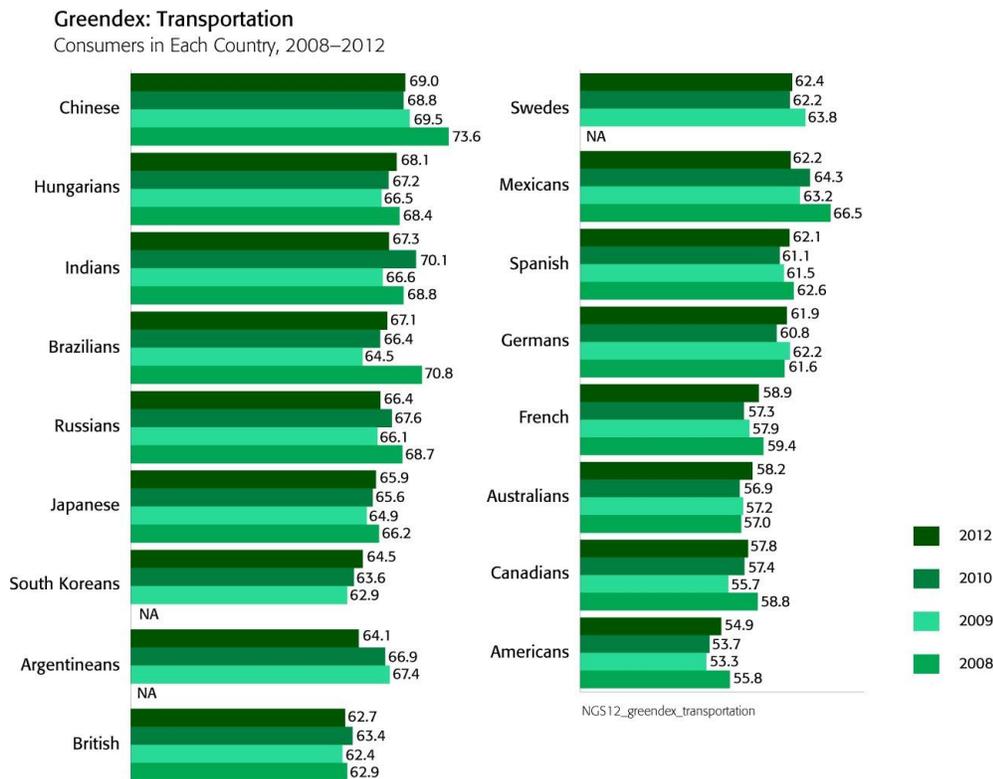
Globally, more than one-third of consumers surveyed say that their household contains an energy-saving television, with those in North America as well as in Australia and Brazil being the most likely to. Since 2008, ownership of these types of televisions has increased broadly, particularly among Australians, Germans and Indians, pushing Greendex scores higher. This likely reflects the widespread adoption LCD technology in televisions.

TRANSPORTATION

Transportation sub-index scores are up from 2010 among average consumers in 12 countries, including many of those surveyed in Europe and North America, and down in the remainder. The largest increase has occurred among French consumers, and the deepest decreases are among Indians and Argentinians. Still, scores have fluctuated only slightly over the years, as consumers generally appear to be stuck in their transportation routines, either unwilling or unable to make impactful changes in their behavior.

Due to improved scores among Hungarians and a notable drop in scores for Indians, Chinese and Hungarians now occupy the top two spots in the transportation sub-index.

The possession of cars or trucks remains much more common among consumers in industrialized economies than those in rapidly developing



countries. Consumers in China, India, and Argentina are the least likely to own at least one, but the use of cars appears to be on the rise in developing economies, and 2012 data show marked increases in the number of consumers who say they drive alone regularly in Argentina and Mexico. In contrast, Australians, French, Germans and Spanish are now less likely than they were in 2010 to report that they regularly drive with no passengers (joining improvements registered by British and Canadian consumers in 2010).

Despite the increasing use of personal automobiles, Chinese, Mexican and Indian consumers are the most likely to say that they choose to live close to their usual destinations to minimize the impact of their personal transportation on the environment. Percentages agreeing have increased from 2010 in Argentina, Germany and Mexico, but have decreased in China and India.

