



# Greendex 2014: Consumer Choice and the Environment – A Worldwide Tracking Survey

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HIGHLIGHTS REPORT

September 2014

## 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, 2012 and now again in 2014 to track progress or the lack thereof. Consistently, consumers in the large developing economies of India and China have scored highest, although this year South Korea has moved into third place before Brazil. Canadians and Americans, with their relatively massive environmental footprints as individuals, continue to score lowest.

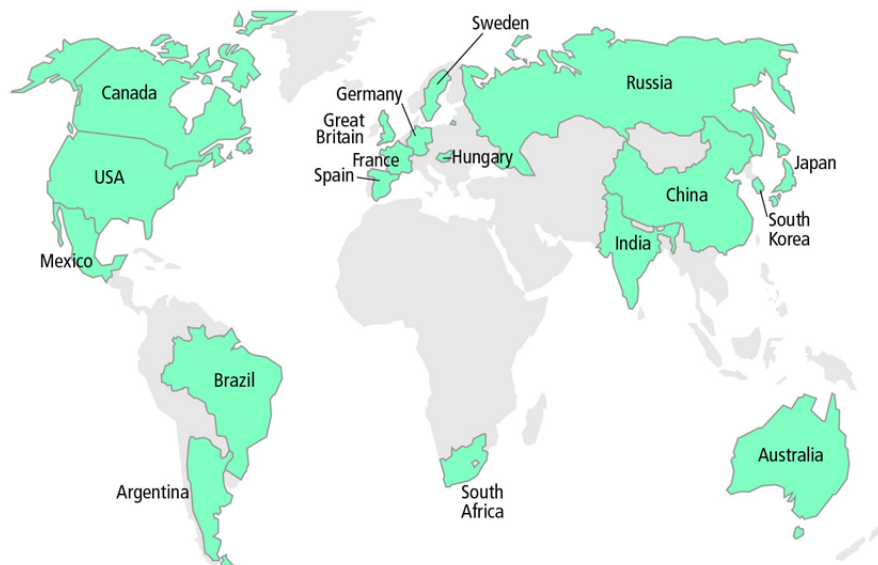
The Greendex studies add to our collective understanding of the barriers and opportunities that people face in becoming more sustainable as consumers. The world has changed since January 2008. How has consumer behavior changed over the past six years? Are trends apparent? With the publication of the results of

this the fifth wave of the research study, we now have insights into the dynamics of sustainable consumption over a six-year period.

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.

The 2012 findings explored 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 2014 updates our measures of environmentally sustainable consumer behavior and furthers our understanding of how to motivate sustainable behavior change among consumers globally.

#### KEY FINDINGS IN BRIEF

Overall, we find that although environmental concerns have widely increased since 2012 and that climate change is presenting an increasingly felt threat to consumers, the pace and scale of uptake of sustainable consumption have remained too little over the past six years. Yet we have positive findings to point to. Compared with 2008, consumer habits have improved at least somewhat in all countries surveyed that year, except Brazil.

A particularly bright spot in 2014 is in the food category—something that all consumers can personally relate to. Our composite measure of food habits shows improvements from 2012 in 11 countries as more people embrace local and organic foods.

An exploration of consumers' intentions to improve their habits in this year's Greendex study also reveals that those in Latin America and India appear to be the most easily influenced to change when they informed about their personal impact on the environment. Results also show that consumers who already display behavior that is relatively sustainable and are told that their behavior is above average from an environmental point of view are more motivated to improve their behavior further than are consumers who display less sustainable habits. This suggests that positive reinforcement is likely a powerful tool for enabling behavior change among consumers.

Changes in consumer behavior indeed seem to be underway in some areas, and as part of our 2014 study we investigate why, and ask how the social and economic dynamics at play here can be fostered to affect other types of consumption.

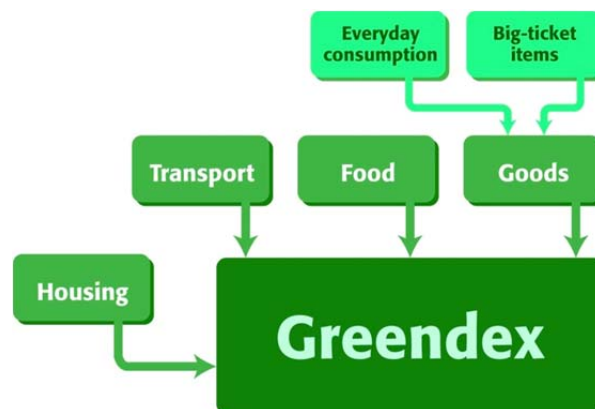
We report the results of this substantial exploration into the area of behavior and attitudes relating to food, and the identification of what specifically drives behavior change in this area for different segments of consumers and for consumers in different geographies. To share details, we provide a separate report annex.

The following is a summary of the results of Greendex 2014: Consumer Choice and the Environment—A Worldwide Tracking Survey.

For the fifth time, the Greendex: Consumer Choice and the Environment survey measures and monitors consumer progress toward environmentally sustainable behavior in 65 areas relating to housing, transportation, food and consumer goods. The objectives of the initiative are to provide regular quantitative measures of consumer behavior and to promote sustainable consumption. Greendex 2014 ranks average consumers in 18 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.

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, Britain, Hungary, India, Japan, Mexico, Russia, Spain and the United States. The same 17 countries were included in the 2012 survey. In 2014 South Africa was added to the survey, expanding its reach to the African continent. Eighteen-thousand consumers were polled online in 2014 (1,000 in each country).

Each respondent earns a score reflecting the environmental impact of his or her consumption patterns within each category of housing, transportation, food and consumer goods, creating four corresponding “sub-indices.” Consumers are 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 2014: OVERALL RESULTS