The frequency of use of public transportation, a key indicator of sustainable transportation, is low in most countries. In descending order, however, Russians, Chinese, South Koreans, Brazilians and Mexicans are the most common users. Australian, French, Canadian and American consumers are the least likely to take public transportation. Consumers in the four Anglophone countries surveyed are also the least likely to walk or ride a bike to their usual destinations, pushing their scores lower. Chinese consumers remain the most likely to walk or ride a bicycle to their usual destinations. Encouragingly, percentages of consumers who report frequently walking or cycling to their

destinations are up from 2010 in ten countries and down in only two—India and Japan. It will be important to monitor trends in sustainable mobility going forward as populous and rapidly growing economies continue on sharp development trajectories.

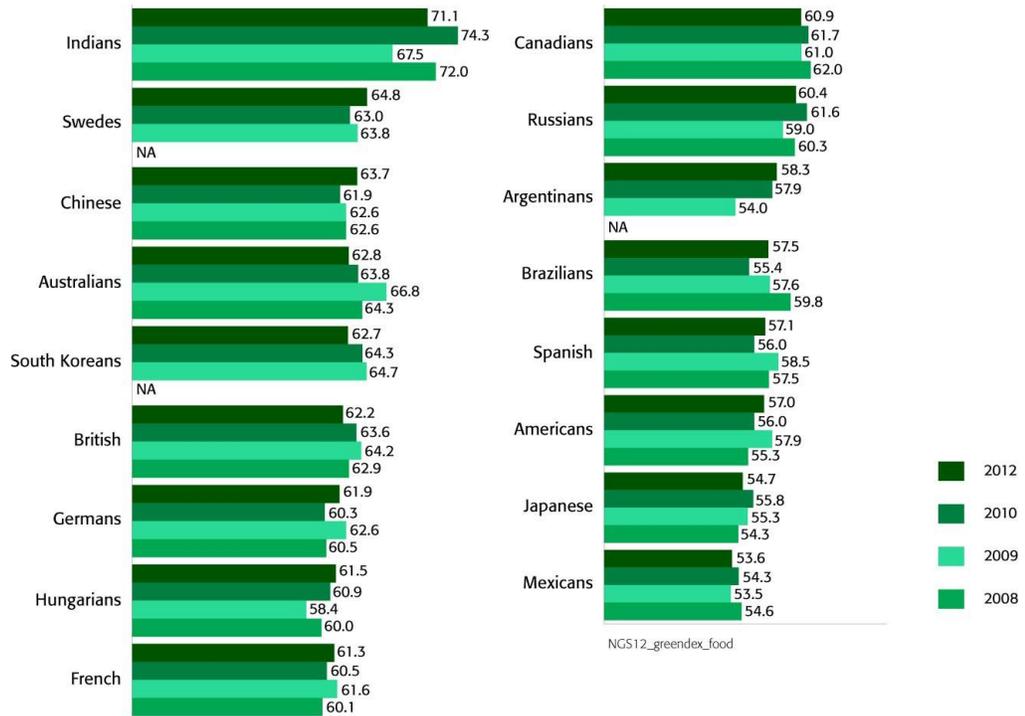
FOOD

Food sub-index scores have improved in nine countries and have decreased in eight. Food scores among Indian consumers, which have fluctuated over the years, have decreased notably since 2010 but remain much higher than the scores for average consumers in other countries due in part to infrequent beef consumption in India. Japanese and Mexican consumers score lowest in 2012.

More than half of consumers in almost all countries surveyed report that they consume beef once or more per week. Germans, South Koreans, Hungarians and especially Indians are the exceptions. Argentinean and Brazilian consumers, followed by Mexicans, are the most likely to consume beef and, with half or more indicating that they consume it daily or several times a week, they have lower food sub-index scores as a result. Indians, in contrast, eat the least beef.

Russians, Chinese, Australians and Germans are the most likely to consume locally grown food frequently, while only about one-third or less of Swedes, Japanese and Americans report that they consume locally grown food at least several times a week.

Greendex: Food
Consumers in Each Country, 2008–2012



Spanish consumers have become the most frequent eaters of fish and seafood, surpassing Japanese consumption relative to reported behavior in 2010, where the frequency of seafood consumption is down following the effects of the 2011 tsunami disaster. Still, at least half of average consumers in all countries surveyed except Germany, Argentina, India and Hungary consume fish and seafood at least once per week. Seafood consumption has, however, become less frequent among Chinese and Russians, in addition to Japanese.

Drinking bottled water is very common among German consumers, with two-thirds reporting that they do so daily. Germans continue to consume more bottled water than those in all other countries surveyed (followed closely by Mexicans where consumption is up since 2009). This adversely affects their Greendex score.

GOODS

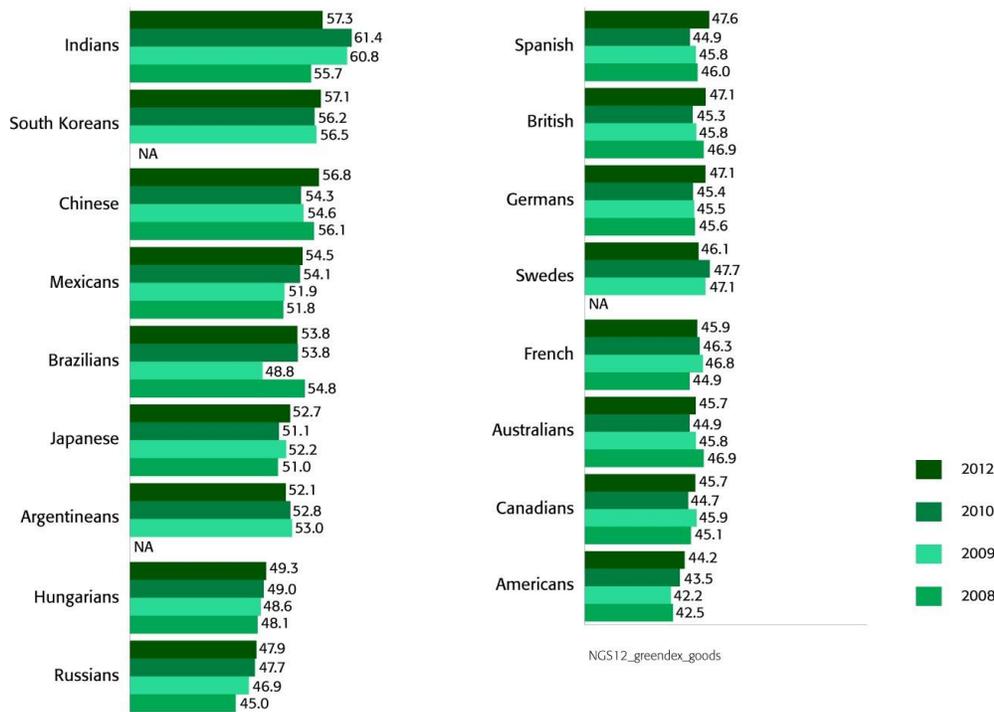
Greendex goods scores for average consumers have increased in 12 countries, notably in Spain and China. Average scores have decreased in four countries, but especially in India.

Majorities of consumers in 16 of the 17 countries surveyed indicate that they prefer to repair something when it is broken rather than to replace it, which has a positive impact on Greendex scores. Japanese consumers are the only ones among whom less than a majority agree. Argentineans, Brazilians, Hungarians and Mexicans are now more likely than they were in 2010 to prefer to repair rather than to replace, but downward tendencies are occurring among Americans, Australians, British, Indians, Russians and Japanese.

Between 2008 and 2010, there were significant increases in the number of Americans, Chinese, and Indians reporting that they generally try to

Greendex: Goods

Consumers in Each Country, 2008–2012



buy things “used” or “pre-owned” rather than new, increasing their 2010 Greendex scores. In 2012, fewer consumers in Argentina, Brazil, Canada and India are inclined toward this preference.

In most countries, consumers say they prefer reusable over disposable products, especially in Sweden, Germany and also Mexico. Indian consumers remain the sharpest exception, with opinion nearly evenly divided.

In most countries, minorities of consumers say that environmentally friendly product premiums are generally worth it to them, but many are undecided on this. In descending order, Russians, Brazilians, Americans and Indians are the most likely to respond that the extra cost does not justify the value. Still, percentages willing to pay a premium have trended upward since 2008 for Americans and Australians—an indication that the market for green goods is growing there.

When it comes to recycling, consumers in North America and Western Europe remain the most likely to report that they recycle materials “all of the time” or “often.” Fewer than half of Indians, Argentineans, Russians and South Koreans recycle as frequently.

China and Brazil remain the only two countries where at least half of consumers report regularly avoiding excessively packaged goods.

Majorities of consumers in most countries often use their own durable bags when visiting stores, with French consumers remaining the most likely to do so. Reusable shopping bag use has become more common in a mix of seven countries on three continents. Many jurisdictions have been regulating the use of disposable plastic shopping bags. Clearly, government regulation can have a powerful impact on everyday consumer behavior.