- 2014 Greendex results show that environmentally friendly behavior among consumers has increased from 2012 in nine of 18 countries surveyed: Argentina, Australia, Great Britain, Hungary, India, Mexico, Russia, Sweden, and South Korea.
- The most notable improvements are found within the food category, with consumers in 11 countries registering increased scores.
- Sustainable consumer behavior as defined by the Greendex study has decreased among consumers in five countries: Canada, China, Germany, Japan, and USA.
- Compared to the study's 2008 baseline levels, however, sustainable consumer behavior has increased in all countries tracked since the first study, with the exception of Brazil, suggesting consumer behavior across the world is improving incrementally, albeit slowly.
- Top-scoring consumers of the 2014 Greendex study are in the developing economies of India and China, in descending order, followed by consumers in South Korea, Brazil, and Argentina. Indian and Chinese consumers also scored highest in 2012.
- Results show that American consumers' behavior still ranks as the least sustainable of all countries surveyed since the inception of the Greendex study in 2008.
- Changes in personal behavior from 2012 within the categories of consumer goods and housing tend to be more often negative than positive, especially for consumer goods. In the food category, changes instead tend to be more often positive.
- The 2014 Greendex study finds that environmental concern has increased since 2012 among consumers in 11 of the 17 where we have tracking data countries, with 61 percent of consumers now saying they are very concerned about environmental problems. However, results show that increased environmental concern is clearly not translating into substantive behavior change; better access to environmentally friendly choices and more (and better) information and influence are needed for consumers to be able to translate their personal values and worries into meaningful action beyond incremental improvements.
- A slight majority of consumers now agree on the seriousness of climate change, with 51 percent of consumers in the 18 countries believing that global warming will negatively affect their own lives. Brazilians are much more likely than others to think that they will be negatively affected by climate change, as 78 percent believe this is the case.
- 2014 Greendex results show increased agreement in 11 of 18 countries with the notion that most scientists are convinced that human activity is the cause of climate change, with 65 percent of consumers now agreeing. Seventy-seven percent of Brazilians, the highest proportion of the countries surveyed, agree.
- As in 2012, the study finds that countries with high average Greendex scores tend to have higher proportions of consumers who feel very guilty about their own environmental impact, while consumers demonstrating the least sustainable behavior are also least likely to feel guilty.
- Results again show that consumers in emerging economies, who tend to demonstrate more sustainable consumer behavior, feel relatively helpless in the face of environmental problems.
- Results from the 2014 Greendex study show that consumers in Mexico, Brazil, India, and Argentina may be the most easily influenced to improve their environmental behavior by receiving information about their personal impact on the environment, while British, German, and Swedish consumers are the least easily influenced by learning about their own environmental impact.

## HOUSING

- In the 2014 Greendex study, consumers in 10 of the 17 countries asked in both years registered lower housing scores compared to 2012, suggesting we need to pay specific attention to consumer behaviors in this area.
- Scores for the housing index are diverging along economic lines, with the spread between consumers in rich and poor countries widening. Consumers in emerging markets top the Greendex housing sub-index, while consumers in developed nations rank as the bottom five.
- In the three countries with the highest housing sub-index scores, India, Mexico, and China, consumers' housing sub-index scores have increased since 2012. Indians register the largest improvement in this sub-index, despite already scoring highest in this area in 2012.
- Consumers in the three countries with the lowest housing sub-index scores, USA, Canada, and Japan, have instead seen decreased housing scores.
- Germans and Canadians register the largest decreases in their housing sub-index scores, driven by small changes in various areas related to housing, such as increases in household energy consumption, with Canadians' scores now approaching those of Americans at the bottom.

## TRANSPORTATION

- Given that changes in transportation infrastructure tend to take place over the long-term, results from the 2014 Greendex study show that transportation sub-index scores have remained fairly stable since 2012 among consumers in most of the surveyed countries.
- Consumers in India still rank the highest on the transportation sub-index, while consumers in North America rank at the bottom.

- Swedish consumers have increased their transportation scores more than others since 2012.
- Consumers in China have notably decreased their transportation scores since 2012. Chinese scores have dropped dramatically compared to their baseline 2008 scores, as consumers there have adopted less sustainable habits in this area, such as owning at least one car or truck and driving alone frequently.
- 2014 results show increases in the number of consumers who say they drive alone regularly in emerging economies China, India and Mexico, a trend that is likely to continue as lifestyles change in these countries.

## FOOD

- 2014 results show that food consumption habits are improving, as food sub-index scores have increased since 2012 in 11 of the 17 countries where we have tracking data.
- Food sub-index scores have decreased most in Sweden and Spain, driven by factors such as increased chicken consumption in Spain and increased consumption of fish and seafood in both countries.
- Indian consumers still score the highest on the food sub-index, far ahead of other consumers, largely due to their relatively low beef consumption.
- Mexican consumers continue to score lowest on the food sub-index, along with Japanese, American, and Spanish consumers.
- Fewer consumers in China say they eat locally grown food than in 2012, although reported consumption of imported food has increased only very slightly.

## GOODS

- Greendex goods scores have decreased for consumers in 11 of the countries surveyed since 2012, while increasing in five, suggesting a recent general decline in environmentally sustainable behavior in the area of consumer goods.
- As they did in 2012, consumers in industrialized nations rank as the bottom eight.
- Canadians register a particularly large decrease in their goods sub-index scores, now closing in on Americans' scores at the bottom of the index.
- South Koreans now have the top rank in this sub-index, having steadily improved their scores since 2010. However, Swedish consumers register the largest improvement since 2012, having become more inclined to repair broken items and to use their own durable shopping bags.

improvements to the way they live than are those consumers who learn they have a heavier than average environmental footprint, hinting at the power of positive reinforcement and perhaps providing significant guidance on which consumers to target. Rather than attempting to change the worst offenders, consumers who are already engaged may be more likely to respond to efforts to extend sustainable consumption.

- Furthermore, results suggest that consumers who already display somewhat sustainable consumer behavior are also slightly more likely to feel guilty about their environmental impact, and are likely to be more receptive to encouragement to further improve their habits, compared to those who display unsustainable habits and do not feel particularly guilty and have relatively little intention to change.

## INTENT TO CHANGE BEHAVIOR

- Results from the 2014 Greendex study show Mexicans, followed by Brazilians, Indians, and Argentineans, are most likely to say they would make a significant improvement to the way they live after learning of their own environmental footprint compared to their country average, suggesting consumers in these countries may be more easily influenced than others surveyed to improve their environmental behavior by receiving information about their personal impact on the environment.
- British, German, and Swedish consumers are the most likely to say they do not intend to make any changes to the way they live after finding out their own environmental footprint and that of the average consumer in their country.
- Consumers who discover that their current behavior is more environmentally friendly than average are slightly more likely to intend to say they will make further

### GREENDEX 2014: OVERALL RESULTS

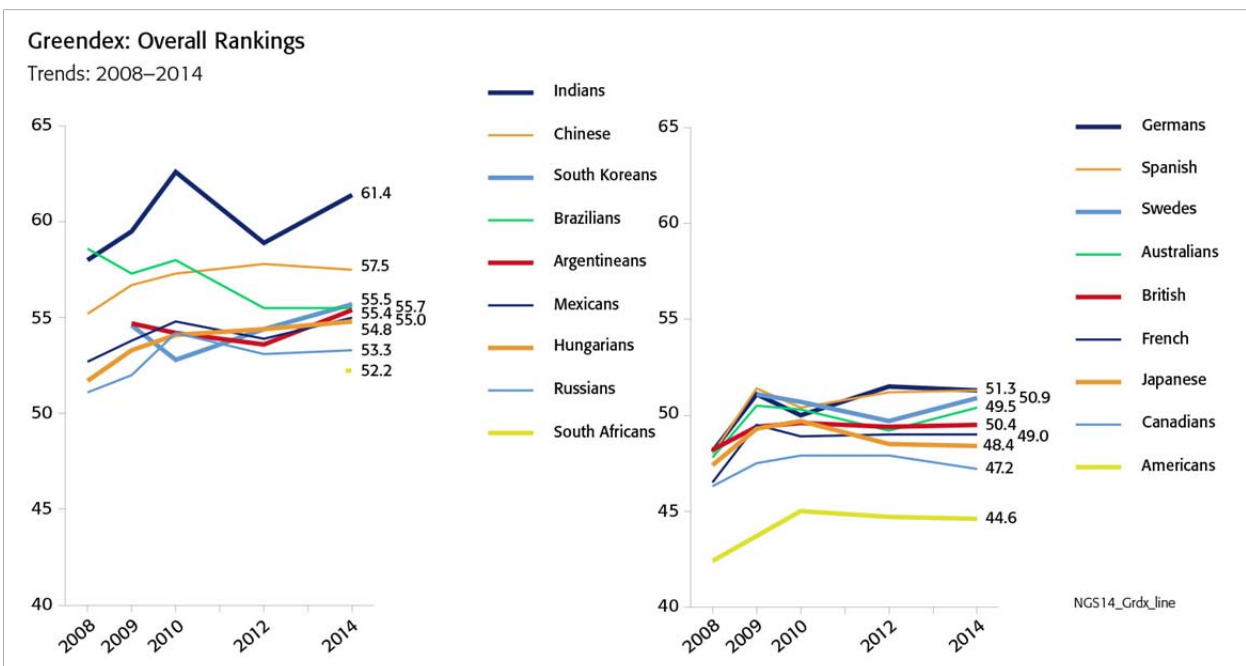
The National Geographic Society and the research consultancy GlobeScan have found that environmentally friendly behavior among consumers has increased from 2012 in nine of 17 trend countries surveyed. Sustainable consumer behavior has decreased in five. Brazil - whose consumers still rate fairly high on the Greendex - is the only country surveyed where environmentally friendly consumer behavior slipped below our 2008 baseline levels. 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.

The top-scoring consumers of 2014 are in the developing economies of India and China, in descending order. Consumers in South Korea, Brazil, and Argentina 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, by some distance, followed by Canadian, Japanese and French consumers as in 2012.

Greendex scores among consumers in most countries remain relatively steady, although scores have increased substantially for Indians, South Koreans, Argentines, Mexicans, Swedes, and Australians. Indian consumers, who maintain the first ranking, have had a notable increase in their Greendex scores since 2012. South Korean consumers have managed to move up from fifth to third place, while Argentinean consumers' overall ranking has moved up two spots, from seventh to fifth place.

Higher index scores for Indian consumers are driven mostly by a large increase in the housing sub-index; for instance, Indian consumers have become more likely to say they minimize the use





of fresh water and wash laundry in cold water to save energy, and they are among the most likely to use solar energy to heat running water. For the increase in index scores for Argentinians, improvement in the transportation sub-index is the main reason for positive change. Australians' and South Koreans' increased scores are caused by higher food sub-index scores, while higher scores for Mexicans result from higher housing and food scores. Swedes' higher index scores are driven by an increase in their transportation sub-index scores.

Consumers in Canada register the largest 2014 vs 2012 decreases in environmentally sustainable consumer behavior, followed by the Chinese, German, Japanese, and American consumers. Lower Greendex scores this year for Canadian, German, and Japanese consumers are driven mostly by decreased scores in the goods and housing sub-indexes, while lower scores for Chinese consumers are driven by decreased scores in transportation and goods sub-indexes.

Americans' lower scores are mostly driven by decreased scores in the goods sub-index.

Brazilian consumers are the only ones whose Greendex scores are lower this year than their baseline level of 2008. Scores for consumers in all the other countries have increased over the past six years, though not always steadily, suggesting that incremental improvements are occurring among consumers in most places. By most accounts, however, both the pace and scale of change must accelerate.

South Africans, surveyed for the first time this year, record close to average overall Greendex scores and close to average scores on the food and housing sub-indexes. South Africans' scores

on the transportation sub-index are below average and they rank near the bottom, while their scores on the goods sub-index are above average.

Changes in personal behavior from 2012 within the categories of consumer goods and housing tend to be more often negative than positive, especially for consumer goods. Consumers in 11 of the 17 countries included in the 2012 study (South Africa was not included in 2012) saw lower consumer goods Greendex scores in 2014, while consumers in 10 of the 17 countries registered lower housing scores.

In the food category, changes instead tend to be more often positive, with consumers in 11 of the 17 countries registering higher or stable food scores. We explore each of these categories of consumption in more detail below.

In terms of the attitudes and beliefs playing a part in driving environmental behavior, there is a significant amount of concern about the environment across the 18 countries surveyed, with more than half of consumers being very concerned about environmental problems. Most noteworthy is that environmental concern has increased since 2012 among consumers in 11 of the 18 countries, six of which also register improved Greendex scores. In the case of Australians, Hungarians, and Japanese, however, current levels of environmental concern are lower than their 2008 base levels despite recent increases. South Africans, surveyed for the first time this year, demonstrate relatively high levels of environmental concern on par with other emerging economies.