On electronics, nearly all consumers report possessing at least one television. More American consumers than others report living in

households that contain four or more televisions, and this drives their score downward. The list of most frequent recyclers of electronic items consists entirely of Europeans, along with Canadians. Globally, the trend appears to be upward, with increased frequency of recycling electronics observed among consumers in eight diverse countries. This is likely the outcome of the establishment of the programs, infrastructure and regulations required to enable this behavior, combined with effective communications.

CHARACTERISTICS OF GREEN CONSUMERS

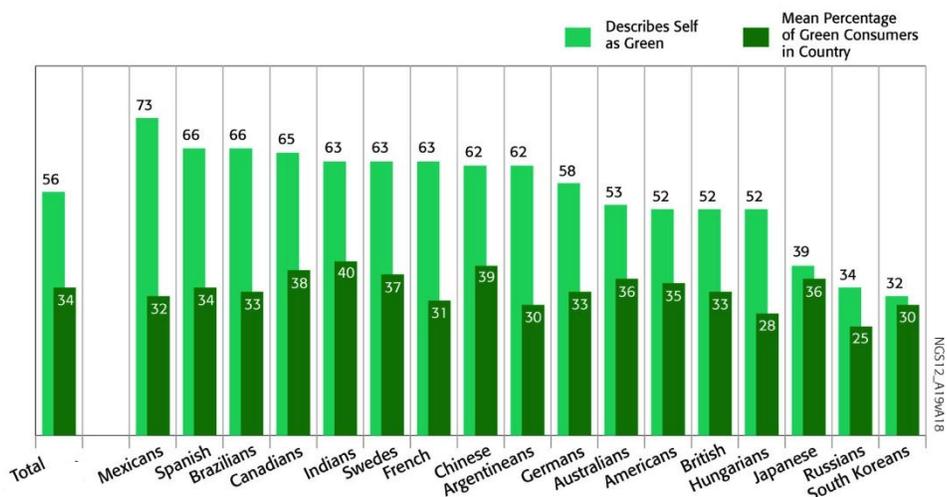
To understand for the first time how typical green consumers are perceived around the world, National Geographic and GlobeScan asked consumers how well a number of attributes describe people in their country who avoid environmentally harmful products, minimize the waste they create, try to save energy, and choose environmentally friendly products as often as they can. The characteristics evaluated include:

Across all countries surveyed but two, “responsible” is most frequently cited as being descriptive of green consumers. “Caring”, “smart”, and “healthy” are the next most commonly identified traits. So, it seems that green consumer behavior is widely seen as socially desirable and civil, boding well for future uptake.

What some may find less encouraging is the disconnect between perceptions of one’s own consumer behavior, and that of others. When asked what proportion of consumers in their countries they think are green, the most common response is somewhere between two and four in ten. Yet when consumers are asked if they themselves are green, more than half say they are. Indeed, Greendex 2012 is intended to further our global understanding of the issues, obstacles and opportunities related to sustainable consumer behavior in a manner that enables behavior change and empowers individuals along with major societal actors like companies and governments.



Describing Self As Green vs Perceived Percentage of Green Consumers in Country
 Percentage of Consumers in Each Country and Mean Percentage, 2012



A18. *Approximately what percentage of people in your country do you think avoid environmentally harmful products, minimize the waste they create, try to save energy, and choose environmentally friendly products as often as they can?*

A19. *Would you describe yourself as someone who avoids environmentally harmful products, minimizes the waste one creates, tries to save energy, and chooses environmentally friendly products as often as one can?*

ABOUT THE GREENDEX

This quantitative consumer study of 17,000 consumers in a total of 17 countries (14 in 2008) asked about such behavior as energy use and conservation, transportation choices, food sources, the relative use of green products versus conventional products, attitudes towards the environment and sustainability, and knowledge of environmental issues. A complex algorithm is applied to results to generate an index score, i.e., a Greendex score, for each individual respondent that reflects the relative environmental impact of his or her consumption patterns in the areas of housing, transportation and the consumption of food and consumer goods. Individual scores are averaged to create a mean score for each country. The Greendex measures the impact of the average consumer in each country surveyed; it does not measure the environmental impact of a total country.

DISCOVER YOUR GREENDEX SCORE

Individuals around the world can find out where they rank on the Greendex scale by visiting nationalgeographic.com/greendex and taking an abbreviated survey. They can also examine the Greendex survey results by country, measure their knowledge of some basic green issues against what others around the world know and get tips on living a more environmentally friendly lifestyle.