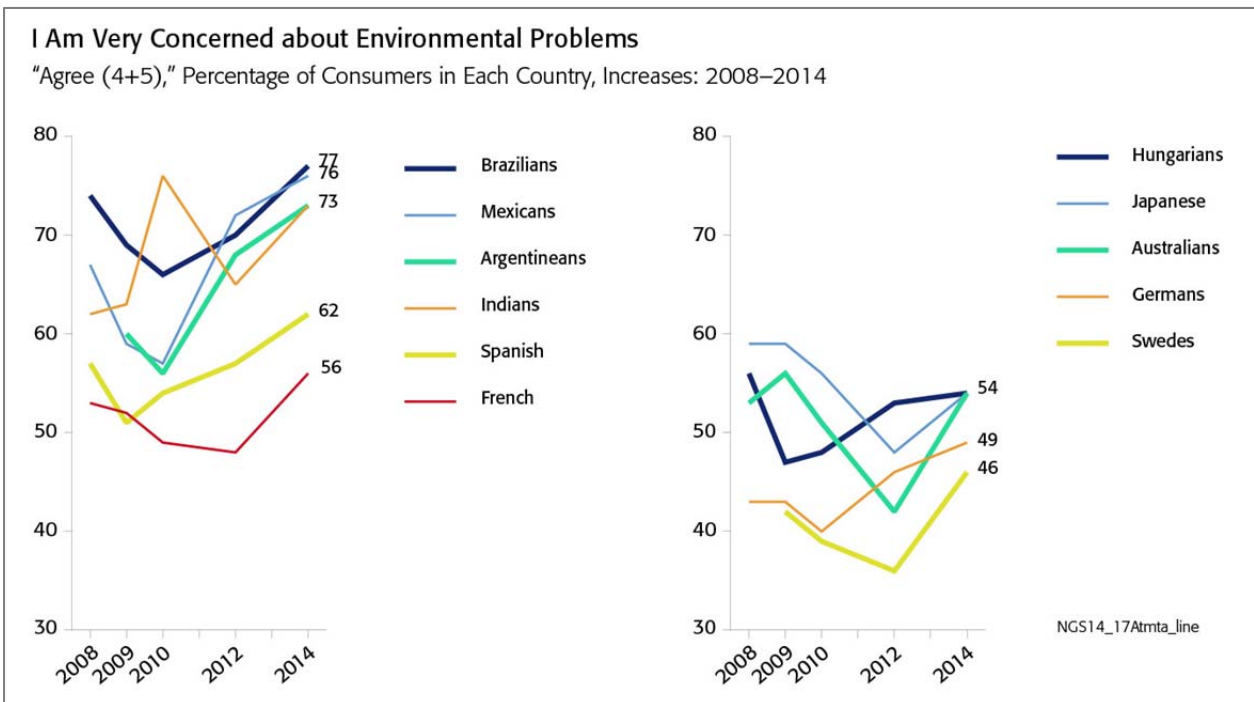
In sum, however, it is clear that increased environmental concern is not manifesting in substantive behavior change; consumers will need to become more enabled by better access to environmentally friendly choices and more (and better) information and influence to be able to translate their personal values and worries into meaningful action.

Four out of ten consumers globally believe that environmental problems are having a negative impact on their health. However, results show significant global disparity on this metric with the situation becoming more acute in China and India, where consumers increasingly feel the ill effects of environmental pollution and are increasingly likely to say that environmental problems affect their health.

Consumers now agree on the seriousness of climate change, with majorities of consumers in the 18 countries believing that global warming will negatively affect their own life. The

perception that global warming will affect people has grown since 2012, although large sections of consumers are still undecided. However, this year we have seen increased agreement in 11 of 17 countries with the notion that most scientists are convinced that human activity is the cause of climate change (66% of South Africans, first surveyed in 2014, also agree with this notion). Notably, this has not been the case among Japanese and American consumers who currently express the lowest level of agreement. Two in ten Americans, for example, disagree with the notion that most scientists are convinced that human activity is the cause of climate change.

Reflecting low levels of trust in government and companies identified in other GlobeScan research, in the 18 countries surveyed majorities of consumers do not agree that government or companies in their country are working hard to make sure they have a clean environment. Faith



in companies to make a difference has decreased among consumers in Latin America, although it has increased among consumers in five other countries.

Consistent with previous waves of the study, countries with high Greendex scores tend to have higher proportions of consumers who feel very guilty about their own environmental impact. Conversely, 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.

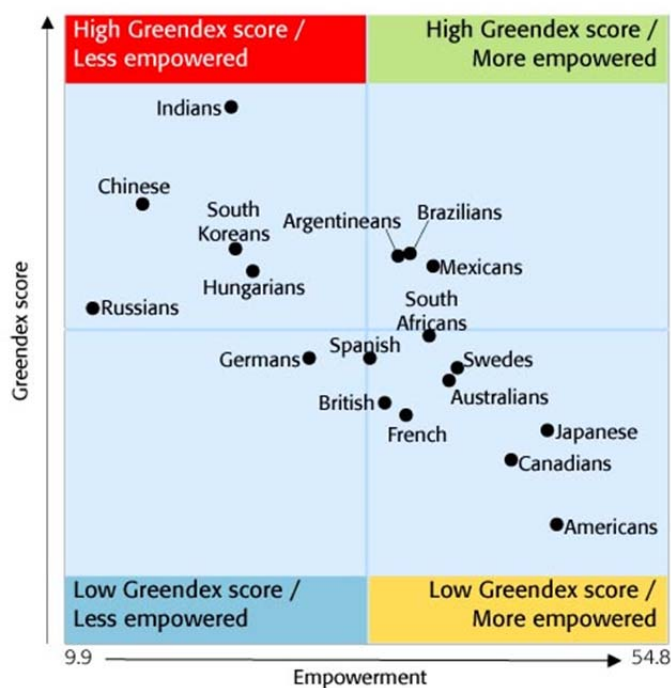
However, the opposite is true when it comes to the extent to which people feel empowered to help improve the environment as individuals. Those with the lowest Greendex scores and the least sustainable patterns of behavior are, ironically, also those who most feel able to make a difference. Consumers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

environmental problems which are often more tangible there. Emerging country consumers may feel that they have less ability as individuals to be involved in the political process to call for more environmental protection, or have less access to environmentally friendly choices as consumers.

Faith in technology, rather than individual behavior change, is increasing in some places, with American, British, Chinese, Indian, and South Korean consumers expressing increased belief that new technology will ultimately solve our environmental problems. Indian, South Korean, and Chinese consumers are the most likely to think that environmental challenges will be solved through technology; consumers in these three countries are also relatively likely to feel that individuals can do little to confront environmental problems, suggesting a link between lack of personal empowerment and trust in technology among consumers in some countries.

**Greendex Score vs Empowerment**

Consumers in Each Country, 2014



**HOUSING**

Scores for the housing index are diverging along economic lines, with the spread between consumers in rich and poor countries widening. Consumers in emerging markets such as India, Mexico, China, and Brazil top the housing sub-index, while consumers in the developed nations of Britain, France, Japan, Canada, and the USA rank as the bottom five. Consumers in the top three countries, India, Mexico, and China, have had their housing sub-index scores increase since 2012. The bottom three countries, Japan, Canada, and the USA, have instead seen decreased housing scores among their consumers.

Energy consumed in home heating is an important component of the Greendex, and home heating is more common in Europe and North America, but less widespread in Asia. Japanese consumers are the most likely to use oil to heat their homes, contributing to their low ranking in the sub-index. Homes in China are considerably more likely to be heated by coal than in other countries.

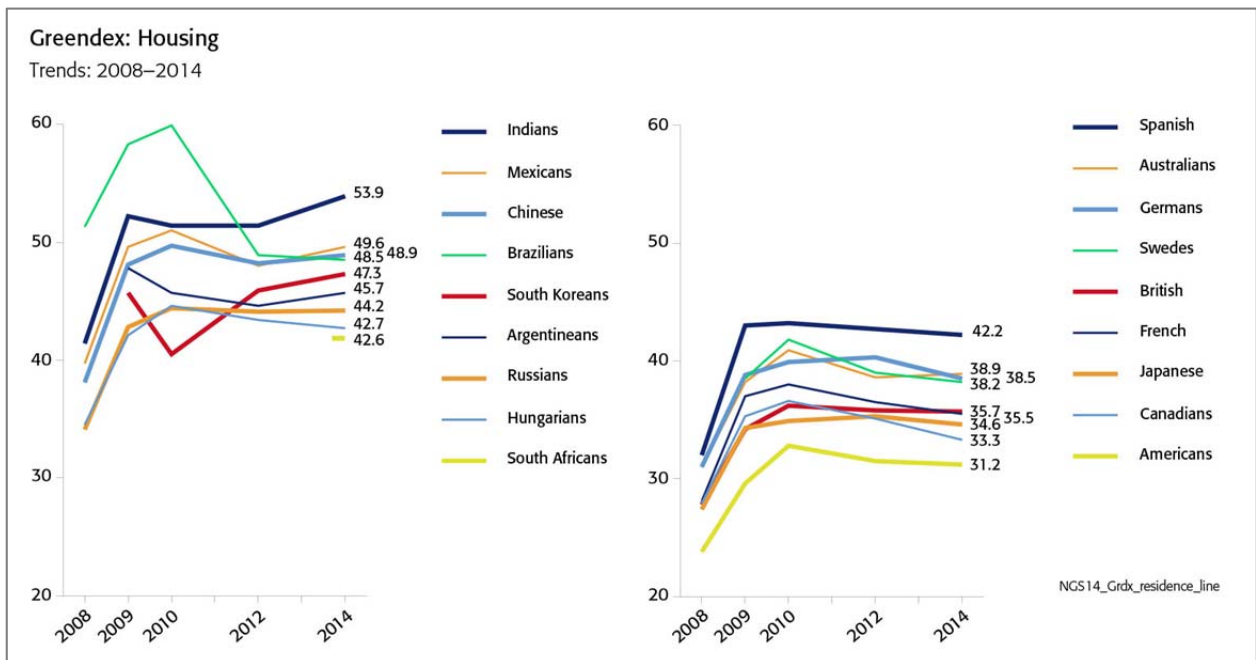
Air conditioning remains a common feature of Japanese, American, and Chinese households. Air conditioners are relatively uncommon in European households, with the exception of Spanish homes.

Brazilian consumers continue to be by far the most likely to report that they purchase electricity sold as “green” or generated from renewable resources. “Green” electricity purchases have increased since 2012 among British consumers.

To save energy, a majority of consumers across many of the 18 countries surveyed continue to report frequently moderating the temperature settings in their homes and washing laundry in cold water. Minimizing the use of fresh water is most common among Brazilian, German, and French consumers, as it was in 2012.

The majority of Canadian, American, and Brazilian consumers report owning televisions certified as energy-efficient. Since 2012, ownership of these types of televisions has increased considerably among Brazilian consumers.

More than half of consumers in Brazil, Australia, and Canada report owning an energy-efficient refrigerator or freezer. Japanese consumers are least likely to possess this type of refrigerator or freezer and this has remained stable since 2012.

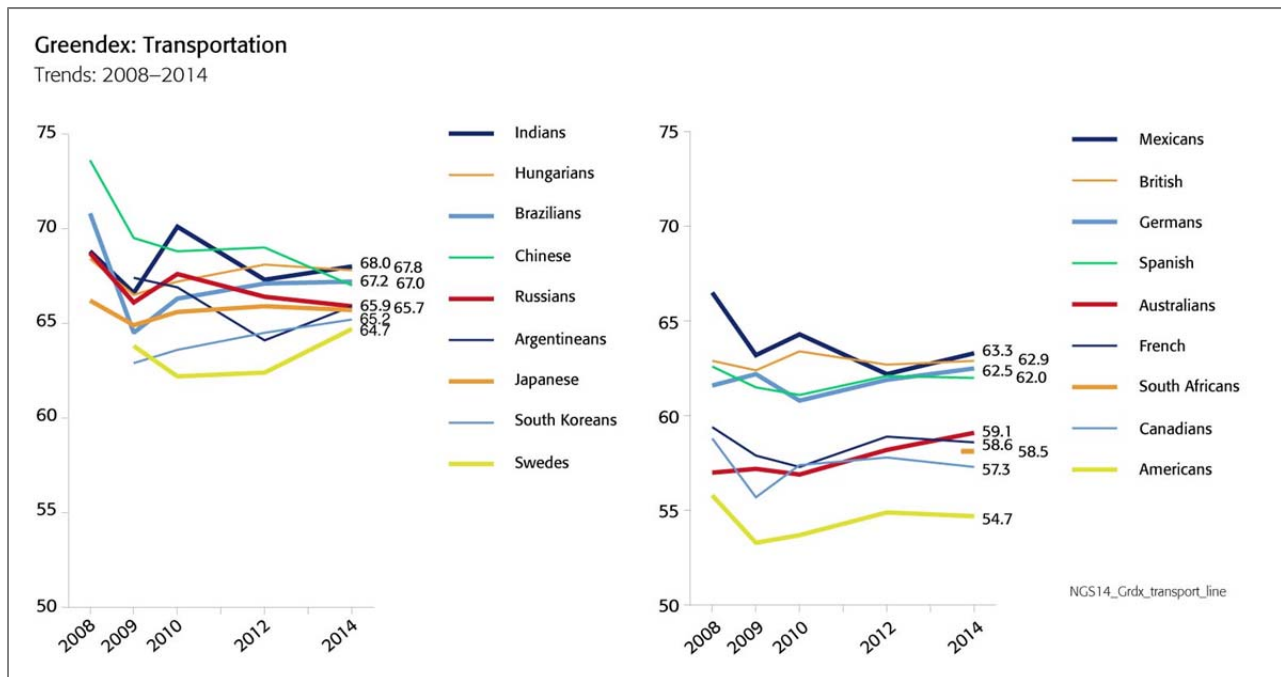


## TRANSPORTATION

Transportation sub-index scores have remained fairly stable since 2012 among consumers in most of the surveyed countries; transportation 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. It is likely that a transition to more sustainable transportation behaviors among consumers would require intervention by government and perhaps industry to enable people to make more environmentally friendly transportation choices by providing alternatives, such as accessible public transportation or bike paths.

Primarily because of their relatively infrequent ownership and use of cars and more frequent use of public transit, consumers in India, Hungary, Brazil, China, and Russia still rank the highest on the transportation sub-index, while consumers in Australia, France, South Africa, and North America rank at the bottom. Americans' scores on the transportation sub-index remain significantly lower than the scores of consumers in the other countries surveyed.

Swedish consumers have increased their transportation scores more than others since 2012, while those in China have notably decreased theirs. We predicted decreased transportation scores for Chinese consumers over time based on insights from the first Greendex study, and Chinese scores have dropped dramatically compared to their baseline 2008 scores, as consumers there have adopted less sustainable habits in this area.



The possession of cars or trucks remains much more common among consumers in industrialized economies than those in rapidly developing countries. Despite decreased transportation scores for Chinese, consumers in China, India, and Brazil remain the least likely to own at least one, and Chinese 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—proportions that have increased since 2012.

However, 2014 results also show increases in the number of consumers who say they drive alone regularly in China, India and Mexico. In contrast, Australians, French, Hungarians, South Koreans, Spanish, and Swedes have become less likely to report that they regularly drive with no passengers.

The frequency of use of public transportation, a key indicator of sustainable transportation, is low in many countries. In descending order, however, Russians, Chinese, South Koreans, and Indians are the most common users. American consumers remain by far the least likely to take public transportation, followed by South Africans and Canadians.

Chinese consumers remain the most likely to walk or ride a bicycle to their usual destinations while South African, Australian, and American consumers are the least likely to do so, pushing their scores lower. Although consumers in Canada are among the least likely to walk or ride a bike to their usual destinations, more of them do this than in 2009. Consumers in Japan have become less likely to claim walking or cycling to their destinations since reporting a spike in this behavior in 2010.

## FOOD

Food sub-index scores have increased in 11 of the countries surveyed but have decreased slightly in Sweden and Spain, and also very slightly in USA and Russia. Indian consumers still score the highest on this sub-index. Consumers in Hungary have greatly increased their food sub-index scores thanks to increased frequency of eating self-grown, local, and organic foods and decreased consumption of convenient packaged food and bottled water, and they rank near the top of this index at third place. Mexican consumers continue to score lowest, thanks to their relatively frequent consumption of beef, chicken and bottled water, along with Japanese, American, and Spanish consumers.

Not surprisingly, consumers living in colder climates are more likely to consume imported foods. Nevertheless, Russians, along with Australians, remain the most likely to report consuming locally grown food frequently. Fewer consumers in China say they eat locally grown food than in 2012, although reported consumption of imported food has increased only very slightly.

A majority of consumers across 18 countries surveyed say that they consume beef once or more per week. Argentinean and Brazilian consumers are still the most likely to consume beef, with more than 60 percent saying they do so daily or several times a week. Beef consumption has increased in Brazil since 2012. Indians continue to eat the least beef, largely explaining their high score on the food sub-index.

Chicken consumption is also high among a majority of consumers in most countries surveyed. Compared to 2012, Spanish and Brazilian consumers have become more likely to eat chicken often.

Spanish, Japanese, and Chinese consumers remain the most likely to consume fish and seafood regularly. French consumers are now less likely to eat this type of food compared to 2012.

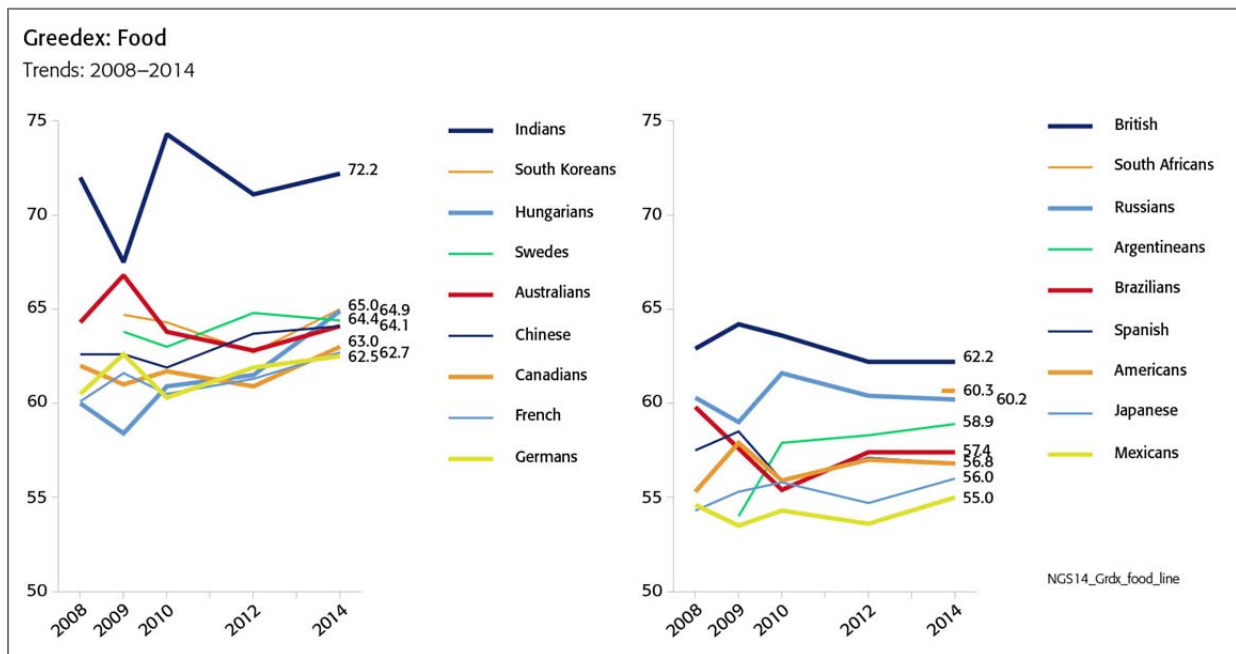
As in 2012, Russian, Indian, and Hungarian consumers eat food that they have grown themselves more frequently than do those in other countries. Consumers in Latin America and Spain are the least likely to eat food they have grown themselves.

Large majorities of consumers in all of the 18 countries surveyed report that they eat fruits and vegetables daily or several times a week. Consumers in Sweden are more likely to do this now than in 2012.

German and Mexican consumers drink bottled water most often, with the majority of Germans saying that they do so on a daily basis, something that continues to negatively affect their Greendex score. Consumers in Hungary have decreased their consumption of bottled water since 2012.

**GOODS**

Greendex goods scores for consumers have increased in only five of the countries surveyed and have decreased in 11 countries since 2012, with substantial declines in four countries (Canada, Japan, Germany, and Australia) and more modest changes in the others. Decreases are mostly driven by incremental changes such as slightly increased ownership of dishwashers, laundry machines, and refrigerators. South Koreans now have the top rank in this sub-index, having steadily improved their scores over time. As they did in 2012, consumers in industrialized nations including Sweden, Spain, France, Britain,



Germany, Australia, Canada, and the USA rank as the bottom eight. Of these, consumers in Australia, Canada, Germany, Japan, Spain, Britain, and USA have lower scores than in 2012, while consumers in Australia and Canada have also decreased their scores compared to their 2008 baseline.

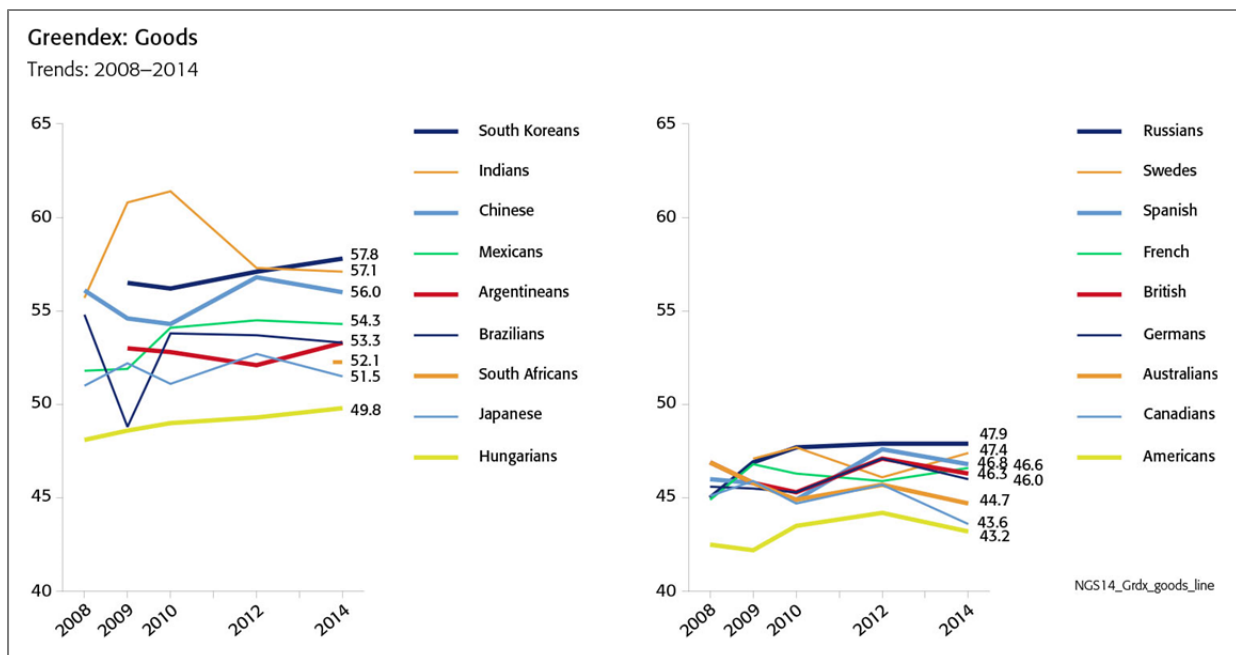
Across the 18 countries surveyed, consumers are generally less likely to prefer to buy used rather than brand new items, and to prefer disposable products over reusable ones. American and French consumers remain the most likely to say that they try to buy used items, while Russian consumers remain the least likely. Indian and British consumers are more likely to buy used items now than they were in 2012. Preference for disposable products is still highest among Indian consumers and it has increased since 2012.

Overall, consumers in the 18 countries surveyed tend to think that environmentally friendly product premiums are worth the extra cost. However, Russian consumers are most likely to

feel that these premiums are not worth it to them. Indian and South Korean consumers are now more likely than they were in 2012 to say that environmentally friendly products are not worthy of a price premium.

Majorities of consumers in 17 of the 18 countries surveyed say that they prefer to repair something when it is broken rather than replace it. Chinese and German consumers are the most likely to say this, while Japanese consumers remain the least likely to repair something when it is broken. A notable trend toward more sustainable behavior, results show increases in the proportions of consumers in ten of the 18 countries who prefer to have things repaired.

When it comes to recycling, Canadian, British, and Australian consumers remain among the most likely to report that they recycle materials frequently, with at least 80 percent saying they do this “all of the time” or “often.” As in 2012, South Korean consumers are among the least likely to recycle. Recycling has increased in Russia, China, and Argentina since 2012.





Avoiding environmentally unfriendly products, and buying environmentally friendly products, remain most common in developing countries, particularly among Brazilian consumers. China and now South Korea are the only countries in which a majority of consumers report avoiding excessively packaged goods. Consumers in Hungary are among the least likely to avoid this type of product.

A majority of consumers in 13 out of the 18 countries surveyed use their own durable bags when they shop, with French and German consumers remaining the most likely to do so. Americans are now least likely to use their own durable bags and have not improved in this respect, while Russians (who were previously the least likely to use their own bags) have become more likely to do so, along with Argentineans and Indians.

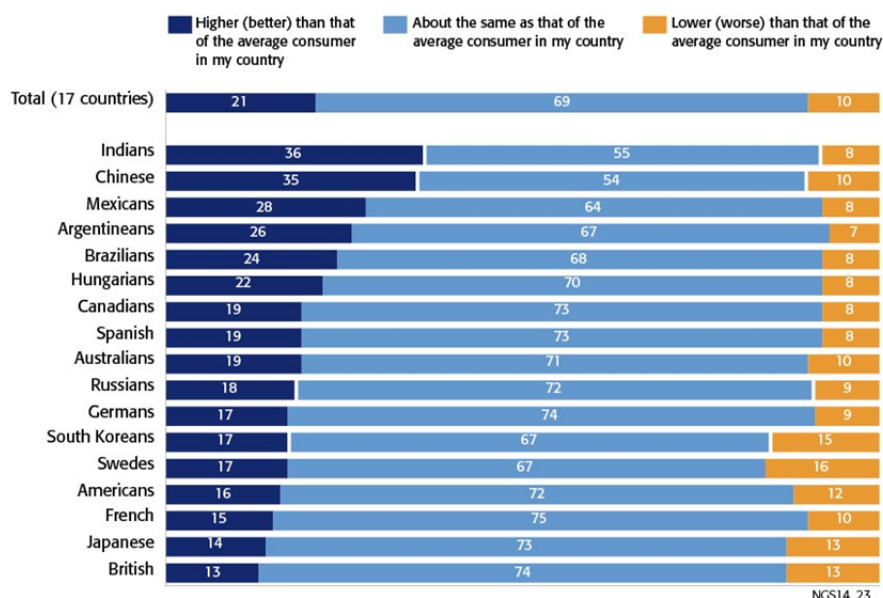
Almost all consumers report owning, renting, or leasing at least one television. Mexicans and Americans are more likely than others to have four or more televisions in their households.

### INTENT TO CHANGE BEHAVIOR

This year National Geographic and GlobeScan added questions to the survey designed to better understand behavior change among consumers. We asked respondents if they thought their own Greendex score, based on their responses to previous survey questions (explained to them as illustrative of how the way they live affects the long-term wellbeing of the environment), was higher, lower, or about the same as that of the average consumer in their country.

Most consumers do not overestimate the environmental friendliness of their own behavior, but instead estimate that their own score is about the same as that of others. However, two in ten consumers think that their own score is higher than average, twice as many

**Prediction of Own Greendex Score**  
Percentage of Consumers in Each Country, 2014



Not asked in South Africa. No country average available as they did not participate in previous years.  
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as those who think it is lower; only one in ten estimate their own score to be lower than average. Indian and Chinese respondents are most likely to estimate their own score as being higher than that of the average consumer in their country, while Swedes and South Koreans are most likely to say that their own scores are probably lower than average.

When we look at how accurate consumers' estimates of their own behavior are in terms of being able to correctly determine their score as being above or below the country average, results show that Chinese and Indian consumers have a relatively good grasp of their own impact compared to consumers in other countries as majorities here judge correctly. Swedes are also slightly more likely than others to correctly estimate their scores. Japanese and Spanish consumers are the least likely to accurately estimate their score as being above or below the country average.

After learning of the average score for consumers in their country, as well as their own, respondents were then asked if they would make changes in the way they live, including the amount and type of food, energy, and other goods they consumed.

Consumers discover that their own score is lower than average are slightly more likely than those who were informed that their score is higher than average to be resistant to making any changes to the way they live. In contrast, those who report above average levels of environmentally friendly behavior are slightly more likely to claim they intend to make a significant or very significant improvement to the way they live, suggesting those who already

display environmentally friendly behavior may be more open to further improvement.

These results suggest that positive reinforcement is a powerful tool for enabling behavior change among consumers, and the findings help identify which consumers to target. Rather than attempting to change the worst offenders, consumers who are already engaged may be more likely to respond to efforts to extend sustainable consumption. Those who already display consumption patterns that are relatively sustainable are also slightly more likely to feel guilty about their own environmental impact. These consumers are likely to be more receptive to encouragement to make further improvements to the way they live than are those who display less sustainable behavior, feel less guilty about it, and have less intention to change their habits.

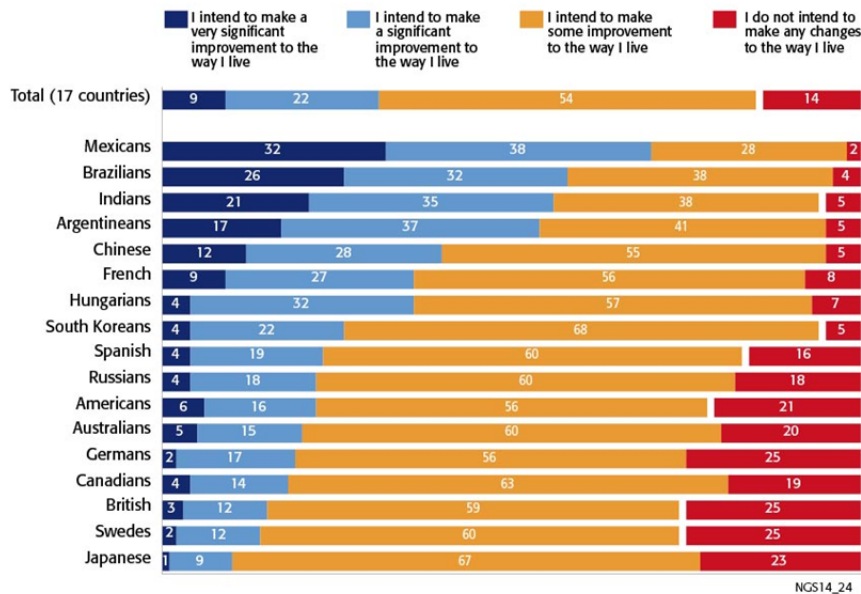
Mexicans, followed by Brazilians, Indians, and Argentineans, are most likely to say they would make a significant or very significant improvement to the way they live after learning of their own score compared to their country average, indicating consumers in these countries may be more easily influenced to improve their environmental behavior by receiving information about their personal impact on the environment.

Mexicans, Brazilians, and Argentineans also feel relatively empowered as individuals to make a difference, suggesting efforts by governments, industry, or NGOs may get more traction in these countries. Indians, however, score relatively low on empowerment and may need more enablement and encouragement to be able to optimize their environmental behavior. Indians, Mexicans, Chinese, and to a somewhat lesser extent Argentineans, also feel particularly guilty

about their environmental impact, likely ensuring further traction of efforts to change environmental behaviors in these countries.

In contrast, British, German, and Swedish consumers are the most likely to say they do not intend to make any changes to the way they live after finding out their score and that of the average consumer in their country, suggesting consumers in these countries may be harder to convince of the importance of their personal environmental footprint. Consumers in these three countries also fall in the category of having a relatively low Greendex score while feeling relatively little guilt about their own environmental behavior, further complicating efforts to convince them to lighten their environmental footprints.

**Attitude toward Making Life-Style Changes After Learning Own Score vs Country Average**  
Percentage of Consumers in Each Country, 2014



Not asked in South Africa. No country average available as they did not participate in previous years.  
The white space in this chart represents "DK/NA."

## ABOUT THE GREENDEX

This quantitative consumer study of 18,000 consumers in a total of 18 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](http://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.